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To : "Ice, Gillian" iceg@ohio.edu

Subject : AAAS Policy Alert - 7 September 2021

Policy Alert

Twitter

Policy Alert

September 07, 2021

## ACTION ITEM

On behalf of the [Golden Goose Award](#), an annual award honoring federally funded research with silly-sounding or obscure beginnings that has gone on to have enormous societal impact, we invite you to join us for our 2021 Golden Goose Award Ceremony. In our tenth year, we are thrilled we can once again recognize three teams of researchers whose work demonstrates how scientific and technological advances that result from foundational scientific research supported by the federal government can profoundly impact society in unforeseen ways. Join us virtually on September 22 at 4pm ET to celebrate these achievements. [Please RSVP here by Tuesday, September 21.](#)

Mark Your Calendar

### MONDAY, SEPTEMBER 13

- The [AAAS EPI Center](#) will hold a webinar on September 13 from 2-3 p.m. ET titled "[Anticipating Changes in Federal Methane Emissions Standards for Oil and Gas Operations](#)." The webinar will convene experts and practitioners to discuss the scientific evidence that can inform federal, state, regional and local efforts to mitigate methane emissions with the purpose of reducing the rate of climate change.

Budget & Finance Outlook

### HOUSE COMMITTEES MOVING FORWARD ON SPENDING PLANS

This week, [multiple House committees](#) are marking up their spending plans as part of the Democrats' [\\$3.5 trillion reconciliation package](#). Notably, the House Science Committee has released the [initial details of its \\$45 billion proposal](#) covering NASA, the Department of Energy, the National Science Foundation and other agencies. Committees focused on agriculture, natural resources and small business are also

marking up proposals in the coming days, with Democratic leaders hoping to complete the package later this month.

## Executive Spotlight

### WHITE HOUSE RELEASES PANDEMIC PREPAREDNESS PLAN

On September 3, the White House released a [pandemic preparedness plan](#) that includes investing over \$65 billion “to protect the United States against biological threats.” The funding will focus on five key activities: advancing development of vaccines and therapeutics, improving public health warning systems, reducing inequities in healthcare delivery, strengthening the supply chain, and stockpiling personal protective equipment. The [response](#) from some in the scientific community is that the investment is insufficient to meet the demands of a future pandemic.

### WHITE HOUSE ISSUES EXECUTIVE ORDER CREATING DEPARTMENT OF EDUCATION HBCU INITIATIVE

The Biden administration issued an [executive order](#) last week announcing the establishment of the Initiative on Advancing Educational Equity, Excellence, and Economic Opportunity through Historically Black Colleges and Universities (HBCUs) in the Department of Education. The new initiative proposes to increase HBCU access to federal resources and programs, partner with the private and education sectors to build a pipeline for students that may be interested in attending HBCUs, and establish clear plans to strengthen federal recruitment activities at HBCUs.

### HHS REVERSES TRUMP POLICY LIMITING FDA REGULATORY POWER

Last week, the Department of Health and Human Services (HHS) revoked a policy issued by the Trump Administration in September 2020 that required the HHS secretary to sign off on FDA rulemaking. Secretary Xavier Becerra outlined the rollback of the Trump policy in a [notice](#) published to the Federal Register.

### HHS CREATES NEW OFFICE ON HEALTH IMPACTS OF CLIMATE CHANGE

The HHS has unveiled a [new office](#), the Office of Climate Change and Health Equity, to focus on the health impacts of climate change. It will be run initially on an interim basis by senior National Institutes of Health official John Balbus, and HHS has requested \$3 million from Congress to fund it next year.

## In the States

### LOS ANGELES ACCELERATES CLEAN ENERGY FINANCING

The Los Angeles City Council voted unanimously on September 7 to [accelerate its 100% clean energy goal by ten years](#), from 2045 to 2035, while also initiating a green jobs program that aims to create nearly 10,000 new positions. The LA Department of Water and Power, the largest municipal utility in the nation, is



responsible for reporting progress semi-annually to the City Council's Energy, Climate Change, Environmental Justice and River Committee.

## **NEW YORK CITY AFFORDABLE HOUSING TO RECEIVE RENEWABLE ENERGY**

New York City is establishing a pilot program this fall that will pump [\\$24 million in renewable energy improvements into the city's affordable housing stock](#). The funds, provided by the New York State Energy Research and Development Authority in partnership with the city's Department of Housing Preservation and Development, will support upgrades to 1,200 units serving 3,000 residents.

## **NEW JERSEY TO LAUNCH COMMERCIAL PACE PROGRAM**

New Jersey Gov. Murphy (D) signed legislation that will [create a "property assessed clean energy" \(PACE\) funding program](#) to serve industrial, commercial, nonprofit, agricultural and large residential developments in the state. PACE funding repayments are attached to property tax bills, providing up-front funding that can be paid off over time and by subsequent property owners. The PACE program will support microgrids, renewable energy improvements, energy efficiency upgrades and resiliency investments.

## **PENNSYLVANIA MOVES CLOSER TO JOINING THE REGIONAL GREENHOUSE GAS INITIATIVE**

Pennsylvania regulators [voted in favor of joining the Regional Greenhouse Gas Initiative](#) (RGGI), which would require 58 state-based power plants to purchase permits, estimated at \$8 per ton of greenhouse gas emissions, to cover their greenhouse gas emissions, but legal and legislative challenges remain likely. Estimates indicate that decreased annual sales of emissions allowances will reduce greenhouse gases from the power sector in Pennsylvania by 25% by 2030, cutting 97 million tons of carbon dioxide in the process. If Pennsylvania officially joins RGGI, it will join 11 other northeastern states in the ten-year-old program.

### **People in the News**

The White House Office of Science and Technology Policy (OSTP) [announced](#) that Dr. Philip Duffy would be joining OSTP as its Climate Science Advisor to its newly formed Climate and Environment Division. Duffy previously served as President and Executive Director of the Woodwell Climate Research Center.

**Publisher:** Office of Government Relations

**Editor:** Gwendolyn Bogard

**Contributors:** Rebecca Aicher, Maysaa Alobaidi, Dan Barry, Joanne Carney, Erin Heath, Matt Hourihan, Haylie Swenson, Alessandra Zimmermann

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September 21, 2021

## ACTION ITEM

[Local Science Engagement Network](#) (LSEN) Advocates have used Twitter to send hundreds of messages to their Members of Congress asking them to #FundScience. This effort is having an impact: the House has already adopted the [largest increase in basic and applied research appropriations](#) in more than a decade. But the job isn't finished. This month, the House is expected to cast final votes on the infrastructure package, which has already been adopted by the Senate. It includes an array of investments to accelerate clean energy technology, strengthen the resilience of critical infrastructure in the face of climate change and extreme weather, plug orphaned gas wells and facilitate next-generation transportation research.

You can help make sure Congress seals the deal for these vital investments — and then make sure support for science is present in the next rounds of funding to come. [Participate in our new campaign today](#) to urge your Member of Congress to support science as they consider the infrastructure package. You can send our ready-to-go email and also tweet your Member of Congress on Twitter using our suggested tweets. Haven't joined LSEN yet? [Click here to register](#) and get connected with opportunities to advocate for climate solutions, renewable energy, green infrastructure and more.

COVID-19 News

### FDA COMMITTEE VOTES ON BOOSTER SHOTS

Last Friday, the U.S. Food and Drug Administration (FDA) Vaccines and Related Biological Products Advisory Committee [recommended](#) against a booster dose of COVID-19 vaccines for most of the U.S. population but voted unanimously to recommend it for Americans 65 and older as well as those who are at risk of severe COVID-19. In other FDA news, the agency [announced](#) last week the reorganization of its information technology, data management and cybersecurity functions into the new Office of Digital Transformation.

## GLOBAL COVID-19 UPDATE

In the U.S., the Centers for Disease Control and Prevention announced an [investment](#) of \$2.1 billion to “improve infection prevention and control activities across the U.S. public health and healthcare sectors” while addressing equity issues. Starting in November, the U.S. will relax current [travel restrictions](#) to accept visitors from Canada, Mexico and Europe. Italy will require that all workers have a [health pass](#) verifying full vaccination status or face sanctions. In France, more than 3,000 health care workers were [suspended](#) for not complying with vaccine requirements. Vietnam has approved the Cuban [vaccine](#), Abdala, for use in the country.

Mark Your Calendar

### WEDNESDAY, SEPTEMBER 22

- The 2021 [Golden Goose Award](#), an annual award honoring federally funded research with silly-sounding or obscure beginnings that has gone on to have enormous societal impact, will hold its tenth annual ceremony virtually on September 22 at 4 p.m. ET. The award ceremony will recognize three teams of researchers whose work demonstrates how scientific and technological advances that result from foundational scientific research supported by the federal government can profoundly impact society in unforeseen ways. [Please RSVP here](#) by Tuesday, September 21.

### TUESDAY, SEPTEMBER 21 – THURSDAY, SEPTEMBER 30

- The 76th session of the United Nations General Assembly [kicks off this week](#), and member states will be asked to deliberate on two of the world’s most pressing challenges: ending the pandemic and reforming the post-pandemic global economy to be healthier for the planet. This year, more than 100 leaders, including U.S. President Biden and other high-ranking representatives, intend to deliver their speeches in person. [Watch the public sessions here](#).

### MONDAY, OCTOBER 18

- Applications are open for undergraduate and graduate students and postdocs for the 71st [Lindau Nobel Laureate Meeting](#), which will be held June 26 – July 1, 2022. About 600 young scientists are selected to attend the meeting, where Nobel laureates in chemistry will give lectures and participate in discussions. [Apply](#) by October 18, and view the [selection criteria here](#).

Budget & Finance Outlook

## DEMOCRATS PLAN FUNDING, DEBT LIMIT VOTE

With the October 1 fiscal year deadline approaching, Senate Majority Leader Chuck Schumer and House Speaker Nancy Pelosi announced in a [late-breaking Monday statement](#) that the House would vote this week on a stopgap continuing resolution (CR) to avoid a shutdown and to provide government funding into December. They also announced that a measure to [suspend the debt limit](#), currently opposed by Republicans, will also be attached to the CR. House Democrats released the text of the CR on Tuesday morning, which will keep federal agencies funded through December 3.

## COMMITTEES CONTINUE RECONCILIATION PROGRESS IN HOUSE

Several House committees finished the markups of their reconciliation bills last week, as part of the broader \$3.5 trillion package under consideration by the House. Across the committees, ongoing COVID-19 and climate change crises were a focus for R&D spending; for example, the Agriculture Committee funded forest management projects in light of the wildfires in the West. The Energy and Commerce Committee provided significant funding to improve critical manufacturing supply chain resilience, pandemic surveillance and vaccine confidence work. The full House must still vote on the complete package.

Congressional News

## || Legislative Updates

### NDAА MARKUP COMPLETE

The House is expected to vote on the FY 2022 National Defense Authorization Act (NDAA) this week following committee markup earlier this month. The House Armed Services Committee [added nearly \\$500 million in basic and applied research authorizations](#) across the Department of Defense. Focus areas include artificial intelligence research, cybersecurity, bio-inspired materials production, climate research and biosurveillance research as well as the Defense University Research Instrumentation Program. In addition, the bill includes provisions for [transitioning applied research](#) into larger-scale manufacturing to bridge the gap between research and acquisition.

## || S&T Hearings

### MONDAY, SEPTEMBER 20

[Business meeting on a number of items, including the Women's Health Protection Act of 2021](#) — House Committee on Rules

### TUESDAY, SEPTEMBER 21

[NASA's Future in Low Earth Orbit: Considerations for International Space Station Extension and Transition](#) — House Committee on Science, Space, and Technology | Subcommittee on Space and Aeronautics

Hearings to examine the nominations of Laura Daniel-Davis, of Virginia, to be an assistant secretary, and M. Camille Calimlim Touton, of Nevada, to be commissioner of reclamation, both in the Department of the Interior, and Sara C. Bronin, of Connecticut, to be chairman of the Advisory Council on Historic Preservation — Senate Energy and Natural Resources Committee

[Legislative Solutions to Revive Travel and Tourism and Create Jobs](#) — Senate Commerce, Science, and Transportation Committee | Subcommittee on Tourism, Trade, and Export Promotion

### **WEDNESDAY, SEPTEMBER 22**

[Business Meeting & Hearing on Circular Economy](#) — Senate Environment and Public Works Committee

Hearings to examine the nominations of Christi A. Grimm, of Colorado, to be inspector general, Department of Health and Human Services, and Neil Harvey MacBride, of Virginia, to be general counsel for the Department of the Treasury — Senate Finance Committee

[Veteran Suicide Prevention: Innovative Research and Expanded Public Health Efforts](#) — House Committee on Veterans' Affairs

[Putting Kids First: Addressing COVID-19's Impacts on Children](#) — House Committee on Energy and Commerce | Subcommittee on Oversight and Investigations

[Recognizing and Building on the Success of Pandemic Relief Programs](#) — House Select Subcommittee on the Coronavirus Crisis

[Examining the Economic Benefits of Electrifying America's Homes and Buildings](#) — Senate Joint Economic Committee

### **THURSDAY, SEPTEMBER 23**

[Voluntary Carbon Markets in Agriculture and Forestry](#) — House Committee on Agriculture

[Advancing Earth System Science and Stewardship at NOAA](#) — House Committee on Science, Space, and Technology | Subcommittee on Environment

## **Executive Spotlight**

### **STATE DEPARTMENT UPDATES IMMIGRATION AND VISA POLICIES**

Last week, the [State Department announced](#) it is updating its policy for in-person interviews, authorizing consular officers to waive the need to conduct an in-person

interview for certain categories of F, M and “academic J visa applicants,” who usually are students, professors, research scholars, short-term scholars or specialists. Details on country eligibility and procedures are forthcoming. In other immigration-related news, efforts to include immigration reform in the federal budget reconciliation process were [blocked](#) by the Senate parliamentarian.

## **DEPARTMENT OF INTERIOR REESTABLISHES BUREAU OF LAND MANAGEMENT WASHINGTON, DC, OFFICE**

Department of Interior (DOI) Secretary Deb Haaland [announced](#) that the National Bureau of Land Management (BLM) office would be returning to Washington, D.C., to coordinate the agency’s work better and ensure that the office is adequately staffed. The previous administration relocated the BLM to Grand Junction, Colorado, causing a mass [exodus](#) of the BLM’s staff, with more than half of the office’s staff deciding to leave rather than relocate. The newly established Colorado office struggled to replace those who left the agency, and it continues to tackle the loss of institutional knowledge that resulted from the relocation. The DOI hopes that they can reverse some of the damage by returning the headquarters to D.C. The Colorado office will remain open and be turned into the bureau’s western headquarters to facilitate the integration of the unique perspectives of the western states in policy development, conservation and the agency’s scientific mission.

### **Must-Read Reports**

#### **[Global Innovation Index 2021: Tracking Innovation through the COVID-19 Crisis](#) — World Intellectual Property Organization (WIPO)**

Out of 132 economies assessed for 81 different indicators, the report found the world’s most-innovative economy in 2021 is Switzerland’s, followed by those of Sweden, the U.S., the U.K. and the Republic of Korea.

#### **[Academic Research and Development](#) — National Center for Science and Engineering Statistics, National Science Foundation**

A new report identifies major facts and trends in academic R&D funding, research infrastructure at universities, and support for graduate students and postdocs in science and engineering.

### **People in the News**

On September 8, President Biden [announced](#) his intention to nominate Tony Allen, president of Delaware State University, to lead the President’s Board of Advisors on Historically Black Colleges and Universities and the [HBCU Initiative](#).



**Publisher:** Office of Government Relations

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**Contributors:** Salma Bahramy, Joanne Carney, Erin Heath, Matt Hourihan, Tatiana Nin, André Porter, Haylie Swenson, Alessandra Zimmermann

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August 31, 2021

## ACTION ITEM

The 2021 Virtual Catalyzing Advocacy in Science and Engineering (CASE) Workshop will be held September 23-24. [CASE](#) is an exciting opportunity to learn from science policy and advocacy experts about the role of science in policymaking and the federal policymaking process. The workshop empowers participants with ways to become a voice for basic research throughout their careers. As the workshop is virtual, registration is FREE and open to all STEM undergraduate students, graduate students and postdocs.

[Register today](#) and share with students and postdocs interested in science policy and advocacy.

## COVID-19 News

### FDA APPROVES PFIZER COVID-19 VACCINE

The Food and Drug Administration (FDA) has given its [full approval](#) to the Pfizer-BioNTech COVID-19 vaccine for individuals 16 and older, following its emergency use authorization in December 2020. The shot will now be marketed as Comirnaty.

### COURT OVERRULES FLORIDA GOVERNOR'S SCHOOL MASK MANDATE BAN

A judge in Florida [overturned](#) Gov. Ron DeSantis's (R) executive order barring school districts from imposing mask mandates to prevent the spread of COVID-19. More than 10 districts in the state — including some of Florida's largest — imposed mask mandates in defiance of the governor's order. The judge's ruling prevents the administration from taking any actions to punish districts that put mask rules in place. The governor is expected to appeal.

### GLOBAL COVID-19 UPDATE

Global vaccination efforts continue as many countries face a surge of new cases and hospitalizations. The U.S. has seen a 500% increase in [hospitalizations](#) over the

past two months and last week hit a daily average of 100,000 hospitalized COVID-19 patients. The EU has [recommended](#) that its member states reimpose restrictions on U.S. tourists. Conversely, [Denmark](#) and [Australia](#) plan to lift restrictions. In addition to its national vaccine, Cuba will now deploy [Sinopharm](#) from China. [New Zealand](#) and [Japan](#) face challenges with inoculation as both nations report deaths related to COVID-19 vaccines.

## Mark Your Calendar

### MONDAY, SEPTEMBER 13

- The [AAAS EPI Center](#) will hold a webinar on September 13 at 2-3 p.m. ET titled “[Anticipating Changes in Federal Methane Emissions Standards for Oil and Gas Operations](#).” The webinar will convene experts and practitioners to discuss the scientific evidence that can inform federal, state, regional and local efforts to mitigate methane emissions with the purpose of reducing the rate of climate change.

### FRIDAY, SEPTEMBER 17 – FRIDAY, OCTOBER 1

- The Department of the Interior has announced an [upcoming forum](#) to address opportunities and challenges regarding expanding broadband access in Tribal communities across the U.S. The virtual summit will begin on September 17 and conclude on October 1. The agency invites researchers and stakeholder groups to attend and submit ideas to highlight during the summit to develop recommendations and programs.

### WEDNESDAY, NOVEMBER 10

- The Department of Energy’s (DOE) Office of Science is accepting applications for the 2021 [Office of Science Graduate Student Research \(SCGSR\) Awards](#). The SCGSR Awards go to U.S. graduate students to support their graduate thesis research at a DOE laboratory or partner institutions. The deadline for applications is November 10, 2021.

## Budget & Finance Outlook

### FEDERAL SPENDING MOVING FORWARD ON MULTIPLE TRACKS

After extended debate, last week the House [reached an agreement](#) to advance a \$3.5 trillion reconciliation spending package and a separate infrastructure package. Congressional committees are now determining how best to spend that \$3.5 trillion as reconciliation deadlines approach. Votes for both packages, each of which will contain billions in support for science, innovation and sustainability, will come in late September and beyond. In addition, the Senate comes back next week to continue its appropriations work, with a deadline of September 30.

## WHITE HOUSE PUBLISHES FY 2023 BUDGET MEMO

On Friday, the White House released a [Memorandum on R&D Priorities for the FY 2023 Budget](#) directing agencies on what to prepare for their upcoming budget requests. The memo includes notes on the pandemic, climate and energy, emerging technology, equity in STEM, and national security and resilience, among others.

### Congressional News

## || S&T Hearings

### WEDNESDAY, SEPTEMBER 1

[Full Committee Markup - National Defense Authorization Act for Fiscal Year 2022](#) — House Committee on Armed Services

[Stakeholder Perspectives on the Cyber Incident Reporting for Critical Infrastructure Act of 2021](#) — House Committee on Homeland Security | Subcommittee on Cybersecurity, Infrastructure Protection, and Innovation

### Executive Spotlight

## OSTP RELEASES READOUT FROM ROUNDTABLE ON ADVANCING EQUITY IN SCIENCE

The White House Office of Science and Technology Policy (OSTP) [posted a readout](#) on their second roundtable organized to address diversity, equity, inclusion and anti-racism in science and technology institutions. The event focused on lessons learned from a National Academies of Science, Engineering and Medicine summit and mechanisms for removing “structural barriers to full and inclusive participation in science and technology classrooms, labs, workplaces, and research centers.”

## NIH DETAILS WORK ON OPIOID CRISIS

In a [JAMA article](#) published last week, National Institutes of Health (NIH) leaders described progress in the agency’s three-year-old opioid-focused HEAL Initiative, which stands for Helping to End Addiction Long-term. “With dedicated support from Congress, the HEAL Initiative has funded more than \$1.5 billion in research through more than 500 projects nationwide, and plans to expand research investments. This comprehensive approach includes efforts to develop more effective therapies for managing pain and for treating opioid use disorder (OUD), test effective pain management strategies that limit addiction risk, and implement evidence-based OUD treatment in a variety of settings. The HEAL Initiative joins the power of science with the strengths of communities to address an urgent public health need,” wrote HEAL Interim Director Rebecca G. Baker, National Institute of Neurological Disorders and Stroke Director Walter J. Koroshetz, and National Institute on Drug Abuse Director Nora D. Volkow.

## NIST TO DEVELOP NEW TECHNOLOGY SUPPLY CHAIN SECURITY FRAMEWORK

Last week, the White House issued [a fact sheet](#) following a meeting with private sector and education leaders to discuss efforts needed to address cybersecurity threats. Several commitments and initiatives were announced during the meeting, including that the National Institute of Standards and Technology (NIST) will work collaboratively with industry and other partners to “develop a new framework to improve the security and integrity of the technology supply chain.”

### In the States

#### OREGON ADOPTS STRICT CLIMATE LAW

Gov. Kate Brown (D) signed a climate bill that is being hailed as [one of the strongest in the country](#). The new climate law will require utilities to achieve zero emissions by 2040, with interim reductions of 80% by 2030 and 90% by 2035. The law also prohibits development of new fossil generation and allocates \$50 million for use in community energy projects.

#### MINNESOTA INVESTS IN EFFICIENCY

Gov. Tim Walz (D) signed the [Energy Conservation and Optimizations \(ECO\) Act](#) into law, updating and expanding Minnesota’s Conservation Improvement Program, which aids households and businesses in using energy more efficiently, reducing energy use while reducing greenhouse gas emissions. The ECO Act will expand eligibility for low-income households, require energy efficiency improvements in public schools and support conservation goals for investor-owned utilities.

#### COLORADO ACCOUNTS FOR SOCIAL COSTS OF METHANE GAS

Colorado is the first state to [require consideration](#) of the “social cost” of methane in new building-electrification and oil and gas emissions rules this year, as required by the [Colorado Greenhouse Gas Pollution Reduction Roadmap](#). Released in January, the roadmap details the pathways for achieving economy-wide emissions reductions targets of 26% by 2025, 50% by 2030, and ultimately 90% by 2050. The U.S. Interagency Working Group on Social Cost of Greenhouse Gases [calculated](#) the social costs of economic damages caused by releasing emissions into the atmosphere to be \$1,756 per short ton, compared to \$68 for carbon dioxide.

### Must-Read Reports

#### [Unclassified Summary of Assessment on COVID-19 Origins](#) — Office of the Director of National Intelligence

An unclassified report from the U.S. Intelligence Community concluded that SARS-CoV-2 likely emerged and first infected humans no later than November 2019; the virus was not developed as a biological weapon; and the

Chinese government was not aware of the virus prior to the initial outbreak of COVID-19 in Wuhan in December 2019. However, the report also reflects a lack of consensus as to whether the outbreak started due to natural exposure to an infected animal or to an incident in a laboratory. The report indicated that a conclusive assessment of the origins would require much more cooperation from China's government.

## **The Economic Impact and Functional Application of Human Genetics and Genomics — American Society for Human Genetics**

The report examines federal investment in research projects and its downstream impacts on economic growth and national competitiveness, using the Human Genome Project as a case study.

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**To : "Ice, Gillian" [iceg@ohio.edu](mailto:iceg@ohio.edu)**

**Subject : AACOM Advocates for Rural GME, PSLF and Interest-Free Student Loan Deferment**

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COLLEGES OF OSTEOPATHIC MEDICINE



**September 7, 2021**

## AACOM in Action

- [AACOM Nominates President John Hummer \(BCOM\), Ashley Reich \(Liberty University\) to ED Negotiated Rulemaking Committee](#)
- [AACOM Urges Rural GME Solutions in Budget Reconciliation](#)
- [AACOM Promotes Interest-Free Student Loan Deferment for Medical Residents](#)
- [AACOM, Coalition for Physician Accountability Release Virtual Interview Recommendations for 2021-22 Residency Season](#)
- [AACOM Recommends Improvements to PSLF Program](#)
- [AACOM Applauds FDA Approval of COVID Vaccine; Urges Everyone to Receive Vaccinations](#)

**What You Need to Know**



## Shape the Future of Osteopathic Medical Education: Register for AACOM Advocacy Day

Sign up today for AACOM Advocacy Day, held virtually on October 6-7, to join hundreds of like-minded advocates—students, residents, DOs, faculty and more—to ensure that osteopathic medical education (OME) priorities are integrated into federal policies and programs. Advocates will ask Congress to:

- Strengthen rural graduate medical education (GME)
- Remove discriminatory restrictions on DOs at federally funded GME programs
- Increase National Institutes of Health (NIH) research funding and representation for osteopathic medical schools
- Authorize health professions students to vaccinate during public health emergencies

Take a stand for OME and [sign up today!](#) There is no cost to register.

**Register for AACOM Advocacy Day**

## Senate Approves Bipartisan Infrastructure Bill; Senate and House Pass Budget Resolution

- **Infrastructure:** The Senate voted 69-30 on August 10 to approve a \$1 trillion bipartisan bill that invests in and transforms transportation, water, energy and broadband infrastructure. House Speaker Nancy Pelosi (D-CA) confirmed a September 27 deadline to vote on the infrastructure package.
- **Budget:** On August 11, after a marathon “vote-a-rama” session, the Senate voted 50-49 along party lines to adopt a \$3.5 trillion spending blueprint, which focuses on Democratic priorities that President Biden outlined in his American Jobs Plan. The House then approved the budget framework on August 24, after days of negotiations between Democratic leadership and moderates. Committees will have until September 15 to craft their sections of the spending bill, which is expected to include



significant funding for families, healthcare, climate and jobs. Support from all 50 Democratic Senators is required for passage. [Learn more.](#)

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## Advocate!



### Urge Congress to Support GME Policies in Budget Reconciliation

[Tell Congress](#) to include measures that strengthen public health infrastructure and the physician workforce in the pending budget reconciliation package. Continued investment in federal GME funding is critical to ensure the stability and continuity of residency programs.

**Take Action**



### Ask Congress to Provide Interest-Free Student Loan Deferment for Medical Residents

[Tell your Representative](#) to support the *Resident Education Deferred Interest (REDI) Act*. The *REDI Act* would make medical education more affordable by providing interest-free student loan deferment for medical and dental residents.



Take Action



## Share Your PSLF Story!

The U.S. Department of Education (ED) seeks public comments on administrative improvements to the Public Service Loan Forgiveness (PSLF) Program, as well as individual student loan borrowers' experiences while working in public service or pursuing PSLF. Share your story and [submit your recommendations today!](#)

Take Action

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## Policy Update

### ED Unveils Several Student Loan Policy Changes

- After waiving many of the Free Application for Federal Student Aid requirements for the 2021-2022 academic year due to COVID-19, ED will restart [audits](#) of financial aid applicants for the 2022-2023 school year, which begins on October 1.
- ED will provide [automatic student loan relief](#) to eligible disabled borrowers. Initially, ED will cancel \$5.8 billion in student loan debt for 323,000 borrowers.
- ED retroactively waived interest on loans for 47,000 current and former active-duty service members, a policy that was authorized under the *Higher Education Act*. This data match provides better information and [access to the interest-waiver benefit](#).
- Following up on the March 2021 borrower defense policy change, ED recently released a [detailed legal rationale](#) for the reversal and announced that it would not seek a replacement formula. Instead, ED would presumptively assume all borrowers are due full relief unless colleges, borrowers or an investigation present evidence to the contrary.

### ED Announces Title IX Enforcement Update

- ED will no longer enforce a Title IX provision recently struck down by a U.S. District Court judge as arbitrary and capricious. Previously, decision makers in sexual

misconduct investigations were prohibited from considering evidence by those not participating in cross-examination at a live hearing.

- [Going forward](#), decision makers may consider evidence from all parties during an investigation.

---

## Engagement and Resources

Now Open: 2022 NHSC Students to Service Loan Repayment Program: Osteopathic medical students may now apply to receive up to \$120,000 in loan repayment assistance. Applications are due on November 4, 2021. [Learn more](#).

Reminder: THCGME Program Funding Opportunity Due 9/21: HRSA released a funding opportunity to support primary care residency programs in rural and underserved communities. Applications are due September 21, 2021. [Learn more](#).

NIH Grant Promotes Diversity in Research Education: Apply now for Maximizing Opportunities for Scientific and Academic Independent Careers grants, which encourage individuals from diverse backgrounds, including underrepresented groups in biomedical and behavioral sciences, to pursue careers in research. Applications are due by November 18, 2021. [Learn more](#).



Visit AACOM's [Federal Funding Opportunities and Resources web page](#) for federal grants of interest to osteopathic medical education.



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Subject : AAN Issues Formal Position Statement on COVID-19 Vaccine

## MEDPAGE TODAY®

### Daily Headlines

Tuesday, August 03, 2021

#### NEUROLOGY

### AAN Issues Formal Position Statement on COVID-19 Vaccine



#### INFECTIOUS DISEASE

### Retracted COVID Paper Lives on in New Citations



#### CARDIOLOGY

### Exercise Without Cutting Calories? Good Luck With Vascular Aging



#### SPECIAL REPORTS

### NewYork-Presbyterian Sued for Allegedly Ignoring Child Sexual Abuse



#### PRACTICE MANAGEMENT

### AMA, Physician Groups Slam VA's Planned Standards of Practice Changes



#### SURGERY

### Urine Tests Before Surgery Blasted as Mostly Unnecessary



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#### GASTROENTEROLOGY

### Two Ulcerative Colitis Biologics: Same Clinical Difference?



OPINION

## Taking Care of Our Patients When Time Is Fleeting



CASE STUDIES

## Teen Seeks Care for Delayed Growth Compared With His Twin



OPINION

## Bring House Calls Into the 21st Century



RHEUMATOLOGY

## Thumbs Up From FDA for Anifrolumab in Lupus



NEUROLOGY

## SSRI No Help for Depression After Stroke



### Weekly Survey

## How to Get More Shots in Arms

With vaccination rates stalled and COVID cases and hospitalizations continuing to climb, [calls for vaccine mandates](#) are growing and [incentives](#) are getting a renewed push [VOTE >](#)

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yourlocalepidemiologist@substack.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : ACIP meeting: Additional Pfizer dose

# ACIP meeting: Additional Pfizer dose

Katelyn Jetelina  
Sep 23    Comment    51

Okay, it's final. Phew. And I promise I didn't leave early.

It's recommended that you get a third Pfizer dose if you're in one of the following groups:

- 65+ years
- Long term care residents
- 50-64 years with underlying condition
- 18-49 years with underlying conditions are recommended to weigh their individual benefits with risks

Three important notes:

1. This does **not** include occupations (like healthcare workers or teachers). Don't kill the messenger.
2. The definition of "fully vaccinated" did **not** change for mandates. So, if you have two doses of Moderna/Pfizer or 1 dose of J&J you are still considered fully vaccinated. You do **not** need an additional dose for mandates.
3. This is a third dose for the Pfizer series. This is not a recommendation for an additional shot for the Moderna series or J&J.

How did we get to this decision?



As a reminder, VRBPAC had a [discussion last week](#) discussing the safety and effectiveness of a third Pfizer dose. The FDA supported that [vote](#) last night. Then the ball was thrown to ACIP to make a policy recommendation.

For the past two days, [ACIP](#) met to decide the policy around a third Pfizer vaccine. Yesterday's meeting mainly comprised of the same conversation as VRBPAC (*i.e.* frustration around no data). But today's meeting was incredibly informative. Importantly, ACIP needed to answer two questions:

1. What is the risk benefit ratio of getting a third dose?
2. Who should get a third dose (age, high risk conditions, occupation, and setting)?

#### **Risk-Benefit Ratio**

ACIP is just incredible at doing risk/benefit analyses. And today's presentation didn't disappoint. The question they needed to answer was: Would benefits of a third dose (prevented cases, hospitalizations, deaths, and transmission) outweigh the risks (vaccine-induced myocarditis and short-term side effects)?

They did this by assessing benefits and risks per every 1 million of additional shots administered.

For every 1 million doses, we would prevent between 7500-10000 COVID19 cases dependent on age. More infections would be prevented than myocarditis events expected. The most benefit would be for the younger population.

For every 1 million doses, more COVID19 hospitalizations would be prevented than myocarditis events expected. This is true for males and females across all age groups. The most benefit would be for the older populations.

There was no discussion about reduced transmission benefit, because CDC does not have the data on this. There was also no discussion about COVID19 induced myo

carditis or long COVID19 (compared to vaccine-induced myocarditis), which was disappointing to me.

#### **Who should get a third dose?**

All the voting members largely agreed that 65+ and long term care facility residents should get a third dose. There was much more discussion about age, occupation, and high risk conditions:

- On one end, voting members wanted people between 50-65 years included. One voting member brought up equity. For example, American Indians, on average, don't make it to 65 years because they are high risk under 65 years. And there is little-to-no risk of myocarditis. Others pointed that data doesn't show (right now) that those under 65 years need an additional dose.
- There was a lot of discussion about high risk conditions. For example, pregnant people with a chronic disease. Others pointed that data doesn't show (right now) that those with high risk conditions need an additional dose.
- Voting members brought up that it's clear people want a 3rd dose, even if there's no data yet that it's necessary. So why not let individuals who feel at increased risk make the decision for themselves?
- There was a lot of discussion about occupation and setting too. Several voting members advocated for an additional dose for healthcare workers. We could protect them from long COVID19. We could reduce absenteeism from work. We could help protect their families from transmission. After 19 months, they deserve at least that. Others mentioned that healthcare workers wear PPE and don't get infected at work, but rather get infected in the community, so this policy isn't helpful (I didn't really understand this point). Similarly, some pointed out that healthy caregivers of immunocompromised kids should get a third dose so we "cocoon" the most vulnerable. But others said there's no data on how much the 3rd dose would reduce transmission. We hypothesize this is the case, but no one has seen the data. One voting member pointed out: "We vaccinate to protect ourselves; not others".

#### **Vote**

ACIP decided the easiest way to determine the policy would be in four separate votes. Who should get a third dose of Pfizer?

1. 65+ and long term care facility residents: 15 YES; 0 NO
2. 50-64 years old with underlying conditions: 13 YES; 2 NO
3. Individual benefit and risk (*i.e.* shared decision making) who are aged 18-49 years with underlying conditions: 9 YES; 6 NO
4. High risk occupation or setting: 6 YES; 9 NO

**Bottom Line:** A third dose will only move the pandemic needle a little. We need to get unvaccinated people vaccinated to end this thing. But, with a third dose, some will now be able to better protect themselves and those around them. I know a lot of people (including myself) are disappointed and angry about the occupation/setting vote. Remember this isn't the end. There may be another vote in the coming weeks.

Love, YLE

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PEEK INSIDE MARS CENTER

VIEW ONLINE



# THE BIG QUESTION: **WHY DID THE CDC CHANGE COURSE ON MASKS?**

Wednesday, July 28, 2021

*In today's newsletter, adapting to an evolving pandemic; catching a peek of Mars's core; checking out tonight's meteor showers; and tracking space hurricanes. Plus, here's how squid help us figure out our brains.*



PHOTOGRAPH BY JOSEPH PREZIOS, AFP/GETTY IMAGES

By **Victoria Jaggard**, *SCIENCE* executive editor

My husband is a cautious person, so it came as no surprise to me when he adapted to COVID-19 restrictions like a duckling to water. He still sets aside the mail in a “quarantine zone” next to the door, washes his hands immediately after being outside, and eats only at restaurants that have outdoor seating. What did shock me was the time last week when we headed to the grocery store and—for the first time in over a year—he had forgotten his mask.

He and I were early adopters of the COVID-19 vaccine, getting our jabs as soon as they came available. It was so encouraging to see cases drop as vaccines rolled out nationwide, and we went into the start of summer feeling like there was, at last, an end in sight. The Centers for Disease Control and Prevention must have been even more optimistic, declaring in May that fully vaccinated people no longer had to wear masks indoors. (*Above, vaccinating in Rhode Island.*)

But that was before the rise of the highly transmissible Delta variant. As our **Michael Greshko** and **Maya Wei-Haas** write, the CDC had to reverse course this week as data came in showing that vaccinated people are just as likely to spread the

virus even if they don't get sick from it. Now, the CDC says, even vaccinated people should wear masks inside in places with significant transmission—which is a lot more places than you might expect. It is worrisome that only 49 percent of the population is vaccinated, and transmission is considered high by the CDC in nearly half of all U.S. counties. (*Pictured below, masked and unmasked in California.*)



PHOTOGRAPH BY FRANCINE ORR, LOS ANGELES TIMES/GETTY IMAGES

The more contagious variants also have scientists grappling with murky data on whether vaccinated people will need a third booster shot of the mRNA vaccines. Both the CDC and the Food and Drug Administration say they do not recommend booster shots based on the available evidence, and doctors shouldn't administer extra doses beyond those authorized by the FDA. Still, some health officials are pointing to studies purporting to show levels of neutralizing antibodies declining among people who received the Pfizer vaccine. As **Amy McKeever** writes for us, antibodies aren't everything, and other studies suggest that protection from the Pfizer shot should last for years. Experts also told us that booster shots aren't really the best way to deal with the threat of variants. The White House expects regular FDA approval for the COVID-19 vaccines as soon as late August, which will spur businesses to require vaccination of employees.



“The best way to do that is to get everybody vaccinated once rather than finessing the potential incremental benefit you might from a booster vaccine in one group when you have a whole other group of people who aren’t vaccinated at all,” says **Jane O’Halloran** of Washington University School of Medicine in St. Louis. (This all applies to healthy, fully vaccinated people; the situation is more complex for people with compromised immune systems, who may indeed benefit from a booster dose.)

I don’t envy the scientists and health officials who have to sift through the constantly changing data, looking at sample sizes and methods and trying to parse the best course of action for the entire nation. I may not need a booster yet, but for my part, I will continue to embrace caution as the best line of defense, and my family will be wearing masks at the grocery store for the foreseeable future.

*Do you get this daily? If not, [sign up here](#) or forward this to a friend.*

## TODAY IN A MINUTE

**Peek inside Mars:** Researchers have analyzed the interior of Mars for the first time, including its shockingly large liquid core. The latest discovery for NASA’s InSight lander will help scientists determine how the dusty planet became what it is today, [Nat Geo reports](#).

**Uh-oh:** Key hour-by-hour information used by firefighters to track wildfires may be off-limits after September, [the Los Angeles Times reports](#). The Pentagon has not responded to California officials who are requesting an extension of Pentagon satellite information used in the Fireguard program. U.S. Representative **Adam Schiff** is pressing the Pentagon to do so as well. The information falls outside the traditional international fighting scope of the U.S. military.

**Lucky Americans:** In other lands, people don't take the availability of vaccinations for granted. In Indonesia, where caseloads are still rising from COVID-19, people rush to get limited access to vaccines, [Sydney Combs writes](#). The nation of 270 million is talking about a "lost generation" to the pandemic, Combs writes.

**Beyond Bourdain:** Some critics thought it was creepy [to hear an AI version of Anthony Bourdain’s voice](#) “talk” three lines of words by the late chef and travel writer in a recent documentary. Apparently, you now can design a chatbot to talk like

a dead person. The purpose is to help loved ones of the deceased through their grief, the *San Francisco Chronicle* reports. But how far back can scientists re-create a voice? Last year, Nat Geo's **Debra Adams Simmons** wrote on how science brought back the voice of an Egyptian priest from 3,000 years ago.

## INSTAGRAM OF THE DAY



PHOTOGRAPH BY @ANNALIMINOWICZ

**Another pandemic effect: Patrycja Donaburska**, already undergoing psychiatric treatment and therapy, has seen her mental health decline during the pandemic. “Her anorexia worsened, panic attacks on public transport returned, and she had panic attacks at home, which she had never had before,” writes photographer **Anna Liminowicz**, working on a project on mental health in Poland. Experts say the pandemic’s effects on mental health may outlast the physical effects.

READ ON

*Anna Liminowicz's photography is funded in part by National Geographic Society's [COVID-19 Emergency Fund for Journalists](#). If you would like to support storytelling like this, [learn more here](#).*

## THE BIG TAKEAWAY

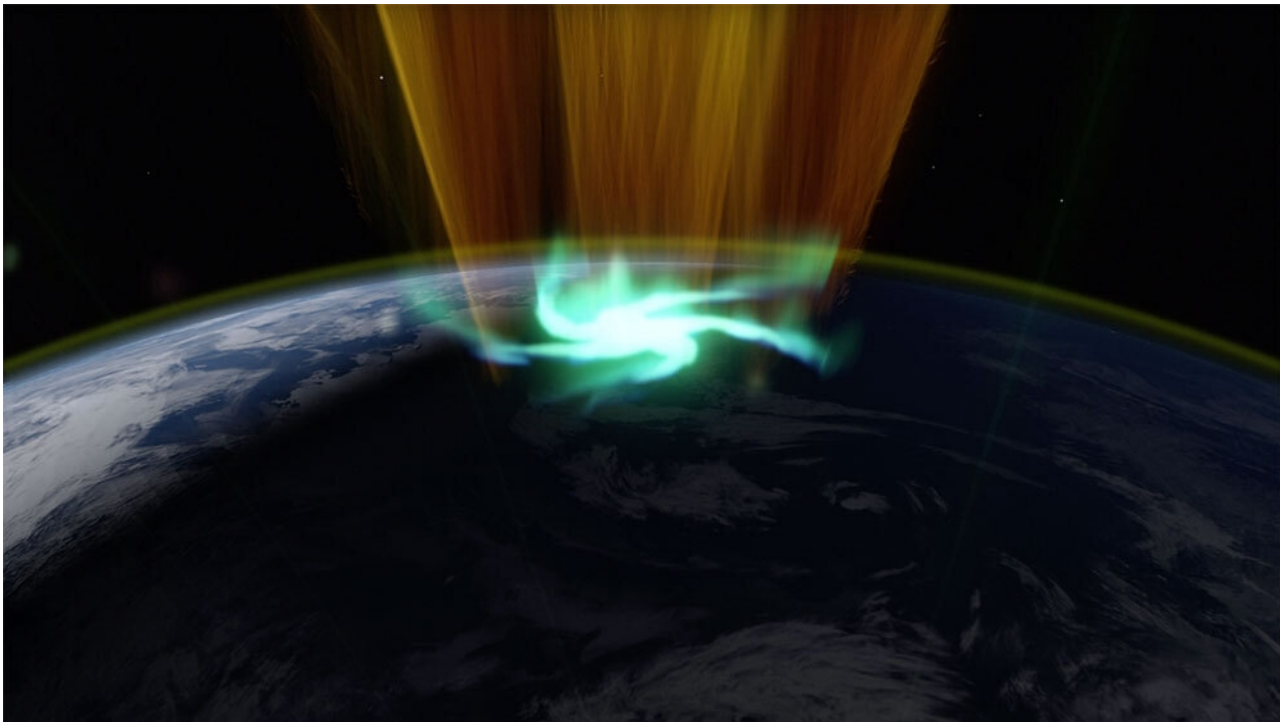
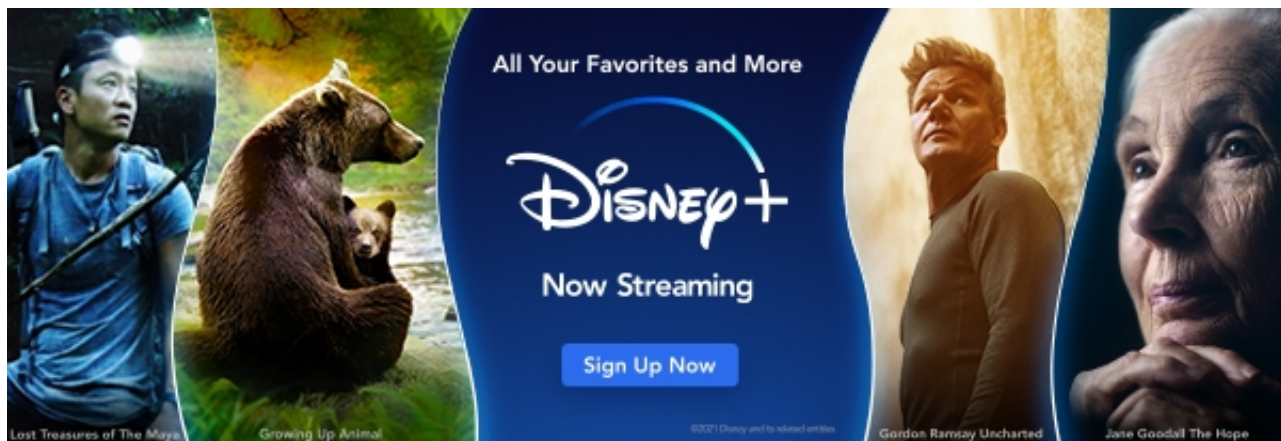


ILLUSTRATION BY MARK GARLICK

**‘Space hurricane’:** We’re talking about a gigantic funnel of plasma up to 1,700 miles across and 31,000 miles high. The only place these “hurricanes” have been spotted is above Earth, **Robin George Andrews** and **Jason Treat** [write in the August issue of \*National Geographic\*](#). Of a 2014 “hurricane,” illustrated above, they write: “The weak solar wind, combined with the alignment of the north magnetic poles of the sun and Earth, constricted a normally expansive swath of northern lights into a tight, rotating spot above magnetic north.”

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## THE NIGHT SKIES

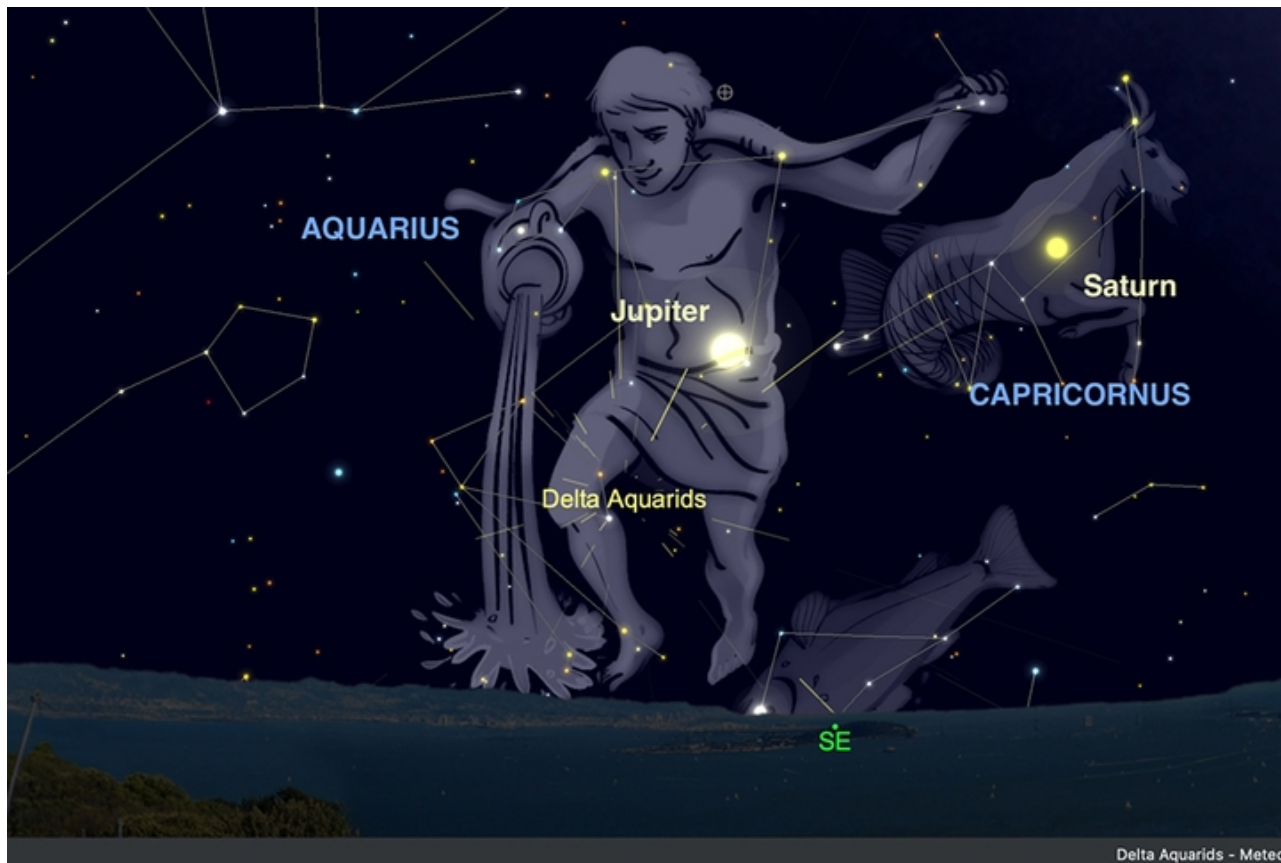


ILLUSTRATION BY ANDREW FAZEKAS

**Meteor shower:** Get ready for cosmic fireworks. The Delta Aquarid meteor shower peaks tonight through Friday night, with about 15 to 20 shooting stars per hour. Viewing is best in southern latitudes of the Northern Hemisphere, as well as the Southern Hemisphere. Best visibility may be before midnight, before the waning



gibbous moon rises. The meteors seem to radiate from the constellation Aquarius. The show is an excellent pre-gamer to the iconic August Perseid meteor showers.

WHEN METEORS SHOWER

## IN A FEW WORDS

“

This is the (admittedly queasy) choice to bring back to life the voice of a dead guy, and make that voice speak words that already existed in another form. Is it creepy, knowing about it now? Absolutely. Was it wrong? I don't think so.

Jason Sheehan

Writer and critic, on the use of an AI voice for the late Anthony Bourdain in a documentary

From: Is it OK to bring a voice back to life?

## DID A FRIEND FORWARD THIS NEWSLETTER?

On Thursday, **Rachael Bale** writes on the latest on animals and wildlife. If you're not a subscriber, [sign up here](#) to also **George Stone** on travel, **Whitney Johnson** on photography, **Debra Adams Simmons** on history, **Rob Kunzig** on the environment, and **Rachel Buchholz** on family and kids.

## LAST GLIMPSE



PHOTOGRAPH BY BRIAN J. SKERRY

**Squid-tastic:** From the waters off Cape Cod, these squid have helped scientists shed light on everything from the basics of nerve signaling to the evolution of complex brains—and may help improve therapies for neurological disorders. (Above, photographer and Nat Geo Explorer **Brian J. Skerry** captures the image of hundreds of longfin inshore squid gathering off the Massachusetts coast to spawn each spring.)

SEE THEM!

*This newsletter has been curated and edited by David Beard and Monica Williams, and Jen Tse has selected the photos. Have an idea, a link, an opinion on squid? We'd love to hear from you at [david.beard@natgeo.com](mailto:david.beard@natgeo.com). Thanks for reading.*

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## MEDPAGE TODAY®

### Daily Headlines

Tuesday, October 05, 2021

#### SPECIAL REPORTS

### Air Ambulance Costs Are Soaring



#### CASE STUDIES

### Invasive Pneumococcal Disease in Older Man, but There's a Worse Problem



#### INFECTIOUS DISEASE

### Delta Variant Acquitted in Need for Pfizer Boosters. Kind Of.



#### INFECTIOUS DISEASE

### Post-Vax Myocarditis Fairly Benign Even in a Diverse Population



#### SPECIAL REPORTS

### One-Word Change in Prostate Cancer Guideline Has Some Urologists in Arms



#### SPECIAL REPORTS

### Healthcare Workers Involved in Hospital Shooting



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#### OPINION

### Vaccine Proselytizing in Burkina Faso



MEETING COVERAGE

## Diabetes Risk With Breastmilk, Antidepressants, Weight Loss



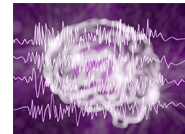
MEETING COVERAGE

## New Parathyroid Hormone Disease Guidelines Make Their Debut



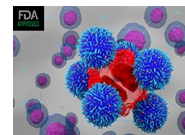
NEUROLOGY

## Some Epilepsy Drugs Linked to Cardiovascular Disease



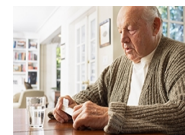
ONCOLOGY/HEMATOLOGY

## FDA OKs First CAR T-Cell Therapy for Adult ALL



CARDIOLOGY

## Antihypertensive Add-On Has Edge Over Boosting Doses



CARDIOLOGY

## Post-TAVR Pacemakers Not All Doom and Gloom



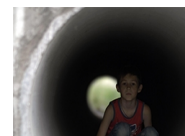
RHEUMATOLOGY

## Lupus Frailty Index Predicts Organ Damage



PEDIATRICS

## Childhood Adversity a Leading Preventable Factor in Death?



MEETING COVERAGE

## Disease Control With Cabozantinib Plus Atezolizumab in CRPC



OB/GYN

## Mental Health Disorders Linked to Higher Childbirth Costs



ONCOLOGY

## Risk of Premature Death Seen in Testicular Cancer Survivors



PUBLIC HEALTH & POLICY

## ACOs Angling for a Bigger Role in Health Equity



### Weekly Survey

## Would You Lie to Get a Booster?

The FDA and CDC have so far only authorized a COVID booster shot for certain recipients of Pfizer's vaccine, but some people are [skirting the rules](#) and getting one anyway [VOTE >](#)

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To : "Ice, Gillian" iceg@ohio.edu  
Subject : America Has Been Flying Blind This Pandemic

## MEDPAGE TODAY®

### Daily Headlines

Wednesday, September 22, 2021

#### OPINION

### America Has Been Flying Blind This Pandemic



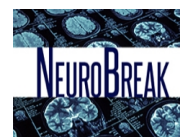
#### SPECIAL REPORTS

### COVID Deaths Surpass 1918 Flu Deaths



#### NEUROLOGY

### ALS-Lipids Link, Eye Disease and Heightened Dementia Risk; Parkinson's and NSAIDs



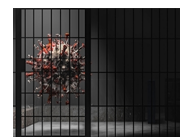
#### INFECTIOUS DISEASE

### J&J Says Second Dose of Their COVID Vaccine Boosts Protection



#### INFECTIOUS DISEASE

### COVID Vaccines No Match for a Delta Prison Outbreak



#### SPECIAL REPORTS

### Hospitals Billed \$320K for Average Complex COVID Stay



#### ADVERTISEMENT

#### ONCOLOGY/HEMATOLOGY

### Antibody-Drug Conjugate OK'd for Cervical Cancer





SPECIAL REPORTS

## Could Texas Law on Limiting Prior Authorization Delays Move the Needle Nationwide?



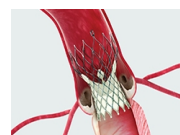
PRIMARY CARE

## Diabetes and Tuberculosis Link Quantified



CARDIOLOGY

## Low Risk and Bicuspid Anatomy: A Passable Combination for TAVR Thus Far



MEETING COVERAGE

## Androgen-Targeting Combos Show Promise in Prostate Cancer



INFECTIOUS DISEASE

## Probiotic Flops for Ventilator-Associated Pneumonia Prevention



MEETING COVERAGE

## Angiogenesis Inhibitor Slows Extrapancreatic Neuroendocrine Tumors



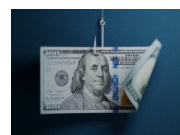
MEETING COVERAGE

## Transarterial Radioembolization Slows Progression of CRC With Liver Mets



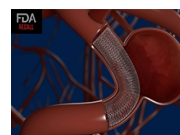
PUBLIC HEALTH & POLICY

## Cash Rewards Not an Inherently Improper Influence on Study Participants



SURGERY

## Pipeline Flex Endovascular Flow Diverters Under Recall



MEETING COVERAGE

## IMpower133: Real-World vs Clinical Trial Data in SCLC



ASCO READING ROOM

## Matteo Lambertini and Eva Blondeaux on Pregnancy After Breast Cancer

ASCO READING ROOM

## New Analysis Gives Reassurance About Potential Long-Term Effects of Chemotherapy Oncofertility



### Weekly Survey

### Who Needs a Booster?

As the [White House, CDC, and FDA wrestle](#) over which Americans need COVID booster shots, we're turning the question over to you [VOTE >](#)

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American Journal of Public Health  
Volume: 111, Number: 10 (October 2021)

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## AJPH Global News

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American Journal of Public Health, Vol. 111, No. 10: 1712-1714.

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E. Thomas Ewing

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Ira Katz

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José Manuel Aburto

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Mental Health Consequences of Racial/Ethnic Disparities in Policing  
Among Adolescents in the United States and the United Kingdom

Juan Del Toro

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Patricia Homan

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## US Communities Need More Accessible Data to Improve Health, Not Less

Sonja S. Hutchins and Robert M. Mayberry

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## Trading Poverty for Health: Ending the Scourge of Medical Bankruptcy Requires Bold Action

Mark G. Shrim

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Sandro Galea and Roger Vaughan

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## Vulnerability and Resilience: Use and Misuse of These Terms in the Public Health Discourse

David H. Chae, Shendra A. Snipes, Kara W. Chung, Connor D. Martz, and Thomas A. LaVeist

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Toward an Office of Evidence-Based Learning in Public Health: Formal Support, Pedagogical Scholarship, and Effective Teaching

Elizabeth Reisinger Walker, Dawn L. Comeau, Colleen M. McBride, and Delia L. Lang

American Journal of Public Health, Vol. 111, No. 10: 1741-1745.

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Finding the Next Flint: The Need to Update the Blood Lead Reference Value

Perry Gottesfeld

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The Prison Industrial Complex as a Commercial Determinant of Health

Daniel Eisenkraft Klein and Joana Madureira Lima

American Journal of Public Health, Vol. 111, No. 10: 1750-1752.

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Countering Misinformation About Abortion: The Role of Health Sciences Librarians

Jill Barr-Walker, Teresa DePiñeres, Peace Ossom-Williamson, Biftu Mengesha, and Nancy F. Berglas

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## A Public Health Agenda for the 2020s

Nicholas Freudenberg

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## Rurality, Gender, and Obesity: An Intersectionality Perspective on Rural Men's Health

Demetrius A. Abshire, Guillermo M. Wippold, Dawn K. Wilson, Bernardine

M. Pinto, Janice C. Probst, and James W. Hardin

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## Broader Implications of Eliminating FDA Jurisdiction Over Execution Drugs

Patricia J. Zettler and Seema K. Shah

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## Rapid-Cycle Experimentation With State and Federal Policymakers for Optimizing the Reach of Racial Equity Research

Elizabeth C. Long, Jessica Pugel, J. Taylor Scott, Nicolyn Charlot,

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COVID-19 Isolation and Quarantine Experience for Residential Students  
at a Large Four-Year Public University

Meredith E. Hayden, Diane Rozycki, Kawai O. Tanabe, Marsh Pattie,  
Laurie Casteen, Susan Davis, and Christopher P. Holstege  
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Implementation of a COVID-19 Mass Vaccination Clinic to College  
Students in Montana

Sally Moyce, Julie Ruff, Ann Galloway, and Sarah Shannon  
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COVID-19 Case Rates After Surveillance and Vaccinations in a Statewide  
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The Interplay of Workplace Redesign and Public Policy in the 21st  
Century

Leslie B. Hammer

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Work Redesign for the 21st Century: Promising Strategies for Enhancing  
Worker Well-Being

Meg Lovejoy, Erin L. Kelly, Laura D. Kubzansky, and Lisa F. Berkman  
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State-Level Sexism and Women's Health Care Access in the United  
States: Differences by Race/Ethnicity, 2014–2019

Kristen Schorpp Rapp, Vanessa V. Volpe, and Hannah Neukrug  
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“Do Their Own Thing”: Radical Health Care and the Fair Haven Community  
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Ezra S. Lichtman  
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The 1918 Influenza Pandemic Versus COVID-19: A Historical Perspective  
From an Italian Point of View

Andrea Cozza, Giuseppe Maggioni, Gaetano Thiene, and Maurizio Rippa  
Bonati  
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in Peru

Alisha H. Redelfs, Paola G. Donoso Naranjo, and María del Pilar L.  
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A Novel Imputation Approach for Sharing Protected Public Health Data

Elizabeth A. Erdman, Leonard D. Young, Dana L. Bernson, Cici Bauer,  
Kenneth Chui, and Thomas J. Stopka  
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Kevin Martinez-Folgar, Diego Alburez-Gutierrez, Alejandra  
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Disparities in Opioid Overdose Death Trends by Race/Ethnicity, 2018–2019, From the HEALing Communities Study

Marc R. Larochelle, Svetla Slavova, Elisabeth D. Root, Daniel J. Feaster, Patrick J. Ward, Sabrina C. Selk, Charles Knott, Jennifer Villani, and Jeffrey H. Samet  
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Mental Disorders, Gun Ownership, and Gun Carrying Among Soldiers After Leaving the Army, 2016–2019

Robert M. Bossarte, Hannah N. Ziobrowski, David M. Benedek, Catherine L. Dempsey, Andrew J. King, Matthew K. Nock, Nancy A. Sampson, Murray B. Stein, Robert J. Ursano, and Ronald C. Kessler  
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Rebuilding a US Federal Data Strategy After the End of the “Community Health Status Indicators”

Robert L. Phillips, Norma F. Kanarek, and Vickie L. Boothe  
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Prevention of Sexually Transmitted Diseases and Pregnancy Prevention  
Among Native American Youths: A Randomized Controlled Trial, 2016–2018

Lauren Tingey, Rachel Chambers, Hima Patel, Shea Littlepage, Shauntel Lee, Angelita Lee, Davette Susan, Laura Melgar, Anna Slimp, and Summer Rosenstock

American Journal of Public Health, Vol. 111, No. 10: 1874-1884.

<https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Fajph.aphapublications.org%2Fdoi%2F10.2105%2FAJPH.2021.306447%3Fai%3Ds0%26ui%3Dbb8%26af%3DT&data=04%7C01%7Ciceg%40ohio.edu%7C2fb7188959ff4340bdf08d98af47832%7Cf3308007477c4a70888934611817c55a%7C0%7C0%7C637693605636578063%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000&sdata=vjhFGZ13f%2B9IEMCXPtUIzEjhHm%2FRkdXpfnpbRfh59fg%3D&reserved=0>

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Adolescent Police Stops, Self-Harm, and Attempted Suicide: Findings  
From the UK Millennium Cohort Study, 2012–2019

Dylan B. Jackson, Alexander Testa, Rebecca L. Fix, and Tamar Mendelson

American Journal of Public Health, Vol. 111, No. 10: 1885-1893.

<https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Fajph.aphapublications.org%2Fdoi%2F10.2105%2FAJPH.2021.306434%3Fai%3Ds0%26ui%3Dbb8%26af%3DT&data=04%7C01%7Ciceg%40ohio.edu%7C2fb7188959ff4340bdf08d98af47832%7Cf3308007477c4a70888934611817c55a%7C0%7C0%7C637693605636578063%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000&sdata=7FR87Ej0g83HZ9%2FWs%2Btikb7yNH40wdVG4dOes39Ippg%3D&reserved=0>

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American Journal of Public Health, Vol. 111, No. 10: 1894-1894.

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Date : 7/23/2021 8:18:45 AM

From : "MedPage Today | Daily Headlines"

daily.headlines@broadcaster3.medpagetoday.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Andy Slavitt on How Politics Became a Public Health Crisis

## MEDPAGE TODAY®

### Daily Headlines

Friday, July 23, 2021

#### OPINION

### Andy Slavitt on How Politics Became a Public Health Crisis



#### INFECTIOUS DISEASE

### Many Older Adults With Severe COVID Presented With Atypical Symptoms



#### SPECIAL REPORTS

### Countries Move Ahead With Mix-and-Match COVID Vaccines



#### PUBLIC HEALTH & POLICY

### Poorer Americans Bear the Brunt of Life Expectancy Drop



#### SPECIAL REPORTS

### American Hospital Association Joins Others in Support of COVID Vax Mandates



#### OPINION

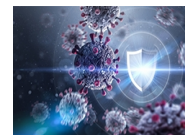
### To Pay or Not to Pay: Medicare's Big Aduhelm Decision



#### ADVERTISEMENT

#### INFECTIOUS DISEASE

### CDC Staff Hint at Vax Boosters for the Immunocompromised



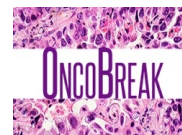
MEETING COVERAGE

## Watchman FLX Stays on Track for Stroke Prevention



ONCOLOGY/HEMATOLOGY

## Legal End Run on Talc Cases? Oral Drug Parity Redux; AI Boosts Upper GI Detections



ENDOCRINOLOGY

## Doubling Semaglutide Dose Helps Get HbA1c Under Control



DERMATOLOGY

## Rates of Serious Infection Differ Among Psoriasis Therapies



MEETING COVERAGE

## Survey Probes Barriers to Long-Acting Injectable PrEP for MSM



PEDIATRICS

## Hospitals Offer Opportunity to Get Kids Vaccinated for Flu



ONCOLOGY/HEMATOLOGY

## Black Prostate Cancer Patients Less Likely to Go Under the Knife During Pandemic



PUBLIC HEALTH & POLICY

## FDA's Device Center Needs More \$\$, Staff, Says Center Director



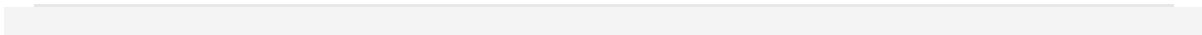
RHEUMATOLOGY

## MRI Predicts Flare in Kids With Inactive Arthritis



ASCO

## Jeffrey Graham, MD, on Immunotherapy for Non-Clear Cell Renal Cell Carcinoma



ONCOLOGY/HEMATOLOGY

## Adding Carboplatin May Help Some Kids With Medulloblastoma



SPECIAL REPORTS

## Georgia Hospital Chooses PAs/NPs, Not Physicians, for Daily Rounds



ASCO READING ROOM

## Role of Immune Checkpoint Inhibition in Non-Clear Cell Renal Cancer



### Weekly Survey

### Mandatory Vaccination for Health Workers?

Infection prevention and epidemiology groups [issued a joint statement](#) saying that healthcare workers should be required to get a COVID-19 vaccine as a condition of employment [VOTE >](#)

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**To : "Ice, Gillian" [iceg@ohio.edu](mailto:iceg@ohio.edu)**

**Subject : APHA Legislative Update - October**

# Legislative Update



## October 2021

Join us for the Legislative Update call on  
Monday, October 4 at 1 p.m. (ET)

APHA's legislative staff will provide an update on  
congressional activity and Q&A

Call 800-442-5794

Passcode: 141930



1. [President signs continuing resolution averting federal government shutdown](#)
2. [As House, Senate and White House continue work on reconciliation legislation, APHA urges the inclusion of strong climate and health provisions](#)
3. [APHA responds to state-level attacks on abortion access](#)
4. [Anti-smoking advocates take action on tobacco tax and menthol](#)
5. [House bill would restore health care access for the immigrant community](#)
6. [Join us at APHA's 2021 Annual Meeting and Expo!](#)

### **President signs continuing resolution averting federal government shutdown**

On Thursday, Sept. 30, President Biden signed a two-month continuing resolution to keep the federal government funded through Dec. 3, preventing a partial government shutdown. The current fiscal year ended on Sept. 30, and Congress has yet to send any of the 12 annual spending bills to the president for his signature. While the House has passed nine of the 12 bills, the full Senate has yet to consider any of the bills. [APHA strongly praised the House](#), which passed its version of the FY 2022 Labor-HHS-Education appropriations bill in July. The bill contains significant funding increase for key programs at the Centers for Disease Control and Prevention and the Health

Resources and Services Administration. APHA will continue to monitor the FY 2022 appropriations process and will continue to advocate for the highest possible funding levels for CDC and HRSA as Congress works to finalize FY 2022 appropriations before the continuing resolution expires.

Advocates can use APHA's action alert to [send a message to their members of Congress](#) urging them to support strong funding for public health programs.

### **As House, Senate and White House continue work on reconciliation legislation, APHA urges the inclusion of strong climate and health provisions**

This week, House and Senate Democratic leaders and the White House continue to work to find a path forward on the currently proposed \$3.5 trillion budget reconciliation legislation, also referred to as the Build Back Better Act in the House. While the House committees that received instructions to draft portions of the legislation have all finished their work and the House Budget Committee has combined the proposals into the Build Back Better Act, the \$3.5 trillion figure is facing pushback from more conservative members of the House and Senate Democratic caucuses. Sens. Kyrsten Sinema, D-Ariz., and Joe Manchin III, D-W.Va., have stated publicly that they are not likely to support a package with a total as high as \$3.5 trillion. In the House, a group of moderate Democrats have said they want the House to first vote on the more modest bipartisan infrastructure package that also includes the reauthorization of federal transportation programs, which has already passed the Senate and is scheduled to be considered by the House later today, though timing remains uncertain as negotiations over the larger reconciliation bill continue. Meanwhile, House progressives had urged House Speaker Nancy Pelosi to ensure the House passes the larger reconciliation bill before it considers the bipartisan infrastructure bill, with some threatening to vote against the bipartisan bill if its passage is not paired with a vote on the reconciliation legislation in the House. Speaker Pelosi has stated that she is not planning to have the House vote on a bill that cannot pass the Senate, so it is likely some of the provisions in the House bill will have to change as the House continues to negotiate with the Senate. APHA staff will continue to follow the latest developments.

The Build Back Better Act as it currently stands in the House contains provisions supporting many priorities supported by APHA, including:

- The creation of a federal Medicaid program to ensure coverage for individuals living in states that do not participate in the Affordable Care Act's Medicaid expansion.
- An expansion of the Medicare program to include coverage for dental, vision and hearing services.
- A permanent extension of the American Rescue Plan Act's expanded tax credits for individuals to purchase ACA coverage through the federal marketplace.
- New funding to strengthen the nation's public health infrastructure.
- Extensive tax credits and other incentives for the power sector to help achieve the goal transitioning to 100% clean non-combustion energy sources by 2035.
- Tax credits and investments to increase the number of electric vehicles on our roadways and to build the needed charging infrastructure to support the transition to zero-emission vehicles.
- Funding to replace all lead service lines throughout the nation.
- A universal paid family and medical leave program.
- Funding to support efforts to address the maternal mortality crisis.

The bill also contains numerous other important provisions related to strengthening child nutrition programs, expanding access to affordable housing, expanding access to affordable child care and access to tuition-free community college, among others.

On Sept. 7, APHA joined the American Academy of Pediatrics, the American Lung Association, the Medical Consortium on Climate and Health and more than 70 other public health and medical organizations in sending [a letter to all members of Congress](#) urging them to include infrastructure investments that will provide real and

substantial health and climate benefits for the nation in the \$3.5 trillion reconciliation bill. In the letter, the groups urged Congress to include robust climate and health provisions that would:

- Advance health equity and environmental justice.
- Strengthen health care and public health infrastructure, capacity and climate resilience.
- Foster a rapid transition to clean, non-combustion renewable energy.
- Promote active and non-polluting forms of transportation.
- Provide parks and greenspace, trees and urban forestry, and green infrastructure.
- Build community resilience to climate change.
- Ensure access to clean and affordable drinking water for all.
- Build healthy and sustainable food and agricultural systems.
- Enable an equitable economic recovery and ensure a just transition to a green economy.

Advocates can send a message to their members of Congress urging them to include strong investments for public health infrastructure, climate change, expanding access to comprehensive and affordable health coverage and other critical public health priorities in the reconciliation bill by visiting [APHA's action alerts page](#).

### **APHA responds to state-level attacks on abortion access**

State-level abortion restrictions are one of the most dangerous threats to reproductive health access in the nation, with states like Texas and Mississippi enacting harsh laws not informed by science and not in line with rights established in previous court precedent. A law enacted by Mississippi that would ban abortion after 15 weeks after conception was deemed unconstitutional by the U.S. Court of Appeals for the Fifth Circuit, but Mississippi is now appealing the decision to the Supreme Court in *Dobbs v. Jackson Women's Health Organization*. APHA weighed in on the case before the Supreme Court in [an amicus brief](#) joined by the Guttmacher Institute, the Center for U.S. Policy and 547 public health deans, chairs, scholars and professionals. The brief outlines why abortion access is both an individual right and a necessary part of protecting the public's health. As explained in the brief, lack of access to abortion carries serious health consequences for pregnant people, making state-level restrictions like Mississippi's a serious health threat. APHA joined George Washington University in [a press release](#) on the importance of the case.

Meanwhile in Texas, the [Supreme Court's decision in Whole Woman's Health v. Jackson](#) allowed one of the most extreme abortion restrictions in the nation to go into effect at the beginning of September. The decision has virtually eliminated access to abortion in the state of Texas and may embolden other states to enact similar legislation. To prevent state-level abortion restrictions from threatening this essential right, APHA has previously endorsed [H.R. 3755 / S. 1975](#), the Women's Health Protection Act, which would create a statutory right for abortion providers to provide abortion care and for patients to receive it. On Sept. 20, APHA sent [a letter to the House of Representatives](#) explaining the connection between abortion access and public health and urging support for the bill. The House voted on H.R. 3755 on Sept. 24, passing the bill by [a vote of 218-211](#).

The bill now awaits action in the Senate. APHA members can contact their senators and [urge their support](#) for the Women's Health Protection Act using APHA's action alert.

### **Anti-smoking advocates take action on tobacco tax and menthol**

APHA participated in a number of advocacy actions in September to protect the public health from the impacts of tobacco. On Sept. 24, APHA joined an organization letter to the [House](#) and [Senate](#) expressing support for provisions in the Build Back Better Act that would raise taxes on cigarette products, impose a tax on e-cigarettes and close existing tobacco tax loopholes. Also on Sept. 24, APHA joined [an amicus brief](#) arguing in favor of a court-ordered timeline for the Food and Drug Administration to issue a rule on menthol cigarettes in *African American Tobacco Control Leadership Council et al. v. U.S. Dept. of Health and Human Services et al.* FDA has



yet to issue a rule on menthol after a recent flurry of advocates urging action, including [a letter from November 2020](#), [a Citizens Petition supplement](#) from this January and [a letter from this March](#), all of which APHA joined. Although [FDA previously announced its commitment](#) to release a rule on menthol, advocates worry that without a mandatory timeline, the agency will continue to delay as it has since the original Citizens Petition demanding action on menthol was filed in 2013. The recently submitted amicus brief outlines how FDA has previously delayed action on menthol and how menthol tobacco products increase youth initiation, increase likelihood of addiction and target Black communities. The brief concludes by arguing that any further delay by FDA to ban menthol would allow ongoing harm to the public's health, thus necessitating FDA be put on a court-ordered timeline for the menthol rule.

### **House bill would restore health care access for the immigrant community**

On Sept. 13, APHA [joined a letter to House and Senate leaders](#) in support of [H.R. 5227](#), the LIFT the BAR (Lifting Immigrant Families Through Benefits Access Restoration) Act. In 1996, the Personal Responsibility and Work Opportunity Reconciliation Act imposed a ban on immigrants who are legally in the U.S. from accessing public programs like Medicaid and the Supplemental Nutrition Access Program for the first five years after their residence or citizenship is approved. Laws like these and the Trump administration's public charge policy prevent and dissuade immigrant communities from rightfully accessing essential health care services as well as services that support nutrition and housing. The LIFT the BAR Act would remove the five-year ban, allowing lawfully present immigrants to be eligible for these essential programs. The letter urges support for the bill, explaining that lifting the ban is a crucial step in the path toward health equity, as the social safety net is currently inaccessible to millions of families of color.

You can [urge your members of Congress](#) to take action on other health equity issues using APHA's action alert.

### **Join us at APHA's 2021 Annual Meeting and Expo!**

The APHA Annual Meeting and Expo is the largest and most influential yearly gathering of public health professionals, bringing the public health community together for robust scientific programming, networking, social events, poster sessions and more. APHA's 2021 Annual Meeting and Expo will take place Oct. 24-27 online and in Denver and begin with the Opening General Session on Sunday. The 2021 theme is ["Creating the Healthiest Nation: Strengthening Social Connectedness."](#) Activities like virtual business meetings and poster sessions, and on-demand short films will start on Oct. 18. Whether participating in Denver or online, attendees will have access to high-quality scientific sessions, inspiring presentations and many opportunities to connect with peers. Check out the [updated Schedule at a Glance](#) and [register now](#).

APHA is keeping a close watch on the evolving COVID-19 situation, and protecting the health and safety of our attendees is paramount. All in-person Annual Meeting attendees and contractors must be fully vaccinated and must wear a facial mask during all indoor activities at APHA 2021. Read our [latest health and safety update from APHA Executive Director Georges Benjamin, MD](#), and make plans to join us in Denver or online.

### **Additional APHA advocacy news**

Given the rapid pace of action in Washington, D.C., we wanted to highlight additional issues we have weighed in on recently. Those include:

- [Organization letter to Congress](#) expressing support for the inclusion of maternal health provisions in the Build Back Better Act (Sept. 17)
- [Organization letter to Senate leaders](#) in support of S. 2691, the Strengthening the Vaccines for Children Program Act of 2021 (Sept. 16)
- [Organization letter to Congress](#) urging inclusion of 12-month continuous eligibility for Medicaid and the Children's Health Insurance Program in upcoming reconciliation legislation (Sept. 14)

- [Organization letter](#) to the Office of Management and Budget urging increased funding for the Teen Pregnancy Prevention program and other sexual health programs at CDC in fiscal year 2023 (Sept. 14)
- [Organization letter](#) to the Department of Agriculture requesting that non-school sponsors like daycares be eligible to operate the Summer Food Service Program (Sept. 14)
- [Organization letter](#) to the Office of Management and Budget urging \$512 million in funding for the Title X family planning program in the President's budget for fiscal year 2023 (Sept. 10)
- [Coalition letter](#) from the National Alliance for Nutrition & Activity to the U.S. Department of Agriculture commending action to update the Thrifty Food Plan to make affording food easier for Supplemental Nutrition Assistance Program beneficiaries (Sept. 7)
- [Letter to House Energy and Commerce Committee and Senate Environment and Public Works Committee leaders](#) urging them to maximize funding for zero-emission school buses in infrastructure legislation (Sept. 1)

**Thank you for all you are doing to address the ongoing pandemics of COVID-19 and racism.** Please share our COVID-19 guidance in [English](#) and [Spanish](#) and our [statement on racism](#) as you join in the chorus for justice. Our [Advancing Racial Equity](#) and [COVID-19 Conversations](#) webinars and [COVID-19](#) and [racism](#) pages are also great resources for you and the public.

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daily.headlines@broadcaster3.medpagetoday.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Approved Cancer Drugs That Don't Work; Hospitalizations, Deaths Among the Vaccinated

## MEDPAGE TODAY®

### Daily Headlines

Monday, October 04, 2021

#### PODCASTS

### Approved Cancer Drugs That Don't Work; Hospitalizations, Deaths Among the Vaccinated



#### OPINION

### Are Restaurants Exacerbating the Obesity Epidemic?



#### OPINION

### Three Ways Leadership Can Get Nurses Back at the Bedside



#### ENDOCRINOLOGY

### COVID Risk in T1D; Lilly to Drop Some Insulin Prices; New ADA/EASD T1D Guideline



#### MEETING COVERAGE

### Bone Disease Drug Misses Endpoint, But Still Very Much Alive



#### MEETING COVERAGE

### That's Not Just Gum on the Soles of Your Shoes...



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MEETING COVERAGE

## Vaccine Could Be Shot in the Arm Against RSV in Older Adults



OPINION

## Too Many Black Men Are Dying From Prostate Cancer



MEETING COVERAGE

## COVID Prevention Tx Safe, Shows Efficacy in High-Risk Groups



MEETING COVERAGE

## Supplements to Prevent Bone Breaks? VITAL Says Forget It



MEETING COVERAGE

## Hospitalizations, Intubations Surged in Kids in Arkansas During Delta



MEETING COVERAGE

## Black Women with HIV Face Higher Early Death Risk



OPINION

## Passing Off Patients; Recruiting the Top Physicians



OPINION

## 'Throwing a Raccoon in a Henhouse': What We Heard This Week



Weekly Survey

## Would You Lie to Get a Booster?

The FDA and CDC have so far only authorized a COVID booster shot for certain recipients of Pfizer's vaccine, but some people are [skirting the rules](#) and getting one anyway [VOTE >](#)

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To : "Ice, Gillian" iceg@ohio.edu  
Subject : Are We Jumping the Gun on COVID Boosters?

## MEDPAGE TODAY®

### Daily Headlines

Wednesday, August 25, 2021

#### OPINION

### Are We Jumping the Gun on COVID Boosters?



#### CARDIOLOGY

### Histology of Vaccine Myocarditis; PFO Closure for Divers; New Evolut Valve OK'd



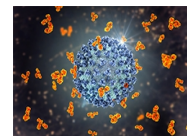
#### SPECIAL REPORTS

### 'Alarming' Number of Pregnant Women Admitted to Alabama ICUs



#### SPECIAL REPORTS

### ADE Is Still Not a Problem With COVID Vaccines



#### SPECIAL REPORTS

### Oregon Emergency Docs Issue Vaccination Plea Amid COVID Surge



#### NEUROLOGY

### Eyes Spy Brain Amyloid; Irisin-Cognition Link; A Look at Anti-IgLON5 Disease



#### ADVERTISEMENT

#### PRIMARY CARE

### More and More U.S. Kids Being Diagnosed With Diabetes



ENDOCRINOLOGY

## USPSTF Lowers Age to Start Diabetes Screening in Overweight/Obese Adults



NEPHROLOGY

## FDA OKs New Drug for CKD-Related Pruritus



DERMATOLOGY

## Oral Drug Active in Teens With Atopic Dermatitis



HIV/AIDS

## High-Dose HBV Revaccination Better Protects HIV Patients



OB/GYN

## Abortion Stays in the Spotlight in Courts, State Legislatures



### Weekly Survey

### Is Your Compassion Wearing Thin?

This week has brought [reports of compassion fatigue](#) among healthcare workers, particularly those whose hospitals are [full of unvaccinated COVID-19 patients](#) [VOTE >](#)

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**Date : 8/16/2021 1:36:43 PM**

**From : "Evelyn Jones" evelyn.jones@info.greycompliance.com**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : Best Practices for Effective Cleaning Validation**

Hi Gillian,

This course provides practical guidance on cleaning validation regulatory compliance, in conjunction with, risk-based, reasonable and informed decision making and activity planning. The program will describe the requirements for establishing an effective cleaning validation program, including the development of a general policy, a "Cleaning Validation Master Plan" and the appropriate documentation for each study to be performed.

Attendance at 90-minute webinar will be beneficial to personnel directly involved in the development of cleaning procedures, cleaning validation programs and plans. Additionally, those responsible for cleaning validation protocols and execution activities, including validation and laboratory personnel, as well as, beginning or seasoned operational personnel who will eventually participate in such efforts, will find this course particularly useful. This includes Analytical Method Development, Quality Control, and Quality Assurance personnel.

#### **Key Course Outline:**

- Understand the importance and underlying principles of cleaning validation and the requirements to have adequate cleaning procedures for manufacturing equipment in contact with the product
- Understand the FDA perspectives on cleaning validation and areas of concern during regulatory inspections
- Be able to set up cleaning validation procedures, protocols and reports that meet current FDA, WHO, PIC/S and EU regulations
- Prepare and defend your own cleaning validation approach/program and avoid costly delays and/or rejections by regulatory agencies

**Join us for this highly-interactive Webinar**

**Topic:** Best Practices for Effective Cleaning Validation

**Date:** 18th, August, 2021, Wednesday

**Time:** 1:PM EDT | **Duration:** 90 Minutes

*Includes proprietary tools and helpful documentation!*

Can't attend live? [Enroll](#) and we'll send you a link to the recording version.

**Save Your Seat**

**INSTRUCTOR PROFILE:**

**J L. McElroy** has 10 years of experience as a consultant, and over 20 years total experience in the pharmaceutical and biotech industries. She has written & executed Equipment Qualification and Validation Protocols for numerous companies and specializes in Quality Assurance, Sterilization, Process and Cleaning Validation, Equipment Qualification and GMP Compliance Auditing.

**Warm Regards**

Evelyn Jones

Training Manager

Tel No.: 1-888-844-8963

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Subject : Biden Announces New Actions to Fight COVID

## MEDPAGE TODAY®

### Daily Headlines

Friday, August 20, 2021

#### INFECTIOUS DISEASE

### Biden Announces New Actions to Fight COVID



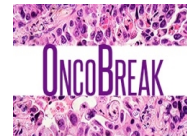
#### EMERGENCY MEDICINE

### Emergency Medicine Residents Report High Rates of Mistreatment



#### ONCOLOGY/HEMATOLOGY

### That Other Breast Cancer Gene; Long Haul to a Cure; Precision Medicine Explained



#### SPECIAL REPORTS

### Calif. Medical Board: Stop Issuing Bogus Mask Exemptions to Students



#### GASTROENTEROLOGY

### Prophylactic PPI Use Tied to Gastric Cancer in PCI Patients



#### INFECTIOUS DISEASE

### Michigan Restaurant at Center of 11-Year Salmonella Outbreak



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#### CARDIOLOGY

### Another SGLT2 Inhibitor OK'd for Heart Failure



CARDIOLOGY

## Pictures of Diseased Arteries Spur Action on Lipid Lowering



PUBLIC HEALTH & POLICY

## FDA Warns on Contamination Risk With Eco-Med Ultrasound Gels



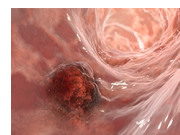
ONCOLOGY

## Can Working Out Slow Prostate Cancer Progression?



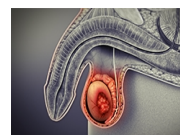
ONCOLOGY

## Are Early-Onset Colorectal Cancers More Aggressive?



ONCOLOGY/HEMATOLOGY

## Study Confirms, Clarifies Excess Mortality in Testicular Cancer Survivors



CLINICAL CHALLENGES

## Clinical Challenges: Pain From Atopic Dermatitis



AMERICAN COLLEGE OF RHEUMATOLOGY

## Uma Thanarajasingam, MD, PhD, on How ANA Positivity May Affect Treatment of Rheumatoid Arthritis

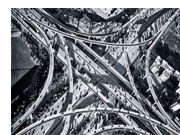
RHEUMATOLOGY

## Rheumatic Events With Checkpoint Inhibitors: Tumor Type Matters



PUBLIC HEALTH & POLICY

## Infrastructure Bill Negotiations Likely to Drag on for Awhile, Analyst Says



ASCO

## Conor Steuer, MD, on Immunotherapy Options for Non-Small Cell Lung Cancer Patients

## Immunotherapy Continues to Give Hope for the Future of NSCLC Care

ACR READING ROOM

### Does ANA Status in Rheumatoid Arthritis Influence Treatment Choice and Timing?



#### Weekly Survey

### Concerned About the Breakthrough Cases?

New [data from the Mayo Clinic](#) showed reduced effectiveness for COVID vaccines against symptomatic illness from the Delta variant, but strong protection against severe outcomes [VOTE >](#)

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To : "Ice, Gillian" iceg@ohio.edu

Subject : Boston Medical Community Grieves Doctors Killed in Tragic Plane Crash

## MEDPAGE TODAY®

### Daily Headlines

Friday, September 10, 2021

#### SPECIAL REPORTS

### Boston Medical Community Grieves Doctors Killed in Tragic Plane Crash



#### SPECIAL REPORTS

### Dying Neuroscientist Leaves Lasting Legacy



#### SPECIAL REPORTS

### Doctors Work to Treat, Understand Post-Vaccine Shoulder Injury



#### SPECIAL REPORTS

### Cough, Cancer, PTSD: Two Decades of World Trade Center Studies



#### OPINION

### The LMNOPs of Caring for the Nursing Workforce



#### ONCOLOGY/HEMATOLOGY

### 'The Art of Deliberate Listening'; Access Tied to Outcomes; No 'A' in Cancer



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#### ENDOCRINOLOGY

### Long-Term Costs, Outcomes of Sleeve Gastrectomy vs Roux-en-Y





INFECTIOUS DISEASE

## Biden Urges Docs to 'Reach Out' to Unvaccinated Patients About a COVID Shot



SPECIAL REPORTS

## 9/11's Lessons for Disaster Response



CARDIOLOGY

## Are DOACs Any Better Than Warfarin for Dementia Risk?



ONCOLOGY/HEMATOLOGY

## Life Expectancy Still Lower for Blood or Marrow Transplant Recipients



PRIMARY CARE

## FDA Punts on Decision for Vape Market Leaders



MEETING COVERAGE

## Study Sheds Light on Physician-Assisted Suicide in Lung Cancer Patients



MEETING COVERAGE

## Second-Line Combo Fails to Improve Survival in SCLC



MEETING COVERAGE

## Cancer Patients, COVID-19, and Long-Term Effects



MEETING COVERAGE

## High Response Rate in Non-Small Cell Lung Cancer With RET Inhibitor



OB/GYN

## Is Heparin-Based Thromboprophylaxis Necessary for Obstetric Patients?



MEETING COVERAGE

## Economic Status Not the Strongest Predictor of Hernia-Related Readmissions



PRACTICE MANAGEMENT

## Q&A: Rep. DelBene Talks Fixes to ACOs, Affordable Care Act



ASCO READING ROOM

## Nicholas Mitsiades, MD, on Liquid Biopsies for MSI-high Prostate Cancer

ASCO READING ROOM

## Liquid Biopsy for Identification of MSI and Monitoring of Tx Response in African American Men With Advanced Prostate Cancer



### Weekly Survey

## Is Roe v. Wade on the Way Out?

The Supreme Court [upheld a Texas law](#) banning abortion after 6 weeks' gestation and allowing Texans to sue those who 'aided and abetted' the procedure [VOTE >](#)

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From : "MedPage Today | Daily Headlines"  
daily.headlines@broadcaster3.medpagetoday.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : Can the Death Rattle Be Silenced?

## MEDPAGE TODAY®

### Daily Headlines

Wednesday, October 06, 2021

#### GERIATRICS

### Can the Death Rattle Be Silenced?



#### PUBLIC HEALTH & POLICY

### HHS Issues Final Rule Reversing Trump-Era Changes to Title X Program



#### CARDIOLOGY

### Vaping Still at Large; GDMT Down Amid COVID; Novel Avenue for Cholesterol Lowering



#### OPINION

### Fear Is at the Root of the COVID Crisis



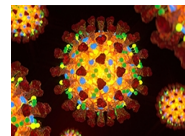
#### NEUROLOGY

### TikTok Tics; COVID Vaccines and CVST; Predicting Brain Injury Outcomes



#### SPECIAL REPORTS

### Delta on the Decline? Not So Fast



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#### POP MEDICINE

### 'Havana Syndrome': A Real and Present Danger



SPECIAL REPORTS

## New Fauci Documentary: 'You Don't Get Intimidated'



MEETING COVERAGE

## Is This the Future of Corticosteroids?



PUBLIC HEALTH & POLICY

## Collins to Step Down as NIH Director at Year's End



INFECTIOUS DISEASE

## Antibody Self-Testing Program Worked for British Essential Workers



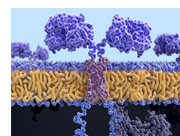
MEETING COVERAGE

## Atezo-Chemo Benefit in Extensive-Stage SCLC Seen Outside Trials, Too



ONCOLOGY/HEMATOLOGY

## CNS Activity in Acute Leukemia No Barrier to CAR-T Remissions



ASCO READING ROOM

## Elizabeth Salerno, PhD, on Exercise and Cognition in Patients With Breast Cancer

ASCO READING ROOM

## Exercise Is Easy Prescription for Patients Concerned About Potential Cognitive Effects of Chemotherapy



### Weekly Survey

## Would You Lie to Get a Booster?

The FDA and CDC have so far only authorized a COVID booster shot for certain recipients of Pfizer's vaccine, but some people are [skirting the rules](#) and getting one anyway [VOTE >](#)

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To : "Ice, Gillian" iceg@ohio.edu  
Subject : CDC Overrides Advisors on Pfizer Booster for High-Risk Workers

## MEDPAGE TODAY®

### Daily Headlines

Saturday, September 25, 2021

#### INFECTIOUS DISEASE

### CDC Overrides Advisors on Pfizer Booster for High-Risk Workers



#### PODCASTS

### Resilience: Being Tough in Tough Times



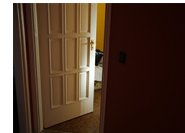
#### SPECIAL REPORTS

### Canada Starts Cracking Down on Fringe Medical Groups



#### OPINION

### Cognitive Bias Is Influencing Forensic Pathology Decisions



#### NEUROLOGY

### Another MS Drug Class Causes Concern for COVID Vaccine Protection



#### INFECTIOUS DISEASE

### Walensky: Pfizer Boosters for High-Risk Workers a 'Scientific Close Call'



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#### PODCASTS

### Balancing Medicine and Country Music Stardom





PRIMARY CARE

## How Many Deaths Will New Cigarette Warnings Prevent?



ONCOLOGY/HEMATOLOGY

## Radiation or Surgery in Early Lung Cancer: Does It Make a Difference?



MEETING COVERAGE

## Migraines Linked With Hot Flash Severity in Menopause



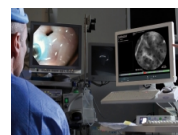
PODCASTS

## From Tragedy to Advocacy



GASTROENTEROLOGY

## Endomicroscopy Fails to Detect Wheat Sensitivity in IBS Patients



DERMATOLOGY

## FDA Issues Orders Clarifying Rules for Marketing Sunscreens



ONCOLOGY/HEMATOLOGY

## Another Checkpoint Inhibitor Misses Mark in Ovarian Cancer



MEETING COVERAGE

## What's Behind the Racial Differences in Women's Cancer Screening?



PODCASTS

## The Power of Social Media



PEDIATRICS

## More Severe Congenital Heart Disease Tied to Lower IQ in Kids



ASCO READING ROOM

## Lauren Byers, MD, on Personalized Therapy in Small-Cell Lung Cancer

ASCO READING ROOM

## Emerging Landscape of Clinically Relevant Biomarkers for SCLC



### Weekly Survey

### Has 'Open Notes' Affected Your Practice?

The new federal Information Blocking rule -- which includes the 'Open Notes' provision -- is allowing patients to [spot errors in their medical records](#) and forcing some doctors to [wrangle with a workaround](#) for delaying the release of bad news [VOTE >](#)

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From : "MedPage Today | Daily Headlines"

daily.headlines@broadcaster3.medpagetoday.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : CDC Panel Backs Third COVID Shot for the Immunocompromised

## MEDPAGE TODAY®

### Daily Headlines

Saturday, August 14, 2021

#### INFECTIOUS DISEASE

### CDC Panel Backs Third COVID Shot for the Immunocompromised



#### OPINION

### Suicide Assessment Is 'Damn Hard Writing'



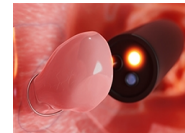
#### HOSPITAL-BASED MEDICINE

### Can Cannabidiol Help Frontline Healthcare Workers?



#### GASTROENTEROLOGY

### Incomplete Polyp Resection Proves Tricky Business for Cancer Risk



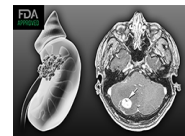
#### UROLOGY

### Novel Blood-Based Test Could Bolster MRI-Based Prostate Cancer Screening



#### ONCOLOGY/HEMATOLOGY

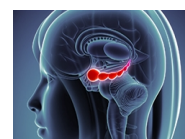
### FDA Approves First Drug for Von Hippel-Lindau-Associated Tumors



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#### ONCOLOGY/HEMATOLOGY

### Avoiding Hippocampus in Brain RT May Help Preserve Cognitive Function



MEETING COVERAGE

## Health IT Needs to Play Catchup With Customer Service for Patients



ONCOLOGY

## Could Nixing Race-Adjustments for eGFR Harm Black Cancer Patients?



AAD

## Matthew J. Zirwas, MD, on Development of Psoriasis in Dupilumab-Treated AD

ONCOLOGY/HEMATOLOGY

## Chemo Triplet May Boost Survival in Rare Soft-Tissue Sarcoma



INFECTIOUS DISEASE

## FDA Authorizes COVID Booster Shots for Certain Populations



### Weekly Survey

## Concerned About the Breakthrough Cases?

New [data from the Mayo Clinic](#) showed reduced effectiveness for COVID vaccines against symptomatic illness from the Delta variant, but strong protection against severe outcomes [VOTE >](#)

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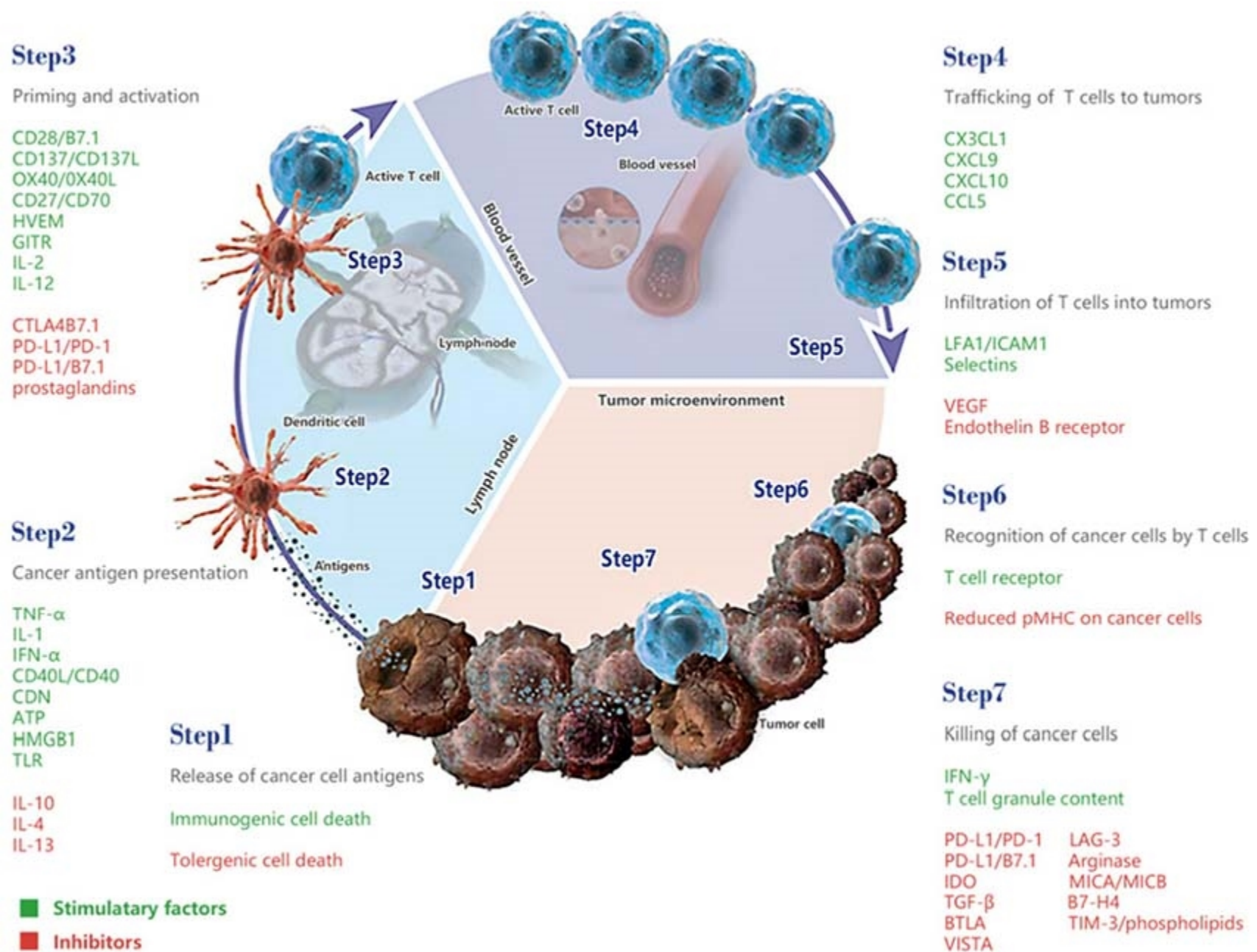
**From : "Allen" [reply@selleckchemical.com](mailto:reply@selleckchemical.com)**

**To : "Ice, Gillian" [iceg@ohio.edu](mailto:iceg@ohio.edu)**

**Subject : Compound-Therapy Based on Cancer-Immunity Cycle: Prospects for Antitumor Regimens**



## **Compound-Therapy Based on Cancer-Immunity Cycle**



Stimulatory and inhibitory factors in each step of cancer-immunity cycle

Am J Cancer Res . 2019 Feb 1;9(2):212-218. eCollection 2019





## Why Screening?

### Looking for candidate drugs in treatment of cancer and other disease

- Bortezomib is a novel therapeutic drug has shown promise for the treatment of multiple myeloma, yet its sensitivity and effectivity still have room for improvement.
- Dr Kong Sun-Young's lab performed a high-throughput cell-based screening using the FDA-approved Library from SelleckChem and identified albendazole (drug for worm infestations) as a sensitizer for combination therapy with bortezomib in the treatment multiple myeloma.



Cancer Res, 2014, 74: 1702.

## Customize Immuno-Oncology Compound Library



Specific Compounds



Quantities



Plate Map



Format (solid or DMSO solution)

View this in [web browser version](#).



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**Date : 7/29/2021 12:05:56 PM**  
**From : "Ali Rogelio" ali@spartanmedspine.com**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Cc : "Customer Service" cs@spartanmedspine.com**  
**Subject : Comprehensive COVID Solutions: Spartan Medical**  
**Attachment : Spartan Brochure - College & Universities Brochure.pdf;**

Good Afternoon Gillian,

Please see attached 2-page brochure as well as the information below:

Spartan Medical is excited to share the American Association of State Colleges and Universities (AASCU) official announcement that Colorado State University (CSU) - Pueblo has received the 2021 Excellence and Innovation Award for their Campus Pandemic Response for its outstanding results and potential to influence and serve as a model for other institutions (see announcement [here](#)). CSU's on-campus testing, staffing, contact tracing, and software integration model achieved a **20-fold reduction in positivity rates in six weeks** ([independent news story](#) and [YouTube video](#)).

Now that the new Delta variant is 83% of all new cases (per CDC), and based on a new study, is 225% more transmissible with 1000 times more viral load than the original SARS-CoV-2 (see study [link](#)), routine testing will play a significant role in controlling outbreaks on college campuses this coming fall semester. Spartan Medical assisted CSU Pueblo in developing their "playbook" and national "best practice" model on how to manage in-person learning during a pandemic, which is summarized in the attached two-page information sheet. Please let me know if we can schedule a call with your leadership team to discuss your school's testing needs prior to your campus opening at full capacity next month.

Regards,

**Allona Mae Rogelio**

**Customer Service Representative, Operations**

**Direct Line:** (240) 451-9674

**Main & Fax:** 1-888-998-3568

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\*\*\*\*\*

# IS YOUR COLLEGE PREPARED TO RETURN STUDENTS TO IN-PERSON LEARNING?



**SPARTAN**<sup>™</sup>  
M E D I C A L



**AS COLLEGES PREPARE FOR IN-PERSON LEARNING AT FULL CAPACITY THIS COMING SEMESTER, MANY SCHOOL ADMINISTRATORS ARE EVALUATING “EVIDENCE-BASED” TESTING MODELS TO KEEP STUDENTS AND FACULTY SAFE ON CAMPUS.**

Colorado State University (CSU) Pueblo received a national “campus pandemic response” award for their on-campus testing, staffing, contact tracing, and software integration model, which achieved a **20-fold reduction in positivity rates in six weeks** ([see link](#) and [YouTube video](#)).

Spartan Medical and our software technology partner, NTT DATA, provided this turn-key testing solution for CSU and we can provide this same award-winning program for your college ([click here](#)).





# TURN-KEY TESTING SOLUTION SUMMARY



**SPARTAN**<sup>TM</sup>  
M E D I C A L

- ✓ **National CLIA accredited laboratory agreements** with increased capacity.
- ✓ **Medically trained staff for sample collection** with coverage across all 50 states.
- ✓ **Secure, HIPAA compliant web-based scheduling portal** to streamline appointments and eliminate bottlenecks during sample collection.
- ✓ **FDA EUA Antigen Rapid Tests for screening and Real-Time Polymerase Chain Reaction (RT-PCR) Tests** to establish a base-line result and as a confirmatory test with a positive Antigen test result.
- ✓ **Dashboard for medical staff, school administrators and coaches to review test results** and provide to local and state regulatory agencies for reporting purposes.
- ✓ **Smart Badge solution** with a daily health survey and QR code for all students, faculty, and staff.
- ✓ **Contact Tracers** that have completed one of the public certification courses as needed (i.e. Johns Hopkins).

## LEARN MORE:

Contact Spartan Medical Inc.

☎ (888) 240-8091

✉ CS@SPARTANMEDSPINE.COM

To learn more about the available tools in the college “toolbox” and to create an a la carte model or turn-key solution on your campus, click the accompanying link **Colleges and Universities**.

This is the first time since the beginning of the pandemic that colleges will be at full-capacity. Let us help your school create a safe learning environment at your college campus this coming semester.

To receive a free, personalized COVID-19 testing solutions consultation, please contact Spartan Medical at 888-240-8091.



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Rockville, MD 20850

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**Date : 9/14/2021 3:37:14 PM**  
**From : "Katie Bennett" Katie@info.greycompliance.com**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : Computer System Validation (CSV) and Data Integrity**

Hi Gillian,

Computer systems used in conducting clinical trials must be evaluated to determine the level of compliance, established on validation and data integrity. We will walk through the entire System Development Life Cycle (SDLC) approach to validation of FDA-regulated computer systems.

This 4 hrs session will also focus on 21 CFR Part 11 and the significance of managing electronic records and signatures appropriately. We will cover all the essential clinical trial files that must be maintained before, during and after completion of the trial in the Trial Master File (TMF).

This discussion will take you through the use and transition to an electronic Trial Master File (eTMF) system. The pros and cons will be evaluated. Finally, how to prepare for a computer systems FDA inspection and its data used to support clinical trials will be discussed. Due diligence is extremely necessary to ensure data integrity is maintained throughout its life-cycle.

**Areas Covered:**

- Learn how to identify "GxP" Systems
- Discuss the Computer System Validation (CSV) approach based on FDA requirements
- Learn about the System Development Life Cycle (SDLC) approach to validation
- Discuss the best practices for documenting computer system validation efforts, including requirements, design, development, testing and operational maintenance procedures
- Understand how to maintain a system in a validated state through the system's entire life cycle
- Learn how to assure the integrity of clinical data that supports trial work
- Discuss the importance of "GxP" documentation that complies with FDA requirements



- Learn about the policies and procedures needed to support your validation process and ongoing maintenance of your clinical trial systems in a validated state
- Understand the key components of 21 CFR Part 11 compliance for electronic records and signatures
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#### **INSTRUCTOR PROFILE:**

**Carolyn Troiano**, has more than 30 years of experience in computer system validation in the pharmaceutical, medical device, animal health, tobacco and other FDA-regulated industries. During her career, Carolyn worked directly, or on a consulting basis, for many of the larger pharmaceutical companies in the US and Europe. She is currently active in the PMI, AITP, and RichTech, and volunteers for the PMI's Educational Fund as a project management instructor for non-profit organizations.

#### **Warm Regards**

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**Subject : Confused about the 3rd dose? Me too**

# Confused about the 3rd dose? Me too

Katelyn Jetelina  
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Today the White House COVID19 Task Force announced their support of a 3rd dose for the mRNA series among the general public. Starting September 20 (and assuming that the FDA and CDC agree), people can get their third dose 8 months after their second dose.

**This has been a rollercoaster to follow**

It's been a confusing story as there's a lot of rapidly moving parts. We're watching the scientific process unfold in real time, which is actually quite beautiful. Science is not static. Our understanding changes and morphs with more and more evidence. If it doesn't, then scientists are not doing their job. The virus also continues to mutate, so the science has to continue to re-evaluate.

Concurrently, we're watching how science then informs policy. Usually this is done slowly (unfortunately with public health), but the institutions are acting fast to the ever evolving landscape of the pandemic.

Nonetheless, it's confusing. Even for me. So, here is a recap of what's happened in the past 2 months regarding a third dose for the general public. I organized this Figure to distinguish what's happening from the science and institution/policymaking perspective:

**So, this is where we are at...**

## **Vaccines continue to protect against severe disease and death**

This is clear. And we are incredibly lucky this is still the case. There have been many studies confirming this around the world. Today, two additional studies from the CDC were released to add to this evidence base.

The first [study](#), using data from New Yorkers, found that from May 3–July 25 vaccine effectiveness against hospitalization was stable over time (ranging from 91.9% to 95.3%).

The second [study](#) looked at hospitalizations at 21 medical centers across 18 states over a 24 week period (March to July 2021). The scientists found *no* decline in vaccine effectiveness against COVID-19 hospitalization. Vaccine efficacy didn't change based on time of vaccination: Vaccine effectiveness was 86% 2–12 weeks after vaccination and 84% at 13–24 weeks. It also didn't matter whether you were “high risk” (65+, immunocompromised, or multiple comorbidities; see figure below).

FIGURE. Sustained vaccine effectiveness against COVID-19 among hospitalized adults, by patient status and interval since vaccination — 21 medical centers in 18 states, March–July 2021

## **The question is efficacy against mild to moderate disease**

The real question is how do the vaccines protect against asymptomatic, mild and moderate disease. Thankfully, Israel and the UK have public health infrastructures to evaluate these numbers in *real time*. While the data from the two countries disagree on the exact efficacy number (probably because of reasons I posted [here](#)) it's clear that it is reduced.

This week we confirmed the international data with national data from three important studies. The first [study](#) used data from Minnesota Mayo Clinic. They found that efficacy was reduced in July compared to earlier months. A second [study](#) from the CDC was released today using data among New Yorkers. From May 3–July 25, vaccine effectiveness against overall infection declined from 91.7% to 79.8% (see figure). The third [study](#) found this decrease was even more dramatic among nursing home residents (74.7% to 53.1%).

We don't know if the reduced efficacy is because of Delta or because of waning immunity (antibody response getting weaker over time) or both. Slides from the White House meeting today suggested that it has to do with waning immunity (not Delta). A Moderna study found that antibodies decreased over time regardless of variant.

#### **So, why do we need a third dose?**

Boosters are not new. In fact, in order to attend kindergarden, kids need five D-TAP shots, four polio shots, two MMR shots, three Hep A shots, and two chickenpox shots. HPV needs a booster after a year. Tetanus needs a booster after 10 years.

Some, like Dr. Hotez (a brilliant immunologist), have said a COVID19 third shot was inevitable because our two doses were too close together. Booster shots are most effective if they are at least 6 months apart. Back in Dec/Jan, we were losing 3,000 people a day to COVID19 disease, so we gave the full protection (2 doses) only 3-4 weeks apart knowing that we could be sacrificing durability of protection. Other countries, like the UK and Canada, decided to give their doses further apart.

Figure drawn by Dr. Hotez and posted on his Twitter account

#### **A third dose has stirred quite the debate among scientists**

On one hand, people think this is too soon for the general public to get a third dose. Vaccines are working beautifully against severe disease and death. Vaccine efficacy against mild and moderate is decreased, but not dramatically for the general public. Vaccine antibodies are decreasing, but we expected this. We don't know how well our innate immune system is doing (*i.e.* T-cells and memory B-cells). Vaccines could also be better used in other countries. Only 31% of the world is vaccinated. The next variant of concern can pop up anywhere in the world, which will then directly impact the US anyways.

On the other hand, (and the White House's argument) is that this is a proactive approach. (I do applaud them for this as we have always played a reactive game and it's exhausting). It takes time and effort to get another 100 million doses in arms. Vaccine efficacy against hospitalization and death could start decreasing with time (or with the next variant). Also, it looks like people are already getting their third dose re

ardless (about 1 million Americans have already done this), so might as well organize this in some sort of fashion.

#### **Bottom Line**

This is probably more than you ever wanted to know. A third dose is coming for you. I'm not convinced that I (a healthy, young person) needs it. I much rather give it to another person in another country. Or, hell, I rather a kid be able to get their vaccine. But I will stand in line come September if it's recommended.

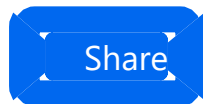
Love, YLE

P.S. Sorry J&J people... we are still waiting on data for you. Don't kill the messenger.

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TRACKING U.S. CASES AND DEATHS

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# Coronavirus Update

**This week:** The many ways COVID-19 could be harming the pancreas; why zoonotic diseases are more prevalent than ever; concerns mount over flu season.



PHOTOGRAPH BY HORACIO VILLALOBOS, CORBIS VIA GETTY IMAGES

COVID-19 linked to new diabetes cases—but long-term problems may be more severe



In addition to triggering new cases of diabetes, the virus may be directly damaging the organ in ways that could lead to chronic inflammation and even cancer.

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## 'Spillover' diseases are emerging faster than ever—thanks to us

History is pockmarked with the scars of past zoonotic outbreaks. What have we learned, why are they increasing, and what can we do to avoid them?

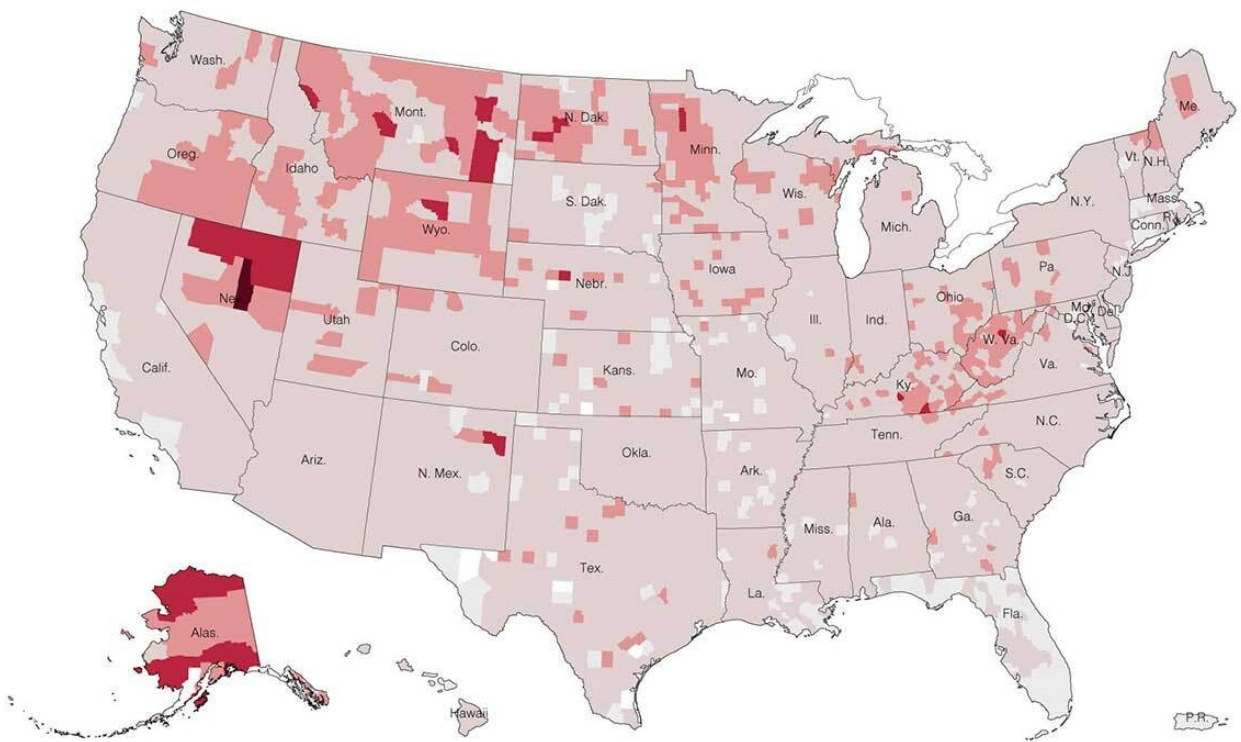
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## Overcrowded hospitals raise alarms over flu season

As the fourth wave ebbs and the number of new cases dips below 100,000 daily, hospitals are still reporting an average of 1,765 COVID deaths each day.

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### Why the WHO endorsed the first malaria vaccine, and what to expect next

The move marks the start of a highly anticipated rollout for this type of vaccine, which experts say could boost the health of millions of at-risk children.

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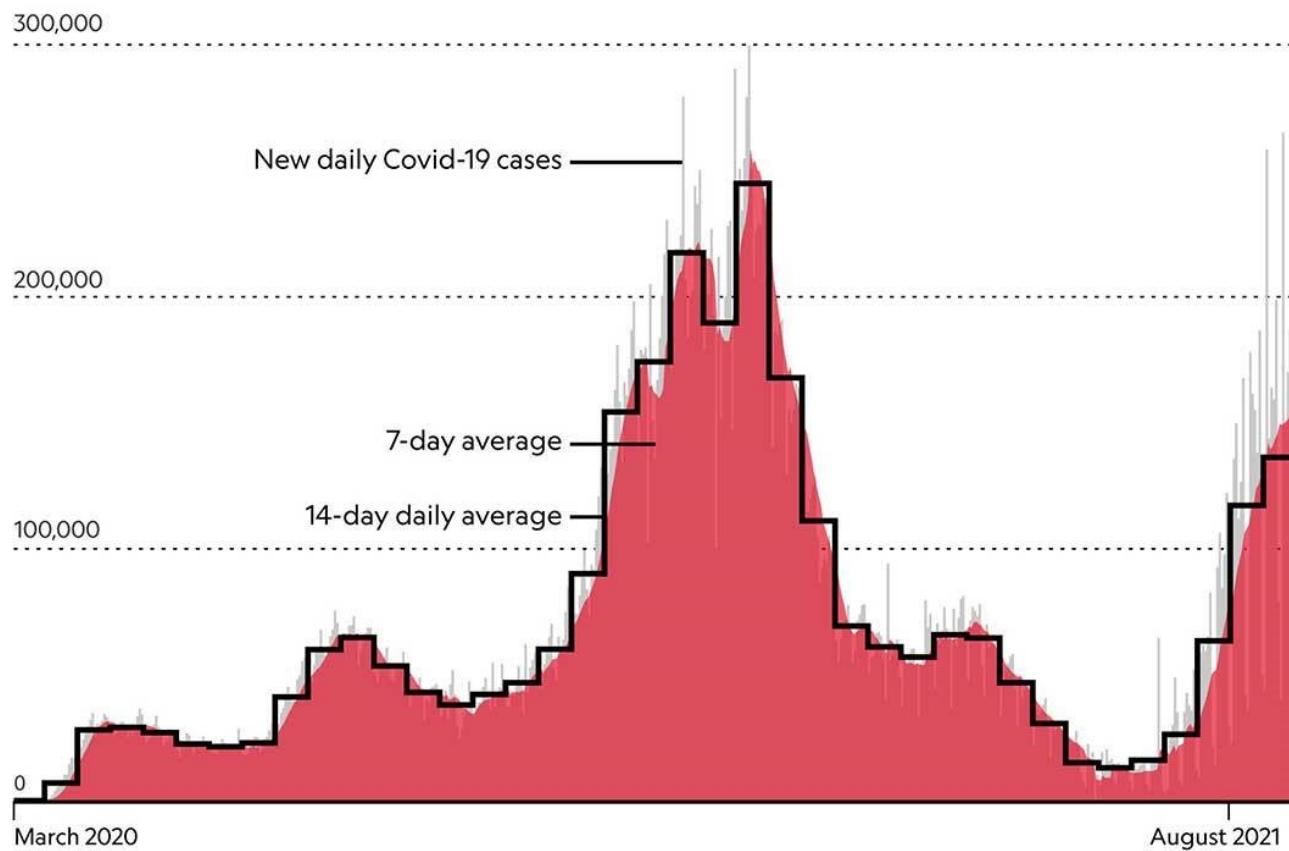
CDC, FDA, NIH: WHAT'S THE DIFFERENCE?

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# Coronavirus Update

**This week:** Rising death tolls in U.S.'s fourth wave; the battle between parents and governors; booster shots and the equity argument; what the FDA's full approval of Pfizer's vaccine really means.



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# As the fourth wave rolls on, daily cases keep climbing in most of the country

The national average for new cases reached 152,000 daily and keeps climbing in nearly all states.

If there's a silver lining, it's that some of the states hit hardest by the fourth wave—Alabama, Arkansas, Louisiana, Georgia and Mississippi—have seen double-digit percentage gains in vaccinations.

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PHOTOGRAPH BY AMY BETH BENNETT, SOUTH FLORIDA SUN-SENTINEL VIA AP

## As kids head back to school, battles over masks pit parents against governors

In states where governors are banning mask mandates, some parents argue that the science shows masks protect kids from COVID-19.

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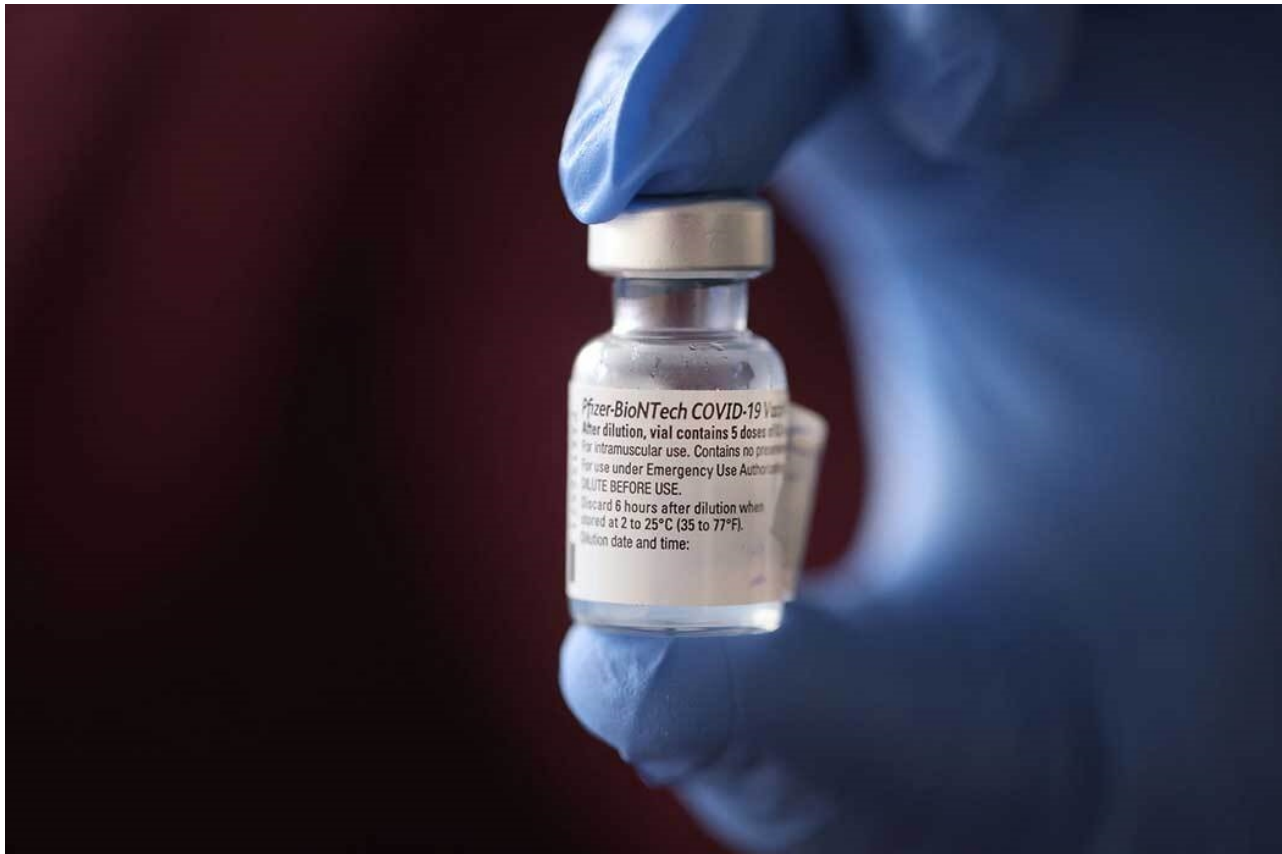
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Why donating COVID-19 booster shots isn't  
that easy

Skipping a booster shot so it can be donated abroad may sound selfless, but experts say there are better ways to get vaccines to those in need.

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## What full FDA approval of Pfizer's vaccine means for the course of the pandemic

Scientists say this decision is "a huge milestone" that clears the way for vaccine mandates and booster doses—and may persuade more unvaccinated people to get a shot.

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ALAMY STOCK PHOTO

## CDC, FDA, NIH—what's the difference?

The U.S. agencies all play an important role in addressing the COVID-19 pandemic, but each evolved from a unique moment in public health history.

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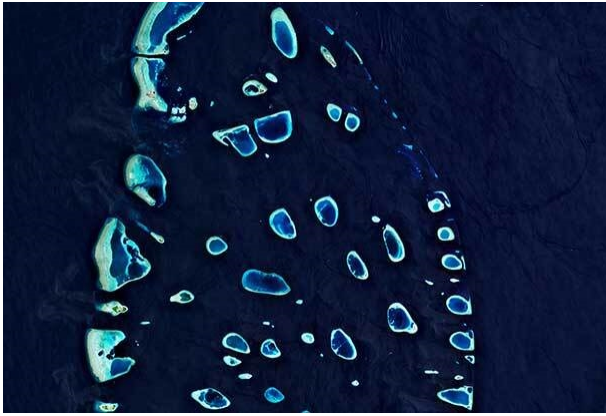


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Evidence mounts that vaccinated people can spread Delta just as easily as unvaccinated people

Bears, baboons, tigers are getting COVID vaccines at zoos across the U.S.

Why kids are still waiting for their COVID-19 vaccines

Why is Delta more infectious and deadly? New research holds answers.

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Subject : CORONAVIRUS UPDATE: The Lambda variant is on the move

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# Coronavirus Update

**This week:** Scientists scramble to understand how dangerous Lambda is; why you might not need a booster shot yet; mask mandates are coming back; the post-pandemic pilgrimage; tackling Muslim opposition to vaccines.



PHOTOGRAPH BY CARLOS MAMANI, AFP VIA GETTY IMAGES

# The Lambda variant has strange mutations. And it's rapidly spreading in South America.

The variant that slid under the radar for months has mutations that help it dodge the immune system. Researchers are scrambling to figure out if it is more dangerous or transmissible than Delta.

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**THE DELTA VARIANT:** Here's where it's spreading +



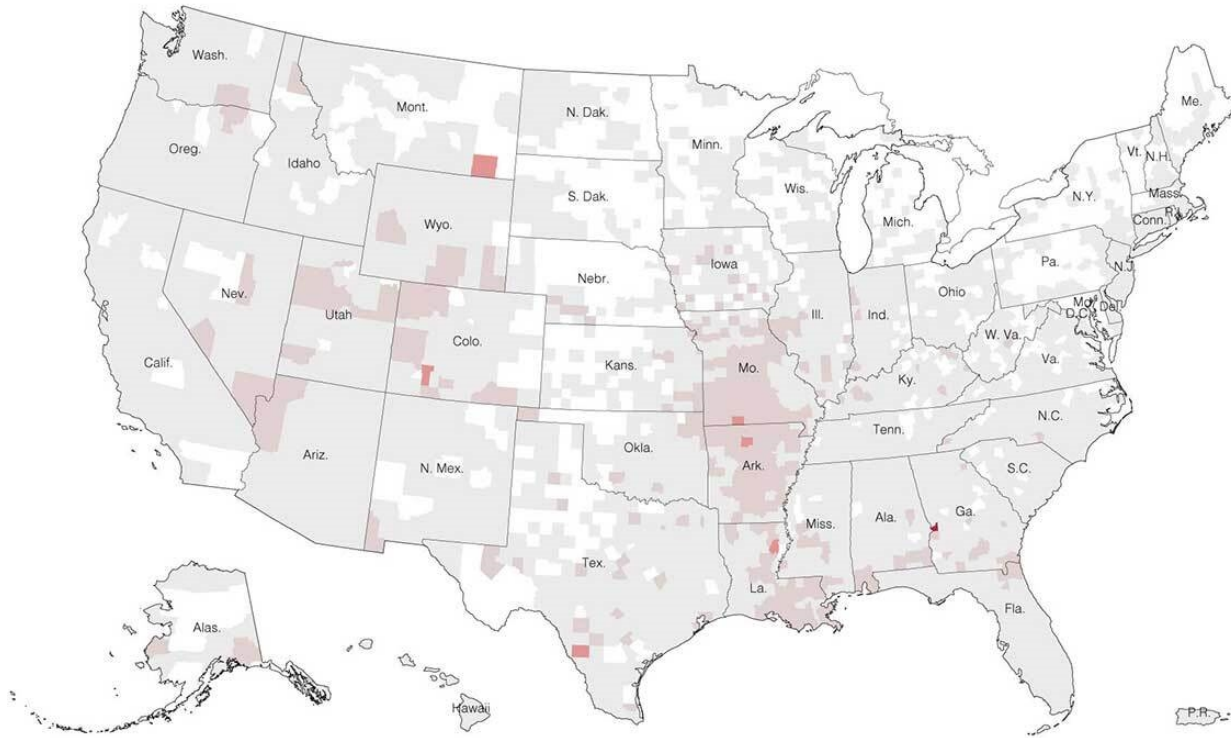
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## Scientists say COVID-19 booster shots aren't needed yet—here's why

For the fully vaccinated, the Pfizer shot generates an immune response that could last years and is protective against severe disease and death.



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## Mask mandates are coming back as cases surge in all 50 states

There are disturbing signs that the virus is surging—again. Every U.S. state is reporting a rise in cases with the national seven-day average passing 28,000, up from a low of 12,000 in late June.

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## Pilgrimages could be the next post-COVID travel trend

Traditionally religious, pilgrim routes may offer travelers from all walks of life a chance to find inner peace and reconnect with the world.

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## Muslim leaders and activists tackle opposition to COVID-19 vaccines

Outreach programs to dispel COVID-19 vaccine disinformation are having an impact on vaccination rates within some Muslim communities.

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# Coronavirus Update

**This week:** Why some Americans are taking a horse dewormer; how asymptomatic infections can still lead to long-term health complications; masks may be here to stay; European travel restrictions.



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# The shaky science behind ivermectin as a COVID-19 cure

Studies are inconclusive and misinformation is rampant. But many Americans now see a deworming medicine as a go-to drug to prevent and fight the Delta variant.

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## How symptom-free COVID-19 can silently damage the body

Scientists are studying the potential consequences of asymptomatic COVID-19 and how many people may suffer long term health problems.

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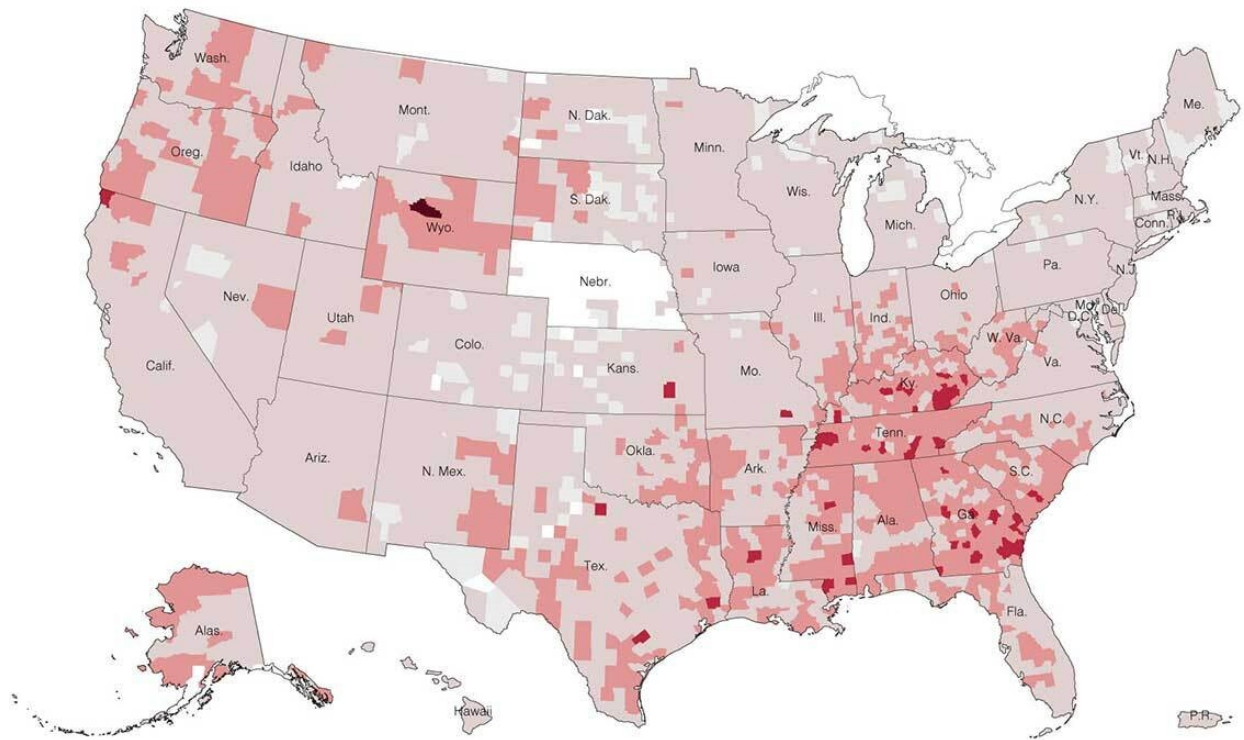
PHOTOGRAPH BY MICHAEL JUN PARK, NAT GEO IMAGE COLLECTION

## Will Americans wear masks to prevent sickness beyond COVID-19?

Americans may be adopting masking habits routine for other global citizens who wear them to block the spread of flu and other respiratory diseases.

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## New U.S. cases, hospitalizations reach highest point in months

Cases of the Delta variant continue to rise as unvaccinated kids get back to in-person learning and fully vaccinated adults face the prospect of booster shots to combat waning protection.

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PHOTOGRAPH BY MARKUS KIRCHGESSNER, LAIF/REDUX

## Europe may soon restrict U.S. tourists again. What does that mean?

This September, expect many changes across the European Union—and the possibility that unvaccinated travelers will be shut out.

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## Reeling from COVID-19, Italy's violin capital is rebounding with music

Known for its violin makers, Cremona is launching an academy for strings.

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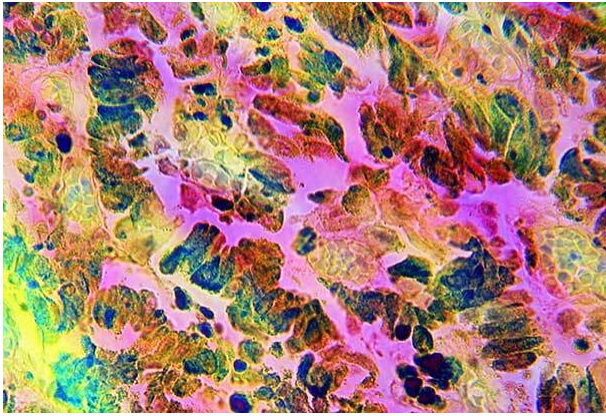


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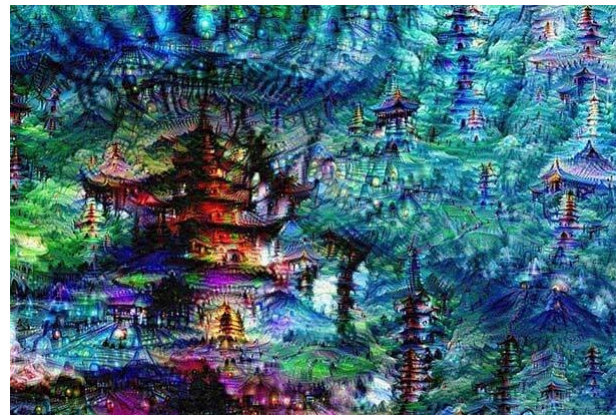


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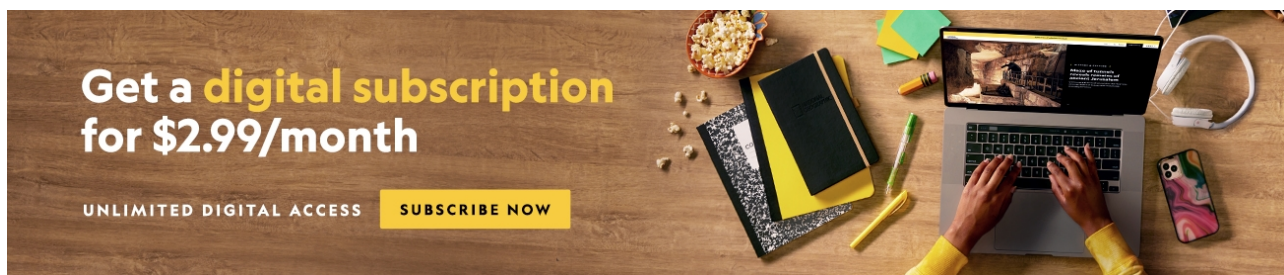
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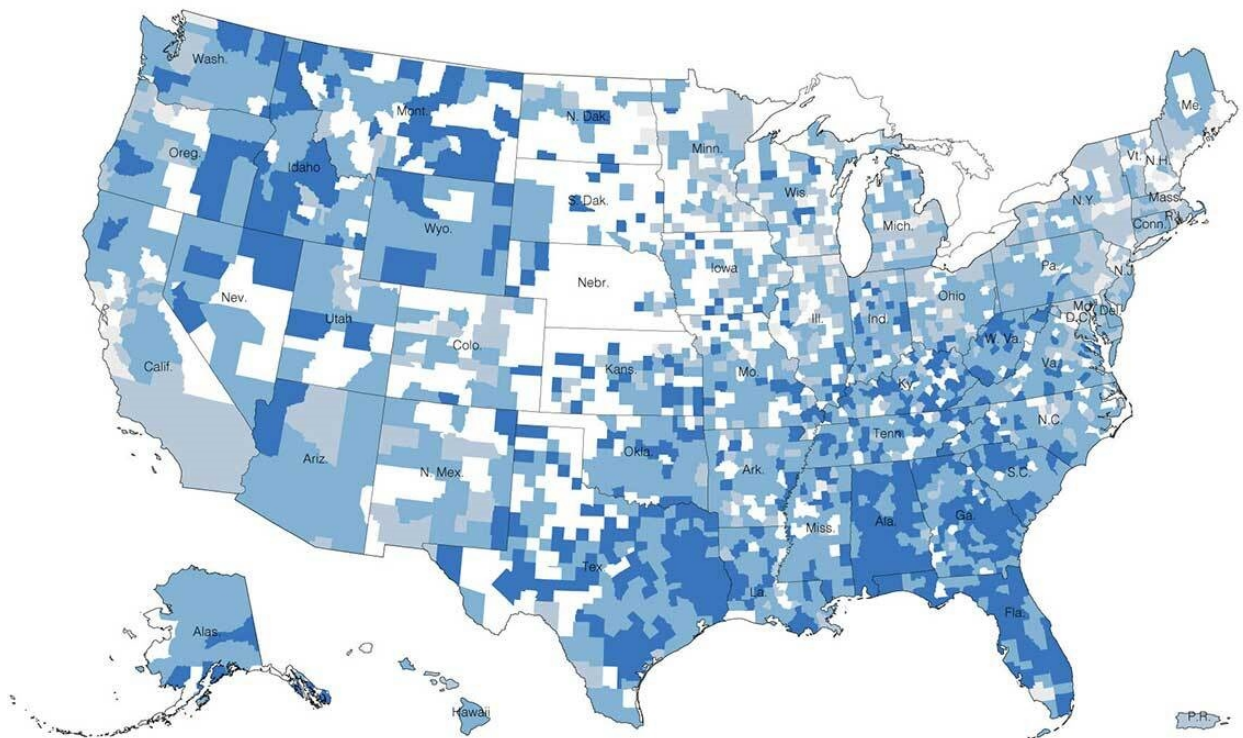
THE U.S. APPROACHES 700,000 DEATHS

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# Coronavirus Update

**This week:** What you need to know about Merck's new antiviral pill; the U.S. approaches a grim milestone; how COVID-19 attacks all five senses; an interview with Dr. Fauci.



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The U.S. is approaching 700,000 deaths

The country is on track to meet the grim milestone this weekend. Meanwhile, Merck announces it has a promising antiviral pill, and the CDC has an urgent warning for pregnant women—only 30 percent of whom are vaccinated.

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**700,000 DEAD AMERICANS:** See the epic scale of loss, in one image  
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PHOTOGRAPH BY MERCK

## How Merck's antiviral pill could change the game for COVID-19

Promising results from clinical trials suggest that the drug may become the first at-home treatment cleared for use by the FDA.

READ THE STORY





PHOTOGRAPH BY MYRIAM TIRLER, HANS LUCAS VIA REDUX

## COVID-19 can damage all five senses—not just taste and smell

The virus that causes the disease disrupts all the ways humans perceive the world. For some, the loss may be permanent. "No one can really empathize unless it happens to them."

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**RELATED:** [How asymptomatic infections silently damage the body](#) +

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and where to get them (Scientific  
American) »

In Portugal, there is virtually no one left  
to vaccinate (New York Times) »



PHOTOGRAPH FROM NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

## One-on-one with Dr. Fauci: 'I'm afraid ... they're going to forget.'

In an interview with National Geographic, Dr. Anthony Fauci reflects on his life, his career, and beyond: "What I'm afraid of as we get out of this is that ... people are just going to either forget or not care how this outbreak completely gripped the world. They're going to forget."

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**RELATED:** Fauci recalls the terrifying early days of the AIDS epidemic



PHOTOGRAPH BY STEPHEN WILKES

## The epic COVID-19 memorial on the National Mall, in one stunning photo

4,882 photos taken over 30 hours. Nearly 700,000 flags representing American lives lost. An incalculable measure of grief.

HOW IT WAS MADE

---

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Why the CDC and FDA only approved booster shots for some Americans

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Date : 8/13/2021 6:05:23 PM

From : "National Geographic " ng@email.nationalgeographic.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Coronavirus Update: Who can get a booster? It's complicated

KIDS, DELTA, AND BACK-TO-SCHOOL

ANXIETY

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# Coronavirus Update

**This week:** Questions linger after FDA's booster shot approval; why a vaccine for kids hasn't been greenlit yet; the fourth wave is surging; linking wildfire smoke and COVID deaths; how vaccines get to the world's most remote spots.



PHOTOGRAPH

BY SARAH

REINGEWIRTZ/MEDIANEWS

GROUP/LOS

ANGELES

DAILY

NEWS

VIA

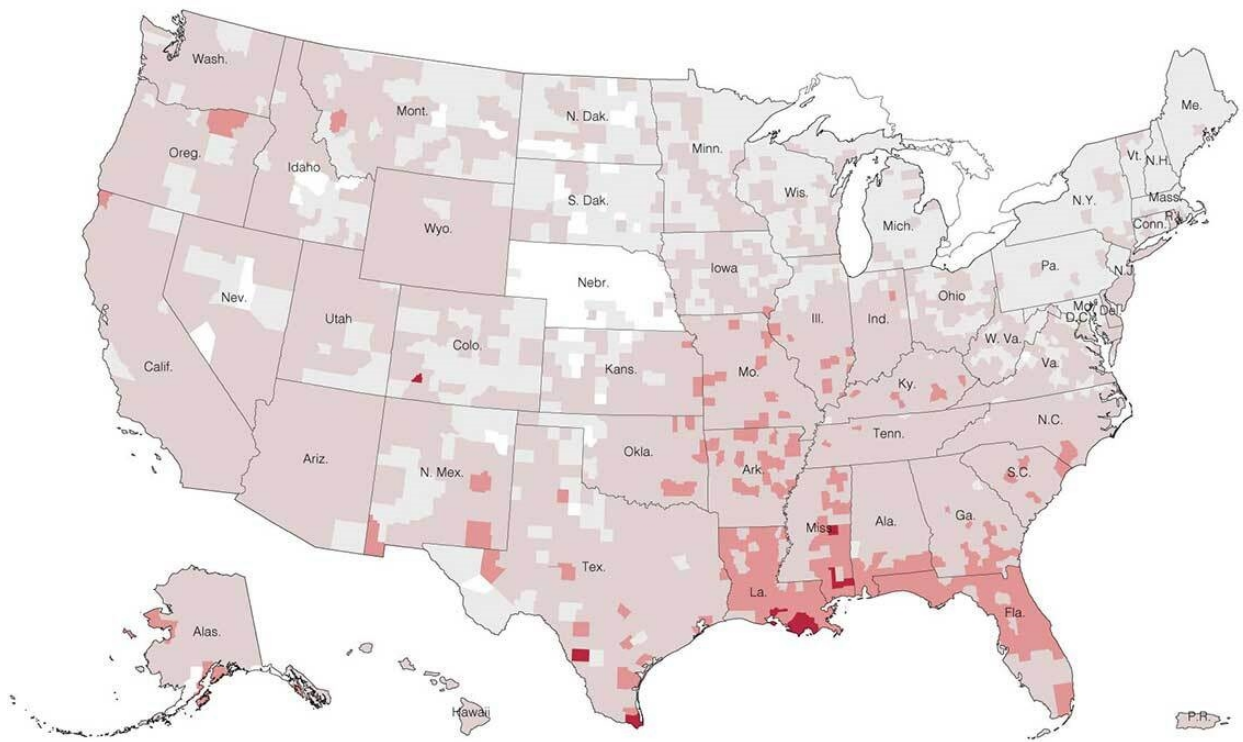
GETTY  
IMAGES

# Why kids are still waiting for their COVID-19 vaccines

The FDA has asked companies to expand clinical trials in children ages 5 to 11 after reports of rare side effects in young adults. But as the more transmissible Delta variant drives a fourth surge, parents are getting anxious.

READ THE STORY

**RELATED:** Why kids need their own COVID-19 vaccine trials +



NG STAFF

## The Delta variant continues to tear through the U.S.

This week new infections—an average of 126,000 daily—hit highs not seen since February, with the Delta variant now accounting for more than 97 percent of new cases. Meanwhile, roughly 93 million Americans who are eligible for a vaccine have not taken the shot.

SEE THE DATA

**RELATED:** Why is Delta more infectious and deadly? New research holds answers [+](#)



PHOTOGRAPH BY JESSICA KOURKOUNIS, AP

## Who qualifies for a coronavirus booster shot? It's still unclear.

While people with immune-compromising conditions rejoice over the FDA decision, many questions remain unanswered.

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What  
we're  
reading

The Delta variant is sending more kids to the hospital. Are they sicker, too? (NY Times) »

The vaccine scientist spreading vaccine misinformation (The Atlantic) »



PHOTOGRAPH BY GINA FERAZZI, LOS ANGELES TIMES/GETTY IMAGES

## Wildfire smoke linked to higher COVID-19 death rates

A new study finds 2020 wildfires may have caused more than 19,000 COVID-19 cases and 700 deaths.



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**RELATED:** Wildfire smoke blowing across the U.S. is more toxic than we thought [+](#)



PHOTOGRAPH BY DAR YASIN, AP PHOTO

## How COVID-19 vaccines are getting to the world's remotest places

Devoted teams of health-care workers are trekking great distances to deliver the life-saving inoculations.

[SEE THE PHOTOS](#)



PHOTOGRAPH BY ASH ADAMS

## COVID-19 threatened Alaska's fishermen. Here's how they persevered.

Communities in the Bristol Bay fishing region, site of the world's largest sockeye salmon run, are defined, in part, by their isolation. Everything is a plane ride or more away, including medical care, food, and supplies.

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## MORE ON YOUR HEALTH

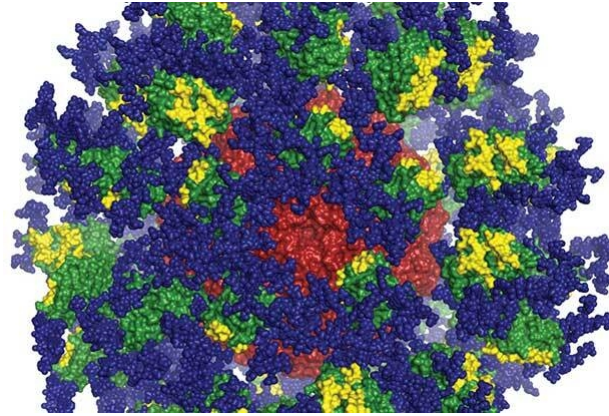




PHOTOGRAPHS BY CRAIG CUTLER (HAND);  
SAMUEL SANCES/CEDARS-SINAI  
(BACKGROUND)

## How personalized medicine is transforming your health care

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COURTESY JOSEPH JARDINE, SERGEY MENIS,  
WILLIAM SCHIEF/SCRIPPS RESEARCH, IAVI

## The four-decade quest for an HIV vaccine yields new hope

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People who already had COVID-19 should still get vaccinated, scientists urge

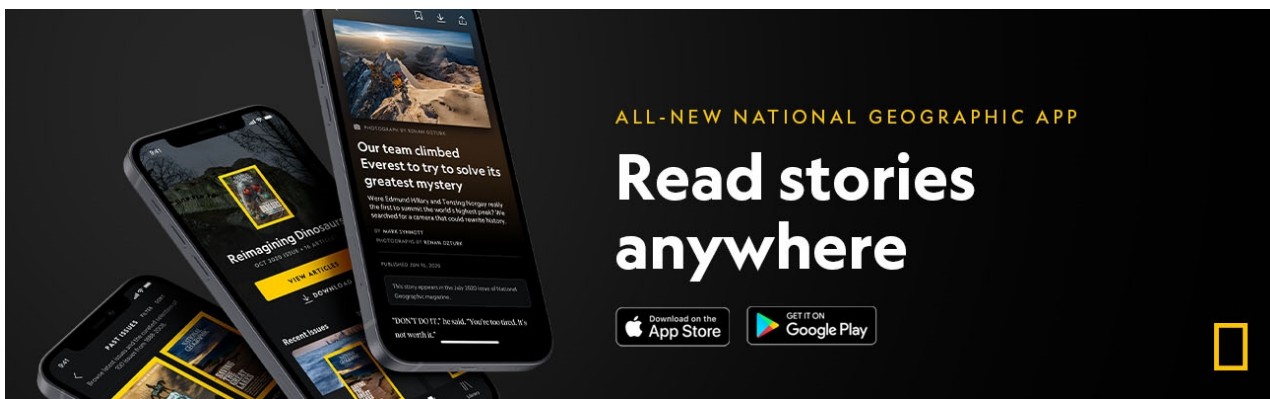
Delta variant prompts venues to rethink how we stand in line

Wild U.S. deer found with coronavirus antibodies

The world needs more vaccines, faster. A tiny tube could make all the difference.

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Date : 9/24/2021 8:21:40 AM  
From : "MedPage Today | Daily Headlines"  
daily.headlines@broadcaster3.medpagetoday.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : COVID Vax Exemptions for Pregnant Healthcare Workers?

## MEDPAGE TODAY®

### Daily Headlines

Friday, September 24, 2021

#### SPECIAL REPORTS

### COVID Vax Exemptions for Pregnant Healthcare Workers?



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### I Got Moderna. Can I Boost With Pfizer?



#### INFECTIOUS DISEASE

### CDC Panel: Thumbs Down on Pfizer Booster for Healthcare Workers



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### 'Privacy Exception' No Cure for Doctors' Open Notes Headaches



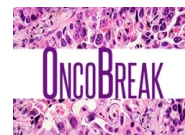
#### OPINION

### Statistical Considerations for Evaluating COVID Vaccine Protection



#### ONCOLOGY/HEMATOLOGY

### Preauthorization Slows Treatment; Taxing Cancer Away; HPV Saliva Test



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### Experts Clash Over Masking Kids in Schools During House Hearing



MEETING COVERAGE

## Immunotherapy-Chemo Offers Survival Advantage in Low PD-L1 NSCLC



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## A Day in the Life of a Doctor: Code Blue Emergency



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## In RA, Little Risk for Recurrent Cancer With Biologic Treatment



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## Top Science From the World Conference on Lung Cancer



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## Checkpoint Inhibitors Whiff in Head and Neck Cancer Trials



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GASTROENTEROLOGY

## Fully Automated Capsule Endoscopy Feasible for Gastric Exams



MEETING COVERAGE

## Sexual Violence May Increase Cardiovascular Disease Risk



GASTROENTEROLOGY

## Early Endoscopy for Acute GI Bleeds Tied to Better Outcomes



NEPHROLOGY

## Nix Race From eGFR, Says Joint Task Force





AAD READING ROOM

## John S. Barbieri, MD, MBA, on the Lived Experiences of Adult Women With Acne

ASCO READING ROOM

## Harsh Shah, DO, on Immunotherapy for B-cell Lymphoma

ASCO READING ROOM

## BCL Agents: Review Highlights Delicate Intricacies in Balancing the Many Factors for Use in R/R Setting



### Weekly Survey

### Who Needs a Booster?

As the [White House, CDC, and FDA wrestle](#) over which Americans need COVID booster shots, we're turning the question over to you [VOTE >](#)

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345 Hudson Street 16th Floor New York, NY 10014





**Date : 8/26/2021 12:58:28 PM**

**From :** [REDACTED]

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID**

Hello, as an OU alum and parent of OU student, I was so disappointed to see the faculty response to vaccinations to be so low. My 20-something kids had vaccinations without hesitation. OU is home to a medical school and public health programs!!! For Heaven's sake, Ohio universities and universities around the country are making vaccinations mandatory now. With all of the layoffs of OU faculty, I'm sure many of them would return to replace vax deniers. Let's get our people vaccinated and get our classes opened up as health issues permit. Allowing professors to keep online classes which is TERRIBLE for students just because they won't follow science is not acceptable.

I hope things are improving since the last report but with FDA approval, my vote is to have OU do mandates at this time for faculty and students, at least with the Pfizer which is fully approved and available there. Good luck. I know you are dealing with cultural influences as well but when the kids exceed "the adults" it's pretty shameful.

All the best from an OU fan,

[REDACTED]

Email: [REDACTED]  
Cell: [REDACTED]

**Date : 8/3/2021 2:16:03 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - August 3, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
198.8  
million  
cumulative  
cases  
and  
4.2

million  
deaths  
worldwide  
as  
of  
11:30  
EDT  
on  
August  
3.  
Global  
weekly  
incidence  
increased  
for  
the  
sixth  
consecutive  
week,  
up  
5.1%  
over  
the  
previous  
week,  
but  
weekly  
mortality  
decreased  
for  
the  
first  
time  
since  
June,  
down  
8%  
compared  
to  
the  
previous  
week.

The  
US  
is  
#1  
globally

in  
terms  
of  
[total  
daily  
incidence](#)  
(85,459  
new  
cases  
per  
day),  
accounting  
for  
14%  
of  
the  
global  
total,  
and  
Indonesia  
is  
#1  
in  
terms  
of  
[total  
daily  
mortality](#)  
(1,789  
deaths  
per  
day),  
representing  
19%  
of  
the  
global  
total.

#### *Global Vaccination*

The  
[WHO](#)  
[reported](#)  
3.89  
billion  
doses  
of

SARS-CoV-2 vaccines administered globally as of August 3.

The WHO reports a total of 1.51 billion individuals have received at least 1 dose, and 752 million are fully vaccinated.

Analysis from Our World in Data shows that the global [daily doses administered](#) continued to increase through August



1,  
peaking  
at  
41  
million  
doses  
per  
day  
before  
falling  
to  
39  
million  
on  
August  
2.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.23  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
28.6%  
of  
the  
global  
population)  
and

1.15  
billion  
who  
are  
fully  
vaccinated  
(14.8%  
of  
the  
global  
population).

*UNITED  
STATES*

The  
US  
CDC  
reported  
34.97  
million  
cumulative  
COVID-19  
cases  
and  
611,051  
deaths.  
Despite  
considerable  
vaccination  
coverage  
at  
the  
national  
level,  
daily  
incidence  
continues  
to  
accelerate,  
mirroring  
the  
early  
stages  
of  
previous  
surges.  
At  
72,790

reported  
cases  
per  
day  
on  
July  
30,  
the  
current  
surge  
is  
the  
United  
States'  
second  
largest  
to  
date,  
surpassing  
both  
the  
spring  
2020  
and  
spring  
2021  
peaks.  
The  
average  
daily  
incidence  
is  
the  
highest  
since  
February  
17\*.

We  
expect  
the  
US  
to  
surpass  
35  
million  
cases  
in

this  
afternoon's  
update.  
If  
that  
is  
the  
case:  
1  
case\*\*  
to  
5  
million  
cases-  
196  
days  
5  
million  
to  
10  
million-  
93  
days  
10  
million  
to  
15  
million-  
29  
days  
15  
million  
to  
20  
million-  
25  
days  
20  
million  
to  
25  
million-  
22  
days  
25  
million  
to  
30

million-  
61  
days  
30  
million  
to  
35  
million-  
132  
days  
*\*\*First  
reported  
cases  
on  
January  
22,  
2020.*

Daily  
mortality  
also  
continues  
to  
increase,  
up  
to  
302  
deaths  
per  
day  
on  
July  
30,  
which  
is  
76%  
higher  
than  
the  
most  
recent  
low  
on  
July  
10  
(172)\*.  
Daily  
mortality

does  
not  
appear  
to  
be  
increasing  
exponentially  
like  
daily  
incidence;  
however,  
this  
could  
change  
over  
the  
coming  
weeks  
as  
daily  
incidence  
increases.

As  
the  
US  
epidemic  
continues  
to  
surge,  
several  
states  
are  
reporting  
daily  
incidence  
at  
or  
near  
their  
highest  
peak  
to  
date.  
According  
to  
CDC  
data,



Louisiana  
(4,119  
new  
cases  
per  
day)  
has  
already  
surpassed  
its  
previous  
record

—  
10%  
higher  
than  
its  
January  
2021  
peak

—  
and  
Hawai'i  
(298)  
surpassed  
its  
highest  
peak  
(August  
2020).

On  
July  
30,  
Florida  
reached  
its  
second  
highest  
average  
daily  
incidence  
to  
date  
(15,817).  
Florida  
has  
not  
yet

reported  
data  
from  
this  
weekend,  
and  
we  
expect  
that  
it  
will  
set  
a  
new  
record  
in  
its  
next  
report.  
Arkansas  
(1,869)  
and  
Mississippi  
(1,475)  
are  
at  
61%  
and  
63%  
of  
their  
respective  
highest  
peaks,  
both  
in  
January  
2021.  
And  
Alabama  
(2,057)  
and  
Missouri  
(2,642)  
are  
both  
approaching  
50%

of  
their  
highest  
peaks  
from  
January  
2021  
and  
November  
2020,  
respectively\*.

*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to*

*the  
current  
date.*

US  
Vaccination

The  
US  
has  
administered  
347  
million  
cumulative  
doses  
of  
[SARS-  
CoV-2  
vaccines.](#)

[Daily  
vaccinations](#)  
are  
increasing  
slowly,  
now  
up  
to  
552,647  
doses  
per  
day\*.

A  
total  
of  
191.8  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
57.8%

of  
the  
entire  
US  
population.

Among  
adults,  
70.0%  
have  
received  
at  
least  
1  
dose  
—

finally  
reaching  
the  
White  
House's  
target  
—

as  
well  
as  
11.1  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
164.9  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
49.7%  
of  
the  
total  
population.

Approximately  
60.6%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
8.4  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
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for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*



**VACCINE-  
RESISTANT  
VARIANT  
RISK**

With the number of new COVID-19 cases rising in much of the world, scientists are warning that continued transmission provides an opportunity for the evolution of new, and potentially more harmful, SARS-CoV-2 variants. The current increase in cases is being fueled by

the  
highly  
transmissible  
Delta  
variant

as  
well  
as  
the  
loosening  
and  
inconsistent  
use  
of  
public  
health  
prevention  
measures,  
increased  
social  
mobility,  
and  
inequitable  
vaccine  
access,  
WHO  
Director-  
General  
Dr.  
Tedros  
Adhanom  
Gebreyesus

said  
on  
July  
30,  
warning  
that  
health  
systems  
in  
many  
countries  
are  
overwhelmed  
and  
that  
more

variants  
will  
emerge  
as  
long  
as  
the  
virus  
continues  
to  
spread.  
US  
CDC  
Director  
Dr.  
Rochelle  
Walensky  
cautioned  
that  
a  
[new  
variant  
could  
potentially  
evade  
vaccines](#)  
but  
added  
the  
vaccines  
authorized  
in  
the  
US  
continue  
to  
protect  
people  
from  
severe  
disease  
and  
death.

In  
a  
[modeling  
study](#)

published  
in  
*Nature  
Scientific  
Reports*  
on  
July  
30,  
researchers  
with  
the  
Austria  
Institute  
of  
Science  
and  
Technology  
examined  
the  
impact  
of  
the  
rate  
of  
vaccination  
and  
the  
strength  
of  
non-  
pharmaceutical  
interventions  
on  
the  
probability  
of  
the  
emergence  
and  
establishment  
of  
a  
vaccine-  
resistant  
SARS-  
CoV-2  
strain.  
The

researchers' model identified three factors that could lead to the establishment of a vaccine-resistant strain: the high probability of a resistant strain's initial emergence, a high number of infected individuals, and a low rate of vaccination. The researchers' analysis showed that the highest risk of vaccine-resistant

strain  
establishment  
occurs  
when  
a  
large  
proportion  
of  
the  
population  
is  
vaccinated  
but  
viral  
transmission  
is  
high,  
underlining  
the  
importance  
of  
controlling  
transmission  
through  
public  
health  
interventions  
while  
continuing  
vaccination  
campaigns.  
Nevertheless,  
the  
researchers  
conclude  
“the  
emergence  
of  
a  
partially  
or  
fully  
vaccine-  
resistant  
strain  
and  
its  
eventual



establishment  
appears  
inevitable.”

The  
UK’s  
Scientific  
Advisory  
Group  
for  
Emergencies  
(SAGE)

[published](#)  
an  
updated  
theoretical  
and  
non-  
peer-  
reviewed  
paper  
on  
July  
30

[essentially](#)  
[coming](#)  
[to](#)  
[the](#)  
[same](#)  
[conclusion](#),  
that

a  
vaccine-  
resistant  
SARS-  
CoV-2  
variant  
almost  
certainly  
will  
emerge  
and  
public  
health  
authorities  
must  
continue  
efforts  
to

reduce  
transmission  
as  
much  
as  
possible.

**US  
CDC  
MASK  
GUIDANCE**

The  
[US  
CDC's  
latest  
masking  
guidance](#)—  
calling  
for  
all  
people,  
even  
those  
who  
are  
vaccinated,  
to  
wear  
masks  
in  
indoor  
public  
settings  
in  
areas  
where  
transmission  
is  
categorized  
as  
high  
or  
substantial  
—  
is  
in  
direct

response  
to  
the  
increased  
transmissibility  
of  
the  
Delta  
variant.  
According  
to  
[data](#)  
[released](#)  
[last](#)  
[week](#),  
data  
show  
that  
individuals  
fully  
vaccinated  
for  
SARS-  
CoV-2  
who  
become  
infected  
—  
known  
as  
breakthrough  
cases  
—  
carry  
viral  
loads  
similar  
to  
those  
found  
in  
infected  
unvaccinated  
individuals,  
suggesting  
that  
[vaccinated](#)  
[people](#)

can  
transmit  
the  
Delta  
variant  
of  
concern  
just  
as  
easily  
as  
those  
who  
are  
unvaccinated.

The  
data  
are  
based  
on  
a  
COVID-19  
outbreak  
that  
began  
in  
Provincetown,  
MA  
(US)  
in  
early  
July  
following  
multiple  
summer  
events  
and  
large  
public  
gatherings.  
Of  
the  
496  
cases  
reported  
in  
the

outbreak  
at  
the  
time  
of  
data  
analysis,  
346  
(74%)  
cases  
were  
among  
fully  
vaccinated  
people  
and  
90%  
of  
133  
cases  
sequenced  
were  
caused  
by  
the  
Delta  
variant.  
Almost  
80%  
of  
the  
breakthrough  
cases  
were  
symptomatic,  
with  
common  
symptoms  
including  
cough,  
headache,  
sore  
throat,  
myalgia,  
and  
fever.  
Among  
5

patients  
who  
were  
hospitalized,  
3  
had  
underlying  
medical  
conditions  
and  
4  
were  
vaccinated.  
No  
deaths  
were  
reported.  
The  
report,  
published  
as  
an  
early  
release  
in  
the  
CDC's  
*MMWR*,  
said  
even  
jurisdictions  
without  
high  
or  
substantial  
transmission  
should  
consider  
expanding  
prevention  
measures,  
including  
masking  
for  
all  
individuals  
in  
indoor



public  
spaces.  
Health  
officials  
emphasize  
that  
breakthrough  
cases  
remain  
rare  
and  
that  
vaccines  
provide  
protection  
against  
severe  
symptoms  
and  
hospitalization.  
Lending  
further  
credence  
to  
the  
protective  
power  
of  
the  
vaccines,  
data  
show  
that  
counties  
with  
low  
vaccination  
rates  
are  
experiencing  
rapid  
rises  
in  
COVID-19  
cases  
and  
increases

in  
deaths.

## **SARS- COV-2 TRANSMISSIBILITY**

An  
[internal  
report](#)  
from  
the  
US  
CDC  
suggests  
that  
the  
SARS-  
CoV-2  
Delta  
variant  
may  
be  
capable  
of  
causing  
more  
severe  
disease  
than  
previous  
variants  
and  
that  
it  
may  
be  
as  
transmissible  
as  
chickenpox.  
[Studies  
from  
Canada,  
Scotland,  
and  
Singapore](#)  
indicate  
that

individuals  
infected  
with  
the  
Delta  
variant  
are  
at  
a  
higher  
risk  
of  
hospitalization  
and  
requiring  
oxygen  
supplementation.

[Evidence  
discussed](#)

[in  
the  
report](#)  
shows  
that  
the  
Delta  
variant  
may  
be  
capable  
of  
skirting  
the  
protection  
offered  
by  
the  
vaccines,  
and  
fully  
vaccinated  
individuals  
who  
become  
infected  
may  
carry  
high

viral  
loads  
in  
their  
noses  
and  
throats,  
possibly  
making  
transmission  
from  
the  
vaccinated  
more  
common  
than  
previously  
understood.  
Despite  
the  
concerns  
raised  
in  
the  
report,  
vaccination  
remains  
the  
best  
way  
to  
protect  
against  
severe  
disease.  
[The  
report  
states](#)  
that  
vaccines  
are  
capable  
of  
preventing  
severe  
symptoms  
in  
at

least  
90%  
of  
cases,  
even  
though  
they  
might  
be  
less  
effective  
at  
preventing  
infection.  
Experts  
acknowledge  
that  
discussions  
around  
vaccination  
may  
need  
to  
shift  
from  
preventing  
transmission  
to  
personal  
protection  
in  
light  
of  
the  
new  
data.

## **US EVICTION MORATORIUM**

The  
federal  
eviction  
moratorium,  
administered  
by  
the  
US

CDC,  
expired  
on  
July  
31,  
without  
extension,  
after  
the  
US  
Supreme  
Court  
on  
June  
29  
declared  
that  
the  
agency  
could  
no  
longer  
extend  
the  
program  
without  
“clear  
and  
specific  
congressional  
authorization  
(via  
new  
legislation).”  
A  
recent  
surge  
in  
COVID-19  
daily  
incidence,  
driven  
by  
the  
highly  
transmissible  
Delta  
variant,



is  
lending  
urgency  
to  
efforts  
to  
keep  
people  
in  
their  
homes  
and  
out  
of  
congregate  
or  
dangerous  
living  
situations,  
such  
as  
in  
shelters  
or  
on  
the  
street.  
More  
than  
11  
million  
adult  
renters  
are  
behind  
on  
payments,  
according  
to  
the  
Center  
on  
Budget  
and  
Policy  
Priorities.  
But  
it

appears  
the  
CDC,  
US  
Congress,  
and  
the  
White  
House  
were  
caught  
off  
guard  
by  
the  
moratorium's  
expiration,  
leaving  
officials  
scrambling  
for  
solutions.

Over  
the  
weekend,  
White  
House  
officials  
asked  
the  
CDC  
to  
extend  
the  
moratorium,  
focusing  
specifically  
on  
areas  
with  
high  
or  
substantial  
COVID-19  
transmission,  
but  
the

CDC  
denied  
the  
request,  
saying  
it  
has  
[no](#)  
[legal](#)  
[authority](#)  
to  
do  
so  
under  
the  
Supreme  
Court's  
ruling.  
Additionally,  
Congress  
failed  
to  
pass  
legislation  
that  
would  
have  
provided  
a  
last-  
minute  
extension  
of  
the  
federal  
moratorium  
until  
October  
18.  
Afterward,  
Congressional  
leaders  
called  
on  
the  
White  
House  
to

extend  
the  
moratorium,  
but  
officials  
said  
they  
also  
lack  
legal  
authority  
to  
do  
so.  
On  
August  
2,  
US  
President  
Joe  
Biden  
called  
on  
state  
and  
local  
governments  
to  
extend  
or  
implement  
eviction  
moratoria  
for  
at  
least  
the  
next  
2  
months.  
Approximately  
one-  
third  
of  
states  
currently  
have  
eviction

moratoria  
through  
August.  
Additionally,  
President  
Biden,  
at  
the  
request  
of  
Congressional  
leadership,  
is  
asking  
relevant  
federal  
agencies  
to  
examine  
why  
more  
of  
[US](#)  
[\\$46.5](#)  
[billion](#)  
[in](#)  
[Emergency](#)  
[Rental](#)  
[Assistance](#)  
provided  
to  
state  
and  
local  
governments  
has  
not  
yet  
been  
distributed.  
The  
White  
House  
made  
other  
requests  
of  
federal,

state,  
and  
local  
agencies  
and  
jurisdictions  
and  
committed  
to  
“doing  
everything  
in  
its  
power”  
to  
keep  
people  
housed.

## **US GLOBAL VACCINATION PROGRAM**

The  
US  
government  
announced  
today  
that  
the  
country  
has  
donated  
and  
shipped  
more  
than  
110  
million  
doses  
of  
SARS-  
CoV-2  
vaccines  
to  
more  
than  
60

countries,  
fulfilling  
a  
June  
pledge  
by  
President  
Joe  
Biden  
to  
donate  
at  
least  
80  
million  
doses.  
The  
majority  
of  
the  
vaccines  
were  
shipped  
through  
the  
COVAX  
facility,  
with  
other  
portions  
provided  
through  
regional  
partners  
such  
as  
the  
African  
Union  
and  
the  
Caribbean  
Community  
(CARICOM).  
Reportedly,  
an  
“initial  
tranche”



of  
25  
million  
vaccines  
is  
going  
to  
African  
nations,  
and  
the  
US  
government  
is  
supporting  
vaccine  
manufacturing  
efforts  
in  
South  
Africa  
and  
Senegal.

A  
White  
House  
fact  
sheet  
lists  
the  
countries  
and  
amount  
of  
vaccines  
the  
US  
has  
donated  
to  
date.

According  
to  
the  
fact  
sheet,  
the

US  
government  
has  
purchased  
500  
million  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine  
and  
expects  
to  
begin  
shipping  
them  
to  
100  
low-  
income  
countries  
at  
the  
end  
of  
August.  
The  
donated  
vaccine  
doses,  
worth  
\$3.5  
billion,  
will  
be  
delivered  
through  
COVAX,  
helping  
the  
facility  
get  
closer  
to  
its  
goal

of  
delivering  
2  
billion  
doses  
in  
2021.  
However,  
to  
offset  
the  
costs  
of  
purchasing  
the  
supply,  
the  
US  
reportedly  
is  
diverting  
hundreds  
of  
millions  
of  
dollars  
intended  
to  
support  
vaccination  
drives  
in  
low-  
income  
countries.  
COVAX  
continues  
to  
struggle,  
delivering  
only  
177  
million  
vaccines  
so  
far,  
some  
of

which  
are  
going  
unused  
in  
recipient  
countries  
due  
to  
a  
lack  
of  
funding,  
shortage  
of  
sufficient  
transportation,  
a  
dearth  
of  
trained  
vaccine  
administrators,  
or  
the  
absence  
of  
public  
interest  
to  
receive  
the  
shots.

### **EMERGENT VACCINE PRODUCTION FACILITY**

After  
a  
more  
than  
3-  
month  
shutdown  
of  
SARS-  
CoV-2

vaccine  
manufacturing  
at  
Baltimore,  
MD  
(US)-  
based  
Emergent  
BioSolutions,  
the  
US  
FDA  
last  
week  
granted  
permission  
for  
the  
plant  
to  
resume  
manufacturing  
based  
on  
the  
regulatory  
agency's  
"observations  
of  
the  
implemented  
corrective  
actions."  
As  
we  
previously  
reported,  
the  
FDA  
published  
a  
report  
in  
April  
stating  
the  
facility  
was

unsuitable  
to  
produce  
vaccine  
doses,  
and  
Emergent  
agreed  
to  
pause  
production  
until  
issues  
identified  
in  
the  
report  
were  
resolved,  
which  
appears  
to  
have  
happened.  
At  
the  
time,  
Emergent  
was  
manufacturing  
both  
the  
J&J-  
Janssen  
and  
AstraZeneca-  
Oxford  
vaccines  
for  
the  
federal  
government;  
production  
for  
the  
latter  
has  
since

moved  
to  
another  
company.  
J&J,  
which  
has  
been  
in  
control  
of  
the  
plant  
since  
April,  
confirmed  
the  
FDA  
is  
permitting  
manufacturing  
to  
resume  
and  
said  
it  
will  
continue  
to  
work  
with  
the  
agency  
to  
[gain  
clearance](#)  
to  
use  
up  
to  
30  
million  
doses  
of  
its  
vaccine  
made  
at



the  
facility  
prior  
to  
its  
shutdown.

In  
a  
call  
with  
investors  
on  
July  
29,  
Emergent  
officials  
[disclosed](#)  
[a](#)  
[US](#)  
[\\$41.5](#)  
[million](#)  
[loss](#)  
from  
having  
to  
discard  
vaccine  
doses  
deemed  
unusable  
by  
regulators  
as  
well  
as  
the  
expenditure  
of  
US  
\$12.4  
million  
to  
address  
problems  
at  
the  
facility.

The  
following  
day,  
[Emergent](#)  
[filed](#)  
[documents](#)  
with  
the  
US  
Security  
and  
Exchange  
Commission  
disclosing  
for  
the  
first  
time  
it  
has  
received  
“preliminary  
inquiries  
and  
subpoenas  
to  
produce  
documents”  
stemming  
from  
shareholder  
lawsuits  
and  
investigations  
from  
the  
SEC,  
the  
US  
Department  
of  
Justice,  
the  
Financial  
Industry  
Regulatory  
Authority,  
the

state  
attorney  
generals  
of  
Maryland  
and  
New  
York,  
and  
committees  
in  
both  
houses  
of  
the  
US  
Congress.  
Additionally,  
*Reuters*  
reports  
that  
AstraZeneca-  
Oxford  
vaccine  
doses  
sent  
from  
the  
plant  
to  
Canada  
and  
Mexico  
in  
late  
March  
were  
cleared  
[without](#)  
[proper](#)  
[regulatory](#)  
[inspections.](#)  
These  
reports  
underscore  
ongoing  
troubles  
for

Emergent,  
which  
holds  
a  
US  
\$628  
million  
federal  
contract  
to  
be  
the  
primary  
domestic  
manufacturer  
of  
both  
the  
J&J-  
Janssen  
and  
AstraZeneca-  
Oxford  
vaccines,  
as  
well  
as  
other  
federal  
contracts  
for  
various  
products  
included  
in  
the  
National  
Strategic  
Stockpile,  
most  
notably  
the  
company's  
anthrax  
vaccine.

**DELTA  
VARIANT**

## **IN CHINA**

Once  
recognized  
as  
implementing  
the  
world's  
strictest  
COVID-19  
prevention  
measures,  
China's  
[zero  
tolerance  
COVID-19  
policy](#)  
is  
[facing  
challenges](#)  
amid  
a  
recent  
increase  
in  
cases  
caused  
by  
the  
Delta  
variant.  
The  
policy  
attempts  
to  
keep  
the  
country's  
number  
of  
cases  
to  
zero  
by  
limiting  
international  
travel,  
requiring

regular  
testing,  
and  
enforcing  
stringent  
quarantine  
measures,  
among  
other  
regulations.

But  
over  
a  
period  
of  
2  
weeks,  
the  
country's  
average  
number  
of  
new  
daily  
COVID-19  
cases  
has  
more  
than  
doubled  
and  
nearly  
half  
of  
China's  
32  
provinces  
have  
reported  
cases  
caused  
by  
the  
Delta  
variant,  
indicating  
the  
variant

is  
moving  
quickly.  
This  
current  
wave  
is  
thought  
to  
have  
originated  
at  
the  
international  
airport  
in  
the  
eastern  
city  
of  
Nanjing,  
after  
a  
case  
was  
first  
detected  
on  
July  
20.  
All  
9.3  
million  
residents  
of  
Nanjing  
are  
undergoing  
testing,  
and  
the  
city  
of  
Wuhan,  
where  
the  
virus  
was



first  
detected  
in  
late  
2019,  
plans  
to  
test  
all  
12  
million  
residents.  
[Wuhan](#)  
[recently](#)  
[recorded](#)  
[3](#)  
[cases](#)  
[of](#)  
[the](#)  
[Delta](#)  
[variant](#)  
after  
having  
reported  
no  
cases  
since  
mid-  
May  
2020.  
The  
variant's  
rapid  
spread  
has  
raised  
concerns  
over  
the  
level  
of  
protection  
provided  
by  
Chinese  
vaccines.  
So  
far,

China  
has  
administered  
1.7  
billion  
doses,  
enough  
to  
fully  
vaccinate  
about  
60%  
of  
its  
population.  
Public  
health  
officials  
estimate  
80%  
of  
the  
population  
will  
be  
fully  
vaccinated  
by  
the  
end  
of  
the  
year.

## **INDONESIA**

Healthcare  
workers  
in  
Indonesia  
are  
overwhelmed,  
as  
daily  
COVID-19  
incidence  
remains  
high,  
daily

mortality  
continues  
to  
climb,  
patient  
capacity  
surges,  
and  
medical  
supplies  
dwindle.

The  
country's  
average  
number  
of

new  
daily  
cases  
peaked  
on

July  
18,  
reaching  
a

number  
4

times  
higher  
than  
the  
previous  
peak  
in

January  
2020.

Average  
daily  
incidence  
is

down

as

of

August

2

but

still

remains

high.  
[Average daily mortality](#) continues to rise as of August 2 and is currently 6 times higher than the previous peak in January 2020. Approximately 1,200 healthcare workers in Indonesia have died during the pandemic; nearly half of those were doctors. Many more healthcare professionals have been infected

and returned to work after recovering. Facing long hours, stressful working conditions, and greater exposure to infected patients, Health Minister Budi Gunadi Sadikin said the country is prioritizing providing additional vaccine doses to healthcare workers. Most who have been vaccinated received the Chinese Sinovac vaccine, but the additional

doses  
will  
be  
the  
Moderna  
vaccine.

## **AUSTRALIA LOCKDOWNS**

Military  
personnel  
are  
being  
brought  
in  
to  
help  
local  
police  
enforce  
a  
lockdown  
in  
[New  
South  
Wales,  
Australia.](#)

The  
lockdown  
comes  
in  
response  
to  
an  
outbreak  
of  
the  
highly  
transmissible  
SARS-  
CoV-2  
Delta  
variant  
in  
the  
region.  
The  
lockdown

was recently extended to August 28 after an outbreak of 170 cases was traced to an infected individual who failed to self-isolate. The 300 unarmed military personnel will aid in enforcing the lockdown by knocking on residents' doors to ensure everyone is complying with stay-at-home



orders.  
In  
[parts](#)  
[of](#)  
[Sydney](#),  
the  
state's  
largest  
city,  
residents  
will  
be  
required  
to  
wear  
masks  
when  
outdoors  
and  
stay  
within  
5  
kilometers  
(3  
miles)  
of  
their  
residence.  
On  
August  
2,  
[Queensland](#)  
[state](#)  
[extended](#)  
[lockdown](#)  
[orders](#)  
through  
August  
8  
in  
its  
largest  
city,  
Brisbane,  
after  
officials  
detected  
13

new  
locally  
acquired  
cases.  
Australia  
is  
expected  
to  
continue  
cycles  
of  
stop-  
start  
lockdowns  
until  
at  
least  
70%  
of  
the  
population  
is  
fully  
vaccinated.  
Prime  
Minister  
Scott  
Morrison  
said  
he  
expects  
to  
reach  
that  
goal  
by  
the  
end  
of  
the  
year;  
only  
15.4%  
of  
the  
population  
is  
fully

[vaccinated](#)

as  
of  
August  
2.

## **BLOOD CLOTS**

Two  
studies  
recently  
published  
by  
*The  
Lancet*  
provide  
additional  
insight  
into  
the  
risk  
of  
blood  
clots  
associated  
with  
the  
[AstraZeneca-  
Oxford  
SARS-  
CoV-2  
vaccine](#).

A  
[peer-  
reviewed  
study](#)  
conducted  
by  
researchers  
at  
AstraZeneca  
included  
data  
from  
all  
reported  
cases  
of

thrombosis  
with  
thrombocytopenia  
syndrome  
(TTS,  
a  
blood  
clotting  
disorder)  
within  
14  
days  
of  
vaccination  
with  
either  
dose  
of  
the  
AstraZeneca-  
Oxford  
vaccine  
[reported](#)  
[to](#)  
[AstraZeneca's](#)  
[global](#)  
[safety](#)  
[database](#)  
through  
April  
30.  
The  
researchers  
identified  
399  
cases  
of  
TTS  
among  
49.2  
million  
individuals  
who  
received  
the  
first  
dose  
of

the vaccine, equating to an estimated risk of 8.1 cases per million doses. The risk decreased following the second dose, however, down to 2.3 per million doses — 13 cases of TTS among 5.62 million individuals who received the second dose. The researchers estimated that the average over

a  
14-  
day  
period  
prior  
to  
the  
pandemic  
was  
as  
high  
as  
7.16  
cases  
of  
TTS  
per  
million  
people.  
So  
while  
the  
risk  
following  
the  
first  
dose  
of  
the  
vaccine  
was  
a  
slight  
increase  
over  
the  
expected  
risk,  
the  
risk  
following  
the  
second  
dose  
was  
“within  
preliminary  
estimates.”

A  
preprint  
study,  
conducted  
in  
Spain  
and  
funded  
by  
the  
European  
Medicines  
Agency,  
included  
1.3  
million  
vaccinated  
individuals  
as  
well  
as  
225,000  
COVID-19  
patients  
and  
4.5  
million  
control  
participants.  
The  
vaccinated  
participants  
included  
946,000  
who  
received  
the  
first  
dose  
of  
the  
Pfizer-  
BioNTech  
vaccine  
(including  
779,000  
who



received  
both  
doses)  
and  
426,000  
who  
received  
the  
first  
dose  
of  
the  
AstraZeneca-  
Oxford  
vaccine.  
The  
researchers  
evaluated  
the  
risk  
of  
[blood  
clotting  
disorders](#)—  
including  
venous  
thromboembolism  
(VTE),  
thrombocytopenia,  
and  
thrombocytopenia  
syndrome  
(TTS)  
—  
following  
vaccination.  
Participants  
who  
received  
the  
Pfizer-  
BioNTech  
vaccine  
had  
29%  
higher  
occurrence  
of

VTE following the first dose than expected, but there was no significant difference following the second dose. For the AstraZeneca-Oxford vaccine, the researchers did not observe a significant difference in the occurrence of VTE. Notably, the risk of VTE was 8 times higher than expected among COVID-19

patients.  
Similarly,  
there  
was  
an  
elevated  
risk  
of  
thrombocytopenia  
following  
both  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine,  
but  
not  
for  
the  
AstraZeneca-  
Oxford  
vaccine.  
Neither  
vaccine  
exhibited  
an  
elevated  
risk  
of  
TTS.  
The  
study  
also  
provides  
further  
analysis  
of  
the  
associated  
risks  
by  
sex  
and  
age  
group;  
however,

the  
duration  
was  
not  
sufficient  
to  
include  
data  
regarding  
clotting  
risk  
after  
the  
second  
dose  
of  
the  
AstraZeneca-  
Oxford  
vaccine.

### **MONOCLONAL ANTIBODY**

The  
US  
FDA  
on  
July  
30  
expanded  
the  
emergency  
use  
authorization  
(EUA)  
for  
the  
monoclonal  
antibody  
REGEN-  
COV—  
a  
combination  
of  
casirivimab  
and  
imdevimab  
—

to  
include  
post-  
exposure  
prophylaxis  
(PEP)  
among  
certain  
people  
exposed  
to  
or  
at  
high  
risk  
of  
exposure  
to  
an  
individual  
infected  
with  
SARS-  
CoV-2.  
The  
EUA  
now  
allows  
monoclonal  
antibody  
PEP  
among  
people  
at  
high  
risk  
for  
progression  
to  
severe  
COVID-19,  
who  
are  
not  
fully  
vaccinated,  
or  
who

are  
not  
expected  
to  
mount  
an  
adequate  
response  
to  
vaccination  
and  
who  
have  
been  
exposed  
to  
a  
SARS-  
CoV-2-  
infected  
individual  
or  
who  
are  
at  
high  
risk  
of  
exposure  
to  
an  
infected  
individual  
in  
[congregate](#)  
[or](#)  
[institutional](#)  
[settings](#)  
such  
as  
nursing  
homes  
or  
prisons.  
Under  
the  
EUA,  
REGEN-

COV  
now  
can  
be  
administered  
monthly  
as  
a  
subcutaneous  
injection  
or  
intravenous  
infusion  
to  
qualifying  
people  
aged  
12  
and  
older.  
The  
expanded  
EUA  
represents  
the  
first  
time  
an  
antibody  
treatment  
has  
been  
authorized  
for  
this  
purpose.

**SARS-  
COV-2  
EXPOSURE  
IN  
DEER**

A  
study  
conducted  
by  
the  
[US](#)

Department  
of  
Agriculture  
(USDA)  
evaluated  
exposure  
to  
SARS-  
CoV-2  
among  
white-  
tailed  
deer  
in  
several  
US  
states.

The  
USDA's  
Animal  
and  
Plant  
Health  
Inspection  
Service  
(APHIS)  
conducted  
serological  
testing  
on  
481  
serum  
specimens  
collected  
from  
white-  
tailed  
deer  
in  
Illinois,  
Michigan,  
New  
York,  
and  
Pennsylvania,  
from  
January  
2020



through  
2021.  
Antibodies  
against  
SARS-  
CoV-2  
were  
detected  
in  
33%  
of  
specimens,  
including  
67%  
of  
specimens  
collected  
in  
Michigan.  
For  
comparison,  
only  
1  
out  
of  
143  
specimens  
collected  
prior  
to  
January  
2020  
tested  
positive  
for  
SARS-  
CoV-2  
antibodies,  
and  
that  
specimen  
"was  
at  
the  
minimum  
threshold  
of  
detection,"

which  
could  
potentially  
indicate  
a  
false-  
positive  
result.  
The  
researchers  
did  
not  
identify  
any  
animals  
that  
exhibited  
signs  
of  
illness.

Statements  
by  
APHIS  
note  
that  
the  
study  
was  
not  
sufficient  
to  
draw  
conclusions  
regarding  
population-  
level  
exposure  
among  
deer,  
but  
it  
does  
provide  
evidence  
that  
deer  
have

been  
infected  
by  
the  
virus.  
It  
is  
unclear  
how  
the  
animals  
were  
exposed  
or  
the  
extent  
to  
which  
the  
infection  
is  
spreading  
among  
deer  
populations.  
It  
is  
also  
uncertain  
whether  
deer  
can  
transmit  
the  
infection  
to  
humans,  
but  
information  
from  
APHIS  
indicates  
there  
is  
no  
evidence  
that  
consuming

meat  
from  
an  
infected  
animal  
could  
result  
in  
SARS-  
CoV-2  
infection.  
While  
many  
questions  
remain  
unanswered,  
this  
study  
does  
provide  
additional  
information  
regarding  
potential  
animal  
reservoirs  
for  
SARS-  
CoV-2,  
which  
could  
potentially  
impact  
longer-  
term  
epidemic  
control  
efforts.

**[US Travel Industry and Retail Supply Chain Updates](#)**

**[Weekly Updates on SARS-CoV-2 Vaccines](#)**

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**Date : 8/6/2021 2:00:38 PM**  
**From : "Johns Hopkins Center for Health Security"**  
**centerhealthsecurity@mail301.jh.edu**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : COVID-19 Updates - August 6, 2021**

**EPI  
UPDATE**

The  
cumulative  
global  
COVID-19  
incidence  
surpassed  
200  
million  
cases:  
1  
case  
to  
25  
million:  
239  
days  
25  
million  
to  
50  
million:  
69  
days  
50  
million  
to

75  
million:  
42  
days  
75  
million  
to  
100  
million:  
39  
days  
100  
million  
to  
125  
million:  
58  
days  
125  
million  
to  
150  
million:  
36  
days  
150  
million  
to  
175  
million:  
43  
days  
175  
million  
to  
200  
million:  
53  
days

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
200.8  
million  
cumulative

cases  
and  
4.26  
million  
deaths  
worldwide  
as  
of  
12:00pm  
EDT  
on  
August  
6.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
3.98  
billion  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
August  
5.  
The  
WHO  
reports  
a  
total  
of  
1.56  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and



781  
million  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
shows  
that  
the  
global  
daily  
doses  
administered  
approached  
the  
record  
high  
on  
August  
4,  
with  
43.0  
million  
doses  
per  
day\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that

there  
are  
2.30  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
29.6%  
of  
the  
global  
population)  
and  
1.18  
billion  
who  
are  
fully  
vaccinated  
(15.2%  
of  
the  
global  
population).

*\*Over  
the  
past  
several  
weeks,  
we  
have  
observed  
a  
pattern  
of  
a  
sharp  
decrease  
in  
the  
average  
doses  
administered  
for  
the  
most*

current  
day.  
This  
decrease  
eventually  
disappears,  
which  
indicates  
that  
it  
is  
an  
artifact  
of  
reporting.  
Moving  
forward,  
we  
will  
attempt  
to  
capture  
the  
longer-  
term  
trends,  
which  
may  
not  
necessarily  
align  
with  
the  
most  
recent  
update.

UNITED  
STATES  
The  
[US](#)  
[CDC](#)  
reported  
35.4  
million  
cumulative  
COVID-19  
cases

and  
611,958  
deaths.  
Despite  
considerable  
vaccination  
coverage  
at  
the  
national  
level,  
daily  
incidence  
continues  
to  
accelerate,  
mirroring  
the  
early  
stages  
of  
previous  
surges.  
Daily  
incidence  
is  
now  
up  
to  
nearly  
90,000  
new  
cases  
per  
day,  
the  
highest  
average  
since  
February  
13.  
Daily  
mortality  
also  
continues  
to  
increase,  
up

to  
377  
deaths  
per  
day,  
which  
is  
more  
than  
double  
the  
most  
recent  
low  
on  
July  
10  
(174)\*.  
It  
appears  
that  
daily  
mortality  
may  
be  
starting  
to  
increase  
exponentially,  
but  
additional  
data  
are  
needed  
to  
more  
fully  
characterize  
the  
longer-  
term  
trend.  
*\*Changes  
in  
the  
frequency  
of  
state-*

*level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
current  
date.*

As  
the  
current  
US  
surge  
continues,  
COVID-19  
hospitalizations  
are  
increasing  
nationwide.

New  
hospital

admissions  
per  
day

are  
the  
highest  
since  
February  
14

and  
more  
than  
4

times  
the  
most  
recent  
low  
in  
late  
June.

Several  
states  
are  
setting  
new  
records

and  
still  
increasing,  
and

several  
others  
are  
approaching  
their  
current  
record.

Florida  
is  
currently  
reporting  
40%

higher  
than  
its  
previous  
highest

peak,  
and  
Louisiana  
is  
reporting  
8%  
higher  
than  
its  
previous  
record.  
Numerous  
states  
in  
HHS  
Region  
4  
(Southeast)  
are  
exhibiting  
concerning  
trends  
in  
new  
hospitalizations.  
In  
fact,  
the  
region  
as  
a  
whole  
is  
reporting  
nearly  
80%  
of  
its  
highest  
peak  
and  
increasing  
rapidly.  
Nationally,  
new  
hospital  
admissions  
among



children  
(17  
years  
and  
younger)  
are  
only  
13%  
below  
the  
record  
set  
in  
early  
January  
and  
increasing  
rapidly.  
Notably,  
Florida's  
new  
hospitalizations  
among  
children  
are  
nearly  
double  
its  
previous  
highest  
peak  
in  
January.  
Arkansas,  
Kansas,  
Maine,  
Mississippi,  
Missouri,  
and  
Texas  
also  
are  
setting  
new  
records  
for  
new  
pediatric

hospitalizations,  
which  
is  
particularly  
concerning  
as  
some  
states  
begin  
their  
school  
year  
with  
in-  
person  
learning.

[Current  
COVID-19  
hospitalizations](#)

also  
are  
increasing  
steadily.  
The  
number  
of  
currently  
hospitalized  
patients  
has  
more  
than  
tripled  
from  
slightly  
more  
than  
12,000  
in  
late  
June  
to  
nearly  
45,000,  
over  
only  
5

weeks.  
Similar  
to  
new  
hospitalizations,  
several  
states  
are  
reporting  
record  
high  
totals,  
particularly  
in  
Region  
4.  
Florida  
is  
reporting  
more  
than  
9,500  
hospitalized  
COVID-19  
patients,  
which  
is  
14%  
higher  
than  
any  
other  
day  
with  
available  
CDC  
data.  
The  
earliest  
data  
are  
from  
August  
1,  
2020,  
and  
Florida's  
trend

at  
that  
time  
was  
declining,  
so  
it  
is  
unclear  
what  
the  
actual  
peak  
was  
during  
that  
surge.  
Louisiana  
is  
currently  
only  
4%  
below  
its  
highest  
peak  
in  
January  
2021.  
The  
current  
surge  
is  
increasing  
rapidly  
—  
much  
more  
quickly  
than  
in  
the  
previous  
surge  
—  
and  
we  
expect

Louisiana  
to  
set  
a  
new  
record  
in  
the  
next  
several  
days.

As  
a  
whole,  
Region  
4  
is  
reporting  
65%  
of  
its  
highest  
peak  
and  
increasing  
rapidly.

Hawai'i  
also  
is  
exhibiting  
a  
rapid  
increase  
in  
hospitalized  
COVID-19  
patients.

It  
is  
currently  
equal  
to  
its  
January  
2021  
peak,  
and  
while

it  
is  
still  
34%  
lower  
than  
its  
highest  
peak  
from  
August  
2020,  
its  
trend  
is  
accelerating  
rapidly.

Analysis  
by  
[The  
New  
York  
Times](#)  
indicates  
that  
every  
state  
except  
Rhode  
Island  
is  
reporting  
increasing  
current  
hospitalizations  
over  
the  
past  
2  
weeks.  
Notably,  
Rhode  
Island's  
COVID-19  
hospitalizations  
have  
decreased

steadily  
since  
mid-  
December  
2020.  
Among  
the  
states  
with  
increasing  
trends,  
10  
have  
more  
than  
doubled  
over  
the  
past  
2  
weeks,  
including  
Alabama  
(+162%),  
Louisiana  
(+156%),  
and  
South  
Carolina  
(+156%),  
which  
have  
increased  
by  
more  
than  
150%  
over  
that  
period.  
Notably,  
6  
of  
the  
8  
states  
in  
Region

4  
are  
reporting  
biweekly  
increases  
greater  
than  
100%.  
The  
exceptions  
are  
Tennessee  
and  
North  
Carolina,  
which  
are  
reporting  
+87%  
and  
+89%,  
respectively.

#### US Vaccination

The  
US  
has  
administered  
349  
million  
cumulative  
doses  
of  
[SARS-  
CoV-2  
vaccines](#).  
[Daily  
vaccinations](#)  
are  
increasing  
slowly,  
now  
up  
to  
582,867  
doses  
per



day\*.

A  
total  
of  
193.2  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
58.2%  
of  
the  
entire  
US  
population.

Among  
adults,  
70.4%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
11.3  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
165.6  
million  
individuals

are  
fully  
vaccinated,  
which  
corresponds  
to  
49.9%  
of  
the  
total  
population.

Approximately  
60.8%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
8.6  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.*

*The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**PFIZER-  
BIONTECH  
VACCINE  
FULL  
FDA  
APPROVAL**

With  
the  
number  
of  
new  
COVID-19  
cases  
surging  
in  
the  
US,  
the  
US  
FDA  
reportedly  
has  
taken  
an  
“all-  
hands-  
on-  
deck  
approach”  
to  
reviewing  
data  
on  
Pfizer-  
BioNTech’s  
SARS-

CoV-2  
vaccine,  
aiming  
to  
grant  
full  
approval  
by  
September  
6  
or  
possibly  
sooner,  
according  
to  
multiple  
sources  
familiar  
with  
the  
process.  
However,  
some  
agency  
and  
White  
House  
officials  
hope  
the  
timetable  
will  
be  
accelerated  
further,  
with  
approval  
coming  
as  
soon  
as  
August  
15,  
several  
sources  
shared.  
Speaking  
at

a  
town  
hall  
on  
July  
21,  
US  
President  
Joe  
Biden  
said  
he  
[expects](#)  
[final](#)  
[approval](#)  
[by](#)  
[the](#)  
[fall.](#)  
Pfizer-  
BioNTech  
filed  
its  
application  
for  
full  
licensing  
with  
the  
FDA  
on  
May  
7,  
and  
the  
agency  
[announced](#)  
the  
vaccine  
would  
undergo  
priority  
review  
on  
July  
16,  
meaning  
approval  
would

come  
no  
later  
than  
January  
2022.  
But  
it  
appears  
the  
FDA  
is  
significantly  
speeding  
up  
that  
timeline.

Real-  
world  
data  
show  
that  
full  
vaccination  
dramatically  
reduces  
the  
risk  
of  
COVID-19-  
associated  
hospitalization  
or  
death,  
but  
the  
pace  
of  
vaccination  
has  
largely  
stalled  
in  
the  
US,  
with  
only

about  
50%  
of  
the  
total  
population  
fully  
vaccinated

and  
70%  
of  
the  
adult  
population  
having  
received  
at  
least  
one  
dose.

In  
an  
August  
4  
statement,  
an  
FDA  
spokesperson  
said  
the  
agency's  
full  
approval  
of  
SARS-  
CoV-2  
vaccines  
could  
engender  
additional  
confidence  
among  
some  
people  
and  
encourage  
them  
to

get  
vaccinated.

A  
June  
poll  
by  
the  
Kaiser  
Family  
Foundation

found  
that  
3  
in  
10  
unvaccinated  
adults  
said  
they  
would  
be  
more  
likely  
to  
get  
vaccinated  
if  
one  
of  
the  
vaccines  
currently  
being  
used  
under  
emergency  
use  
authorization  
received  
full  
approval.  
Notably,  
the  
survey  
concluded  
that  
FDA  
approval



might  
serve  
as  
a  
proxy  
for  
alleviating  
safety  
concerns,  
as  
many  
respondents  
appeared  
to  
not  
understand  
the  
regulatory  
process  
and  
two-  
thirds  
believed  
that  
the  
vaccines  
currently  
available  
already  
have  
full  
FDA  
approval  
or  
were  
unsure  
whether  
they  
have  
full  
approval.  
Full  
licensing  
of  
a  
SARS-  
CoV-2  
vaccine

also  
is  
expected  
to  
spur  
even  
more  
employers  
to  
implement  
vaccine  
mandates  
and  
would  
provide  
physicians  
greater  
latitude  
to  
prescribe  
additional  
doses  
for  
older  
adults  
or  
people  
with  
compromised  
immune  
systems.

### **EMPLOYER VACCINE MANDATES**

Some  
of  
the  
largest  
employers  
in  
the  
US  
recently  
have  
announced  
SARS-  
CoV-2

vaccination  
mandates  
for  
all  
or  
some  
of  
their  
employees  
amid  
a  
surge  
of  
COVID-19  
cases.  
The  
US  
FDA  
is  
expected  
to  
fully  
license  
the  
Pfizer-  
BioNTech  
vaccine  
within  
the  
next  
few  
months,  
a  
move  
that  
could  
spark  
more  
companies  
to  
implement  
requirements.  
Tyson  
Foods,  
Google,  
Netflix,  
Disney,  
Walmart,

Uber,  
Lyft,  
Morgan  
Stanley,  
*The*  
*Washington*  
*Post*,  
and  
United  
Airlines  
are  
several  
of  
the  
major  
companies  
that  
are  
requiring  
that  
at  
least  
some  
of  
their  
employees  
be  
vaccinated,  
either  
as  
a  
condition  
of  
employment  
or  
in  
order  
to  
return  
to  
corporate  
office  
buildings.  
On  
August  
5,  
CNN  
announced

it  
fired  
3  
employees  
who  
violated  
the  
company's  
policies  
by  
returning  
to  
the  
office  
unvaccinated,  
one  
of  
the  
first  
known  
examples  
of  
a  
major  
company  
terminating  
employment  
for  
workers  
who  
ignore  
vaccine  
mandates.

Reportedly,  
the  
Biden  
administration  
is  
considering  
withholding  
federal  
funds  
from  
a  
variety  
of  
institutions,

including  
long-  
term  
care  
facilities  
and  
universities,  
in  
order  
to  
encourage  
more  
Americans  
to  
get  
vaccinated.  
The  
US  
Equal  
Employment  
Opportunity  
Commission  
(EEOC)  
has  
issued  
[guidance](#)  
[generally](#)  
[permitting](#)  
[employers](#)  
[to](#)  
[institute](#)  
[vaccination](#)  
[mandates](#)  
in  
the  
workplace  
as  
long  
as  
reasonable  
accommodations  
are  
offered  
to  
those  
with  
religious  
beliefs,

disabilities,  
or  
other  
conditions  
that  
might  
prohibit  
vaccination.  
On  
July  
6,  
the  
[US](#)  
[Department](#)  
[of](#)  
[Justice](#)  
[published](#)  
[a](#)  
[memorandum](#)  
explaining  
that  
Section  
564  
of  
the  
Food,  
Drug,  
and  
Cosmetic  
Act,  
which  
authorizes  
the  
US  
FDA  
to  
issue  
emergency  
use  
authorization  
(EUA),  
does  
not  
prohibit  
public  
and  
private  
entities

such  
as  
businesses  
and  
schools  
from  
imposing  
SARS-  
CoV-2  
vaccine  
requirements.

In  
essence,  
the  
regulation  
permits  
employers  
to  
implement  
policies  
requiring  
vaccination  
as  
a  
condition  
of  
employment  
even  
when  
the  
vaccine  
is  
being  
used  
under  
an  
EUA.

Several  
states  
have  
moved  
to  
ban  
future  
vaccine  
mandates.  
As  
we



previously reported, mandatory vaccination requirements twice have been upheld in federal courts. Undoubtedly, additional legal challenges will emerge as [more employers, universities, and other entities](#) require proof of vaccination for employees, contractors, and office guests.

## **NEW YORK CITY VACCINE MANDATE**

On August 3, [New York City Mayor](#)

Bill  
de  
Blasio  
announced  
the  
Key  
to  
NYC  
Pass  
program,  
which  
requires  
vaccination  
for  
many  
activities  
in  
the  
city.  
Starting  
August  
16  
(with  
the  
program  
fully  
implemented  
by  
September  
13),  
the  
program  
will  
require  
individuals  
to  
have  
received  
at  
least  
1  
dose  
of  
a  
SARS-  
CoV-2  
vaccine  
for

indoor  
dining,  
indoor  
fitness  
facilities,  
and  
indoor  
entertainment  
venues  
(eg,  
theaters,  
museums).  
The  
effort  
is  
similar  
to  
restrictions  
implemented  
in  
France,  
but  
it  
appears  
to  
be  
the  
first  
large-  
scale  
program  
in  
the  
US.  
Last  
week,  
Mayor  
de  
Blasio  
announced  
a  
vaccine  
mandate  
for  
city  
employees,  
which  
requires

weekly  
testing  
for  
unvaccinated  
personnel.

Notably,

Key  
to  
NYC  
Pass  
does  
not  
refer  
to  
an  
actual  
pass

or  
smartphone  
application,  
but  
rather  
to  
the  
mandate  
itself.

Individuals  
have  
the  
option  
to  
use  
the  
physical  
vaccination  
card  
issued  
by  
the  
US  
CDC,  
the  
state's  
Excelsior  
Pass  
app,  
or

the  
city's  
NYC  
COVID  
Safe  
app  
to  
provide  
documentation  
of  
vaccination  
status,  
but  
questions  
remain  
regarding  
how  
businesses  
are  
expected  
to  
verify  
vaccination  
status,  
particularly  
regarding  
how  
to  
verify  
the  
authenticity  
of  
vaccination  
cards.  
While  
both  
apps  
also  
document  
negative  
test  
results,  
these  
are  
not  
considered  
a  
valid

substitute  
for  
vaccination  
under  
the  
city's  
mandate.

## **US EVICTION MORATORIUM**

Following  
the  
expiration  
of  
a  
[federal  
moratorium  
on  
evictions](#)  
on  
July  
31,  
the  
[US  
CDC](#)  
[issued](#)  
[a  
new  
temporary  
moratorium](#)  
on  
August  
3  
that  
targets  
areas  
of  
"substantial  
or  
high  
[SARS-  
CoV-2]  
transmission."  
Substantial  
transmission  
corresponds  
to

counties  
with  
more  
than  
50  
new  
weekly  
cases  
per  
100,000  
population  
and  
test  
positivity  
of  
8%  
or  
higher  
over  
the  
past  
week.  
Based  
on  
the  
CDC's  
COVID-19  
risk  
classification,  
these  
counties  
currently  
account  
for  
approximately  
90%  
of  
the  
US  
population.  
The  
new  
order  
is  
scheduled  
to  
expire  
on

October  
3.  
The  
moratorium  
aims  
to  
provide  
additional  
time  
for  
states  
to  
distribute  
rental  
assistance  
funding  
at  
a  
time  
when  
the  
increasing  
prevalence  
of  
the  
Delta  
variant  
is  
increasing  
the  
COVID-19  
risk  
across  
the  
country.

As  
the  
previous  
moratorium  
expired,  
the  
White  
House  
and  
the  
US  
Congress



called  
on  
each  
other  
to  
act;  
however,  
Congress  
was  
unable  
to  
agree  
to  
a  
legislative  
solution,  
and  
the  
White  
House  
acknowledged  
that  
it  
did  
not  
have  
the  
authority  
to  
take  
action.  
In  
light  
of  
a  
recent  
US  
Supreme  
Court  
decision  
to  
allow  
the  
CDC  
to  
extend  
the  
previous

moratorium  
through  
July,  
in  
part,  
due  
to  
assurances  
that  
it  
would  
not  
be  
extended  
further,  
[US](#)  
[President](#)  
[Joe](#)  
[Biden](#)  
noted  
that  
the  
[new](#)  
[moratorium](#)  
will  
likely  
“face  
obstacles.”  
In  
fact,  
one  
realtor  
organization  
has  
already  
filed  
a  
[lawsuit](#)  
[in](#)  
[federal](#)  
[court](#),  
and  
one  
local  
judge  
has  
reportedly  
indicated

that  
he  
will  
[disregard](#)  
[the](#)  
[order](#).  
Even  
if  
the  
moratorium  
is  
overturned,  
President  
Biden  
indicated  
that  
it  
could  
potentially  
remain  
in  
place  
during  
the  
litigation  
process,  
which  
would  
effectively  
extend  
protections  
for  
renters.

#### **WHO BOOSTER DOSE MORATORIUM**

The  
WHO  
on  
August  
4  
called  
for  
a  
[temporary](#),  
[2-](#)

month  
moratorium  
on  
the  
administration  
of  
“booster,”  
or  
third,  
doses  
of  
SARS-  
CoV-2  
vaccines  
for  
most  
people,  
urging  
a  
focus  
on  
helping  
all  
nations  
catch  
up  
with  
their  
vaccination  
efforts  
to  
reach  
at  
least  
10%  
of  
their  
populations  
by  
the  
end  
of  
September.  
In  
a  
briefing,  
WHO  
Director-

General  
Dr.  
Tedros  
Adhanom  
Ghebreyesus  
said,  
“We  
cannot  
—  
and  
we  
should  
not  
—  
accept  
countries  
that  
have  
already  
used  
most  
of  
the  
global  
supply  
of  
vaccines  
using  
even  
more  
of  
it,  
while  
the  
world’s  
most  
vulnerable  
people  
remain  
unprotected.”  
Of  
approximately  
4  
billion  
doses  
administered  
worldwide,  
[more](#)

than  
80%  
have  
been  
used  
in  
high-  
or  
upper-  
middle-  
income  
countries.

WHO  
staff  
said  
the  
science  
supporting  
booster  
doses  
for  
the  
vaccinated  
general  
population  
to  
enhance  
immunity  
is  
not  
yet  
clear,  
and  
distinguished  
those  
shots  
from  
additional  
doses  
potentially  
needed  
among  
immunocompromised  
populations  
for  
the  
development  
of

immunity,  
which  
they  
said  
should  
be  
considered  
part  
of  
the  
initial  
series  
and  
not  
a  
booster.  
Dr.  
Tedros  
called  
for  
a  
moratorium  
on  
booster  
doses  
through  
at  
least  
the  
end  
of  
September,  
with  
the  
possibility  
of  
extension,  
in  
order  
to  
increase  
the  
vaccine  
supply  
going  
to  
the  
COVAX

facility  
and  
encouraged  
leaders  
of  
the  
Group  
of  
20  
countries  
to  
make  
“concrete  
commitments”  
to  
help  
close  
the  
global  
vaccine  
gap.

The  
WHO’s  
call  
for  
a  
booster  
moratorium  
comes  
as  
several  
nations  
begin  
or  
move  
toward  
starting  
such  
programs.  
[Israel](#)  
on  
August  
1  
began  
providing  
third  
doses



to  
adults  
over  
age  
60  
who  
are  
at  
least  
5  
months  
from  
their  
second  
dose,  
with  
Prime  
Minister  
Naftali  
Bennett  
on  
August  
5  
warning  
older  
Israelis  
to  
take  
extreme  
caution  
until  
they  
receive  
the  
additional  
shot.  
In  
Russia,  
anyone  
6  
months  
post-  
vaccination  
can  
receive  
an  
extra  
dose,

and  
in  
Hungary,  
those  
who  
are  
4  
months  
post-  
vaccination  
can  
get  
one.  
Other  
nations,  
including  
[Germany](#),  
the  
[United  
Kingdom](#),  
and  
[France](#),  
are  
set  
to  
roll  
out  
additional  
dose  
campaigns  
among  
various  
segments  
of  
their  
populations  
beginning  
in  
September.  
The  
[US  
FDA](#)  
is  
[expected  
to  
announce  
a  
plan](#)

for  
additional  
doses  
for  
all  
populations  
by  
early  
September,  
with  
a  
[plan](#)  
for  
immunocompromised  
individuals  
possibly  
coming  
sooner.  
Despite  
the  
WHO's  
calls  
for  
a  
moratorium,  
most  
[countries](#)  
[appear](#)  
[to](#)  
[be](#)  
[moving](#)  
[ahead](#)  
with  
plans  
for  
additional  
doses,  
claiming  
they  
will  
be  
able  
to  
provide  
the  
extra  
shots  
and

donate  
millions  
of  
doses  
to  
low-  
and  
middle-  
income  
countries.  
Notably,  
a  
[WHO](#)  
[internal](#)  
[analysis](#)  
estimates  
that  
if  
only  
the  
11  
wealthier  
nations  
planning  
or  
expecting  
to  
begin  
additional  
dose  
campaigns  
this  
year  
were  
to  
provide  
shots  
to  
everyone  
over  
age  
50,  
they  
would  
use  
approximately  
440  
million

doses  
of  
the  
already  
tight  
global  
supply.  
If  
all  
high-  
or  
upper-  
middle-  
income  
countries  
began  
such  
campaigns,  
the  
estimate  
doubles.  
With  
COVAX  
seeking  
at  
least  
half  
a  
billion  
more  
vaccine  
doses  
to  
distribute  
before  
the  
year's  
end,  
the  
onus  
lies  
with  
wealthier  
countries  
to  
fill  
global  
vaccination

gaps  
with  
limited  
supplies.

## **VACCINE DIPLOMACY**

As  
the  
Delta  
variant  
spreads  
worldwide,  
driving  
up  
the  
number  
of  
new  
COVID-19  
cases,  
the  
US  
government  
is  
under  
increasing  
pressure  
to  
provide  
vaccine  
doses  
to  
countries  
in  
need.  
So  
far,  
the  
US  
has  
[donated](#)  
[more](#)  
[than](#)  
[110](#)  
[million](#)  
[doses](#)  
and

plans  
to  
donate  
at  
least  
500  
million  
more.

As  
part  
of  
its  
efforts  
to  
improve  
global  
vaccine  
access,  
the  
US  
Department  
of  
State  
is  
working  
to  
support  
the  
development  
of  
a  
network  
of  
overseas  
manufacturers  
to  
help  
grow  
global  
SARS-  
CoV-2  
vaccine  
supplies  
by  
several  
billion  
doses  
annually.

Gayle  
Smith,  
US  
State  
Department  
Coordinator  
for  
Global  
COVID-19  
Response  
and  
Health  
Security,  
said  
she  
would  
like  
to  
see  
US  
vaccine  
makers  
—  
including  
Moderna,  
Pfizer,  
and  
J&J  
—  
support  
the  
establishment  
of  
low-  
cost  
manufacturing  
facilities  
and  
share  
technological  
information  
with  
other  
companies  
to  
make  
vaccines  
available



at  
lower  
price  
points.

To  
this  
end,  
the  
US  
International  
Development  
Finance  
Corporation  
has  
offered  
US  
\$2  
billion  
to  
vaccine  
makers  
as  
incentives.  
So  
far,  
agreements  
have  
been  
made  
with  
companies  
in  
India,  
South  
Africa,  
and  
Senegal,  
but  
these  
are  
for  
companies  
to  
“fill  
and  
finish”  
vaccine

doses  
by  
obtaining  
large  
batch  
ingredients,  
blending  
the  
product,  
and  
filling  
and  
packaging  
vials  
for  
distribution.  
One  
of  
these  
companies,  
South  
Africa-  
based  
Aspen  
Pharmacare,  
this  
week  
announced  
it  
will  
[increase  
its  
annual  
production  
capacity](#)  
for  
the  
J&J-  
Janssen  
vaccine  
from  
300  
million  
to  
500  
million  
beginning  
in

January  
2022.  
Some  
advocates  
are  
pushing  
for  
the  
US  
to  
[pressure](#)  
[pharmaceutical](#)  
[companies](#)  
to  
share  
the  
technical  
expertise  
necessary  
for  
overseas  
companies  
to  
produce  
the  
vaccines  
themselves.  
Notably,  
the  
US  
government  
retains  
ownership  
of  
one  
of  
the  
main  
patents  
used  
in  
the  
Moderna  
vaccine,  
but  
it  
has  
not

yet  
charged  
royalties,  
giving  
the  
government  
leverage  
over  
the  
manufacturer.

In  
an  
effort  
to  
counter  
criticisms  
it  
has  
not  
done  
enough  
to  
incentivize  
large  
pharmaceutical  
companies  
to  
transfer  
vital  
technologies,  
the  
US  
—  
in  
partnership  
with  
nongovernmental  
organizations  
and  
philanthropies  
—  
plans  
to  
host  
a  
high-  
level

leadership  
summit  
during  
next  
month's  
UN  
General  
Assembly  
meeting,  
with  
the  
goal  
of  
rallying  
the  
international  
community  
to  
increase  
its  
pledges  
for  
vaccine  
and  
public  
health  
resources  
donations.  
As  
the  
US  
appears  
to  
be  
stepping  
up  
its  
vaccine  
diplomacy  
efforts,  
so  
does  
China.  
Chinese  
President  
Xi  
Jinping  
on

August  
5  
announced  
his  
country  
hopes  
to  
provide  
2  
billion  
doses  
of  
SARS-  
CoV-2  
vaccines  
to  
other  
countries  
this  
year,  
and  
will  
donate  
US  
\$100  
million  
to  
the  
COVAX  
facility.

### **MODERNA VACCINE EFFICACY**

Moderna  
this  
week  
[released](#)  
final  
analysis  
of  
its  
Phase  
3  
COVE  
study  
data  
for

fully  
vaccinated  
individuals  
at  
6  
months  
follow-  
up.  
A  
corresponding  
preprint  
[published](#)  
in  
*medRxiv*  
provides  
details  
about  
the  
study.  
The  
placebo-  
controlled  
efficacy  
trial  
included  
nearly  
45,000  
participants  
aged  
16  
and  
older,  
and  
roughly  
2,250  
participants  
between  
the  
ages  
of  
12  
and  
15.  
According  
to  
the  
data,  
the

Moderna vaccine's efficacy after 6 months was 91% among evaluable participants and irrespective of previous SARS-CoV-2 infection. Vaccine efficacy against severe disease was 97%. In South Africa, where the SARS-CoV-2 Beta variant (B.1.351) was dominant during the study, the vaccine efficacy was 100%. However, the study



did  
not  
evaluate  
vaccine  
efficacy  
against  
the  
now  
widespread  
Delta  
variant,  
and  
the  
company  
acknowledged  
that  
additional  
research  
is  
necessary  
to  
fully  
evaluate  
the  
vaccine  
against  
new  
variants.

**NOVAVAX  
VACCINE  
CANDIDATE**

Novavax  
issued  
several  
statements  
this  
week  
regarding  
progress  
on  
its  
candidate  
SARS-  
CoV-2  
vaccine.  
Novavax  
has

been  
working  
on  
its  
application  
to  
the  
US  
FDA  
seeking  
emergency  
use  
authorization  
(EUA),  
but  
it  
appears  
the  
company  
will  
not  
submit  
the  
application  
until  
the  
fourth  
quarter  
of  
2021.  
Despite  
the  
delay  
in  
seeking  
emergency  
authorization  
in  
the  
US,  
Novavax  
also  
announced  
encouraging  
information  
on  
the  
international

front.  
Novavax  
submitted  
applications  
for  
emergency  
use  
authorization  
to  
regulatory  
authorities  
in  
[India](#),  
[Indonesia](#),  
[and](#)  
[the](#)  
[Philippines](#),  
[and](#)  
it  
expects  
to  
submit  
an  
application  
for  
emergency  
use  
listing  
to  
the  
WHO  
later  
this  
month.  
Reportedly,  
emergency  
use  
applications  
are  
expected  
to  
be  
submitted  
to  
Australia,  
Canada,  
[and](#)  
the

UK  
starting  
in  
September.  
Novavax  
is  
partnering  
with  
the  
Serum  
Institute  
in  
India  
to  
manufacture  
its  
vaccine.  
Additionally,  
the  
company  
finalized  
an  
[advance  
purchase  
agreement  
with  
the  
European  
Commission](#)  
for  
up  
to  
200  
million  
doses  
of  
the  
vaccine,  
with  
an  
initial  
commitment  
of  
100  
million  
doses  
with  
the

option  
to  
add  
an  
additional  
100  
million  
in  
2023.

Novavax  
also  
announced  
[preliminary  
results  
from  
an  
ongoing  
clinical  
trial](#)  
of  
its  
vaccine,  
specifically  
regarding  
the  
effect  
of  
an  
additional  
dose  
of  
the  
vaccine.  
In  
the  
Phase  
2  
study,  
participants  
received  
a  
third  
dose  
of  
the  
vaccine  
6

months  
after  
the  
initial  
2-  
dose  
regimen.  
According  
to  
a  
press  
release,  
the  
researchers  
observed  
“a  
4.6-  
fold  
increase  
in...antibody  
titers”  
following  
the  
third  
dose.  
Additionally,  
the  
participants  
exhibited  
a  
6-  
fold  
increase  
in  
antibodies  
effective  
against  
the  
Delta  
variant.  
The  
preliminary  
data  
suggest  
that  
older  
adults  
—

aged  
60-84  
years  
—

could  
exhibit  
greater  
benefit  
from  
a  
booster  
dose  
compared  
to  
younger  
adults.

The  
statement  
indicates  
that  
complete  
data  
will  
be  
published  
to  
a  
preprint  
server  
and  
submitted  
for  
peer  
review.

## **POST- EXPOSURE PROPHYLAXIS**

A  
[study](#)  
[published](#)  
[this](#)  
[week](#)  
[in](#)  
[the](#)  
[New](#)  
[England](#)  
[Journal](#)

*of  
Medicine*

shows  
that  
REGEN-  
COV

—

a  
combination  
of  
the  
monoclonal  
antibodies  
casirivimab  
and  
imdevimab

—*reduced  
the  
risk  
of  
symptomatic  
COVID-19  
disease*

*by  
81%*  
among  
people  
exposed  
to

a  
household  
contact  
with  
confirmed  
SARS-  
CoV-2  
infection.

The  
trial  
included  
1,505  
participants,  
with  
half  
assigned  
to  
receive  
REGEN-



COV  
and  
the  
other  
half  
to  
placebo.  
The  
participants'  
mean  
age  
was  
42.9  
years,  
45.9%  
were  
adolescent  
boys  
or  
men,  
9.3%  
identified  
as  
Black,  
and  
40.5%  
identified  
as  
Hispanic  
or  
Latinx.  
Overall,  
a  
single  
1,200  
mg  
subcutaneous  
injection  
of  
REGEN-  
COV  
reduced  
the  
risk  
of  
symptomatic  
and  
asymptomatic

infections  
by  
66.4%  
among  
household  
contacts.  
Additionally,  
the  
median  
time  
to  
symptom  
resolution  
(1.2  
weeks  
vs  
3.2  
weeks)  
and  
duration  
of  
high  
viral  
load  
(0.4  
weeks  
vs  
1.3  
weeks)  
were  
shorter  
among  
REGEN-  
COV  
recipients  
who  
developed  
symptomatic  
COVID-19  
than  
for  
placebo  
recipients  
who  
developed  
symptomatic  
COVID-19.  
The

study's findings were used by the US FDA in its recent [revision to REGEN-COV's emergency use authorization \(EUA\)](#), which expanded emergency use for the drug as post-exposure prophylaxis (PEP) for COVID-19 in high-risk adults and pediatric individuals. REGEN-COV remains authorized for the treatment of

mild-  
to-  
moderate  
COVID-19  
among  
adults  
and  
pediatric  
patients  
who  
are  
at  
high  
risk  
for  
progression  
to  
severe  
COVID-19.

**LONG  
COVID/PASC  
IN  
CHILDREN**

According  
to  
a  
[study](#)  
published  
in  
*The  
Lancet  
Child  
&  
Adolescent  
Health*,  
so-  
called  
“long  
COVID,”  
or  
post-  
acute  
sequelae  
of  
COVID-19  
(PASC),  
is

rare  
among  
children,  
with  
most  
children  
fully  
recovering  
from  
SARS-  
CoV-2  
infection  
after  
8  
weeks.  
British  
researchers  
aimed  
to  
determine  
illness  
duration  
and  
symptoms  
among  
UK  
school-  
aged  
children  
who  
reported  
data,  
through  
adult  
proxies,  
to  
the  
COVID  
Symptom  
Study.  
The  
researchers  
included  
data  
from  
1,734  
children  
aged

5  
to  
17  
years  
who  
tested  
positive  
for  
SARS-  
CoV-2,  
with  
case  
control  
matches  
who  
reported  
information  
to  
the  
database  
but  
who  
tested  
negative  
for  
the  
virus.  
Of  
these  
children,  
the  
most  
common  
symptoms  
were  
headache  
(62.2%)  
and  
fatigue  
(55%)  
and  
illness  
duration  
lasted  
approximately  
6  
days.  
Only

25  
(1.8%)  
of  
1,379  
children  
who  
tested  
positive  
experienced  
symptoms  
for  
at  
least  
56  
days,  
with  
a  
significant  
regression  
in  
symptoms  
within  
the  
first  
28  
days.  
Notably,  
the  
data  
showed  
that  
while  
only  
0.9%  
of  
the  
children  
who  
tested  
negative  
had  
symptoms  
lingering  
for  
28  
or  
more  
days,

this control group had more symptoms (median: 9) during the first 28 days and in the few in whom symptoms persisted beyond 28 days (median: 5). While the study's findings suggest that long-lasting symptoms are rare among children diagnosed with COVID-19, the researchers emphasized the importance of



following  
any  
child  
with  
prolonged  
illness,  
whether  
from  
SARS-  
CoV-2  
infection  
or  
another  
illness.

### **VACCINATION FOR PREGNANT WOMEN**

On  
August  
3,  
the  
UK  
government  
initiated  
a  
study  
to  
determine  
the  
most  
beneficial  
dose  
schedule  
for  
[SARS-  
CoV-2  
vaccination  
in  
pregnant  
women.](#)  
The  
study  
will  
include  
600  
pregnant

women  
who  
will  
be  
vaccinated  
using  
either  
the  
Pfizer-  
BioNTech  
or  
Moderna  
vaccines.  
The  
women  
will  
receive  
the  
2  
doses  
of  
these  
vaccines  
either  
4-6  
weeks  
apart  
or  
8-12  
weeks  
apart  
in  
order  
to  
determine  
the  
best  
interval.  
Researchers  
will  
analyze  
blood  
specimens  
from  
each  
participant  
collected  
over

9  
follow-  
up  
visits  
as  
well  
as  
a  
single  
blood  
specimen  
from  
the  
newborn  
and  
from  
breast  
milk.  
While  
pregnant  
women  
in  
the  
UK,  
US,  
and  
other  
countries  
are  
already  
being  
vaccinated,  
this  
study  
aims  
to  
provide  
further  
insight  
into  
the  
immune  
response  
in  
pregnant  
women  
and

their  
newborns.

**“DELTA  
PLUS”  
VARIANT**

As  
the  
prevalence  
of  
the  
Delta  
SARS-  
CoV-2  
variant  
of  
concern  
(VOC)  
continues  
to  
increase  
around  
the  
world,  
there  
are  
emerging  
reports  
of  
infections  
caused  
by  
a  
sub-  
lineage  
of  
the  
Delta  
variant  
that  
includes  
an  
additional  
mutation.  
The  
subvariant  
is  
being

widely  
referred  
to  
as  
“Delta  
Plus”;  
however,  
this  
appears  
to  
be  
an  
informal  
designation,  
as  
there  
is  
not  
yet  
a  
mention  
of  
that  
term  
on  
the  
[WHO](#)  
or  
[US](#)  
[CDC](#)  
VOC  
websites.  
[India](#)  
designated  
[Delta](#)  
[Plus](#)  
as  
a  
VOC  
in  
late  
June.  
Delta  
Plus  
refers  
to  
the  
B.1.617.2.1

(or  
AY.1)  
variant  
—  
a  
subset  
of  
the  
Delta  
variant  
B.1.617.2  
—  
which  
includes  
an  
additional  
mutation  
(K417N)  
to  
the  
spike  
protein  
that  
is  
not  
present  
in  
the  
original  
Delta  
variant.  
The  
K417N  
mutation  
also  
is  
present  
in  
the  
Beta  
variant,  
and  
it  
is  
believed  
to  
help  
the

virus  
evade  
immune  
response,  
including  
[reduced](#)  
[susceptibility](#)  
to  
some  
monoclonal  
antibody  
treatments.

The  
[Outbreak.info](#)  
variant  
tracker  
reports  
more  
than  
450  
cases  
involving  
the  
Delta  
Plus  
variant  
across  
at  
least  
30  
countries.

In  
June,  
[Public](#)  
[Health](#)  
[England](#)  
was  
among  
the  
[first](#)  
to  
[document](#)  
the  
[K417N](#)  
[mutation](#)  
in  
the

Delta  
variant.  
Information  
from  
the  
[Indian  
Ministry  
of  
Health  
and  
Welfare](#)  
indicates  
that  
the  
Delta  
Plus  
variant  
exhibits  
“increased  
transmissibility,  
stronger  
binding  
to  
receptors  
of  
lung  
cells,  
[and]  
potential  
reduction  
in  
monoclonal  
antibody  
response.”  
But  
while  
the  
“plus”  
seems  
to  
[imply  
that  
the  
variant  
is  
more  
dangerous,](#)  
it



is  
not  
yet  
clear  
how  
much  
it  
differs  
from  
the  
main  
Delta  
variant.  
As  
the  
pandemic  
continues,  
new  
variants  
will  
continue  
to  
emerge,  
which  
could  
include  
further  
evolution  
of  
VOCs  
that  
possibly  
result  
in  
increased  
transmissibility,  
disease  
severity,  
and  
resistance  
to  
treatments  
or  
vaccines.  
Genomic  
surveillance  
is  
critical

to  
rapidly  
identifying  
and  
characterizing  
these  
variants  
before  
they  
spread  
widely.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

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**Date : 8/10/2021 1:55:36 PM**  
**From : "Johns Hopkins Center for Health Security"**  
**centerhealthsecurity@mail301.jh.edu**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : COVID-19 Updates - August 10, 2021**

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
202.6  
million  
cumulative  
cases  
and  
4.29  
million  
deaths  
worldwide  
as  
of  
1:00pm  
EDT  
on  
August  
9.  
The  
global  
weekly  
incidence  
increased

for  
the  
seventh  
consecutive  
week.  
Last  
week's  
total  
is  
3.3%  
higher  
than  
the  
previous  
week,  
but  
it  
appears  
as  
though  
case  
counts  
may  
have  
passed  
an  
inflection  
point  
and  
could  
be  
approaching  
a  
peak  
or  
plateau.  
Global  
weekly  
mortality  
increased  
again  
as  
well,  
up  
1.3%  
compared  
to  
the

previous week.  
Overall, the trend has increased steadily for 5 consecutive weeks, with the exception of a spike during the week of July 19, which was the result of 8,786 deaths reported by Ecuador on July 21.

*Global Vaccination*

The WHO reported 4.03 billion doses of SARS-

CoV-2  
vaccines  
administered  
globally  
as  
of  
August  
9.  
The  
WHO  
reports  
that  
a  
total  
of  
1.59  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
798  
million  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
shows  
that  
the  
global  
[daily](#)  
[doses](#)  
[administered](#)  
has  
leveled  
off  
at  
approximately

41  
million  
doses  
per  
day\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.35  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
30.2%  
of  
the  
global  
population)  
and  
1.22  
billion  
who  
are  
fully  
vaccinated  
(15.6%  
of  
the  
global  
population).

*\*Average  
doses  
administered  
is  
exhibiting  
a  
sharp  
decrease  
for  
the  
most  
recent  
several  
days,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

*UNITED  
STATES  
The  
[US](#)  
[CDC](#)  
reported*



35.8 million cumulative COVID-19 cases and 614,856 deaths. On August 5, the US surpassed 100,000 new cases per day for the first time since February 10. The current average of 102,413 is nearly 9 times the most recent low — 11,486 on June 19 — and still increasing

rapidly.  
Daily  
mortality  
appears  
to  
continue  
its  
exponential  
increase  
up  
to  
457  
deaths  
per  
day.  
This  
is  
the  
highest  
average  
since  
May  
27,  
and  
it  
is  
an  
increase  
of  
46%  
over  
the  
past  
week  
and  
79%  
over  
the  
past  
2  
weeks\*  
*\*Changes  
in  
the  
frequency  
of  
state-  
level*

*reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

Florida  
in  
#1  
nationally  
in  
terms  
of  
both  
total  
weekly  
incidence  
and  
mortality,

representing  
22%  
and  
25%  
of  
the  
national  
total,  
respectively.  
Florida  
is  
also  
#1  
nationally  
in  
terms  
of  
[per  
capita  
weekly  
incidence](#)  
with  
733  
new  
cases  
per  
100,000  
population,  
3.5  
times  
the  
national  
average  
(205).  
Arkansas  
is  
#1  
in  
terms  
of  
[per  
capita  
weekly  
mortality](#)  
with  
4.8  
deaths  
per

100,000  
population,  
nearly  
5  
times  
the  
national  
average  
(1.0).

US  
Vaccination

On  
August  
4,  
the  
US  
surpassed  
350  
million  
cumulative  
doses  
of  
[SARS-CoV-2](#)  
[vaccines](#)  
administered.  
The  
current  
cumulative  
total  
is  
351.9  
million.  
[Daily](#)  
[vaccinations](#)  
continue  
to  
increase  
slowly,  
now  
up  
to  
608,654  
doses  
per  
day\*.  
The

US  
also  
surpassed  
50%  
of  
the  
total  
population  
fully  
vaccinated.

A  
total  
of  
195.2  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
58.8%  
of  
the  
entire  
US  
population.

Among  
adults,  
71.1%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
11.7  
million  
adolescents

aged  
12-17  
years.  
A  
total  
of  
166.7  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
50.2%  
of  
the  
total  
population.  
Approximately  
61.1%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
8.8  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered*

*are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

## **US SURGE**

The  
US  
continues  
to  
face  
a  
COVID-19  
surge,  
with  
the  
most  
severe  
burden  
faced  
by  
states  
in  
the  
South  
and  
Southeast  
regions  
of  
the  
country.



The national biweekly relative change peaked at more than +160% in late July — the largest relative increase since the initial surge in March/April 2020 — but a slight decrease to +119% indicates that the increase is beginning to taper off.

While full vaccination coverage has surpassed

50% nationally, major disparities remain at the state level. Analysis by [\*The Wall Street Journal\*](#) found that all 12 states that are reporting per capita hospitalizations greater than the national average have full vaccination coverage below the national average. Additionally, all 20 states with full vaccination coverage higher

than  
the  
national  
average  
are  
reporting  
per  
capita  
hospitalizations  
below  
the  
national  
average.

At  
the  
local  
level,  
counties  
with  
the  
lowest  
vaccination  
coverage  
also  
are  
experiencing  
much  
larger  
surges  
in  
mortality,  
compared  
to  
counties  
with  
higher  
vaccination  
coverage.  
These  
statistics  
illustrate  
that  
low  
vaccination  
coverage  
is  
a  
driver

of  
the  
ongoing  
surge  
in  
severely  
affected  
states  
and  
that  
the  
vaccines  
are  
providing  
protection  
against  
severe  
disease,  
hospitalization,  
and  
death.

In  
severely  
affected  
cities  
and  
states,  
the  
surge  
is  
placing  
a  
major  
burden  
on  
health  
systems.  
In  
some  
instances,  
the  
current  
surge  
is  
as  
severe  
or

worse  
than  
the  
United  
States'  
largest  
surge  
in  
January  
2021.  
Hospitals  
in  
[Houston,](#)  
[Texas,](#)  
and  
[Orange](#)  
[County,](#)  
[California,](#)  
are  
reporting  
increased  
wait  
times  
for  
ambulances  
to  
drop  
off  
patients  
at  
emergency  
departments  
(ED).  
Hospitals  
in  
some  
parts  
of  
the  
country  
faced  
[similar](#)  
[challenges](#)  
[during](#)  
[the](#)  
[January](#)  
[2021](#)  
[surge.](#)

Texas  
Governor  
Greg  
Abbott  
issued  
a  
statement  
to  
the  
Texas  
Hospital  
Association  
encouraging  
hospitals  
to  
“voluntarily  
postpone  
[some]  
medical  
procedures”  
in  
order  
to  
ensure  
sufficient  
capacity  
is  
available  
to  
treat  
COVID-19  
patients,  
but  
at  
least  
1  
hospital  
in  
Houston  
is  
already  
preparing  
an  
emergency  
tent  
to  
handle  
overflow

COVID-19  
patients.

As  
schools  
resume  
classes,  
some  
school  
districts  
in  
states  
that  
have  
banned  
mask  
mandates  
are  
pushing  
back  
against  
state-  
level  
legislation  
and  
policies.  
In  
Texas,  
the  
Dallas  
Independent  
School  
District  
District  
(ISD),  
the  
second-  
largest  
in  
the  
state,  
announced  
it  
will  
temporarily  
require  
masks  
for  
students,

employees,  
and  
visitors  
during  
the  
surge,  
defying  
Governor  
Abbott's  
statewide  
ban.  
Reportedly,  
the  
Houston  
ISD  
is  
expected  
to  
vote  
on  
a  
similar  
mandate  
this  
week.  
In  
Florida,  
Governor  
Ron  
Desantis  
threatened  
to  
withhold  
pay  
for  
school  
administrators  
that  
institute  
mask  
mandates  
during  
the  
state's  
most  
severe  
surge  
to



date,  
including  
a  
record  
high  
for  
[pediatric  
hospital  
admissions.](#)

**US  
MILITARY  
VACCINE  
MANDATE**

SARS-  
CoV-2  
[vaccination  
will  
be  
mandatory](#)  
for  
all  
1.3  
million  
members  
of  
the  
US  
Armed  
Forces  
no  
later  
than  
mid-  
September,  
or  
as  
soon  
as  
the  
US  
FDA  
fully  
licenses  
a  
vaccine,  
“whichever  
comes

first,"  
US  
Secretary  
of  
Defense  
Lloyd  
J.  
Austin  
III  
said  
in  
an  
[August](#)  
[9](#)  
[message](#)  
[to](#)  
[all](#)  
[troops](#).  
Secretary  
Austin  
implored  
all  
US  
Department  
of  
Defense  
(DOD)  
military,  
civilian,  
and  
contractor  
personnel  
to  
get  
vaccinated,  
regardless  
of  
a  
mandate.  
US  
President  
Joe  
Biden  
[strongly](#)  
[supports](#)  
[the](#)  
[plan](#)  
and

is  
prepared  
to  
issue  
a  
waiver  
to  
make  
the  
shots  
mandatory  
if  
the  
FDA's  
expected  
timeline  
for  
approval  
of  
the  
Pfizer-  
BioNTech  
moves  
past  
early-  
September.  
In  
a  
[statement](#),  
President  
Biden  
said  
vaccinations  
"will  
enable  
our  
service  
members  
to  
stay  
healthy,  
to  
better  
protect  
their  
families,  
and  
to

ensure  
that  
our  
force  
is  
ready  
to  
operate  
anywhere  
in  
the  
world,”  
calling  
out  
the  
Delta  
variant  
as  
a  
threat  
to  
unvaccinated  
populations.  
In  
a  
[related  
memo](#),  
Chairman  
of  
the  
Joint  
Chiefs  
General  
Mark  
Milley  
called  
COVID-19  
“a  
threat  
to  
force  
protection  
and  
readiness”  
and  
reminded  
troops  
that

vaccine mandates in the military are common. About 73% of active-duty US service members have received at least one SARS-CoV-2 vaccine dose, according to the Pentagon. But without more members fully vaccinated, the military faces challenges in deploying unvaccinated troops to countries that have strict local

rules,  
and  
an  
increase  
in  
cases  
among  
its  
ranks  
could  
harm  
military  
readiness.  
Secretary  
Austin  
added  
that  
if  
COVID-19  
incidence  
increases  
among  
military  
personnel,  
he  
[could](#)  
[act](#)  
[sooner](#)  
or  
recommend  
a  
different  
course  
of  
action  
to  
President  
Biden.  
Earlier  
this  
month,  
the  
DOD  
[recommended](#)  
[an](#)  
[immediate](#)  
[waiver](#)  
to

institute  
a  
mandate  
before  
FDA  
approval,  
but  
White  
House  
officials  
urged  
caution  
and  
settled  
on  
the  
current  
plan.

**J&J-  
JANSSEN  
VACCINE  
EFFECTIVENESS**

Researchers  
leading  
the  
[Sisonke](#)  
[clinical](#)  
[trial](#)  
in  
South  
Africa  
on  
August  
6  
[presented](#)  
[data](#)  
showing  
the  
J&J-  
Janssen  
SARS-  
CoV-2  
single-  
shot  
vaccine  
is  
highly

effective  
in  
preventing  
severe  
disease  
and  
death  
from  
COVID-19  
among  
healthcare  
workers.  
The  
Phase  
3b  
study  
[enrolled](#)  
[477,234](#)  
[healthcare](#)  
[workers](#)  
at  
122  
sites  
throughout  
South  
Africa,  
administering  
the  
J&J-  
Janssen  
vaccine  
between  
February  
and  
May  
2021.  
Data  
collection  
ran  
through  
July  
17,  
and  
researchers  
will  
continue  
to  
monitor



participants  
for  
another  
2  
years.  
Overall,  
the  
J&J-  
Janssen  
vaccine  
provided  
91-96.2%  
protection  
against  
death  
from  
both  
the  
Beta  
and  
Delta  
SARS-  
CoV-2  
variants.  
When  
the  
Beta  
variant  
was  
dominant,  
the  
vaccine  
offered  
67%  
protection  
from  
hospitalization,  
and  
71%  
protection  
against  
hospitalization  
when  
the  
Delta  
variant  
became  
dominant.

When  
breakthrough  
cases  
occurred,  
healthcare  
workers  
experienced  
mild  
symptoms  
and  
less  
than  
0.05%  
of  
those  
cases  
resulted  
in  
severe  
disease  
or  
death.

Two  
cases  
of  
rare  
blood  
clots  
occurred  
among  
participants,  
but  
both  
fully  
recovered.

The  
data  
have  
not  
yet  
been  
peer  
reviewed  
nor  
published  
in  
a

scientific  
journal,  
but  
they  
should  
alleviate  
some  
concerns  
over  
the  
J&J-  
Janssen  
vaccine's  
effectiveness.  
Some  
previous  
studies  
suggest  
the  
vaccine  
might  
not  
be  
as  
effective  
against  
the  
Delta  
variant,  
leading  
some  
people  
to  
seek  
out  
an  
additional  
vaccine  
dose;  
however,  
the  
researchers  
concluded  
additional  
doses  
are  
not  
warranted

at  
this  
time  
based  
on  
the  
data.  
J&J-  
Janssen  
is  
expected  
to  
release  
results  
of  
a  
trial  
evaluating  
a  
2-  
dose  
regimen  
in  
the  
coming  
weeks.  
South  
Africa  
granted  
conditional  
approval  
to  
the  
J&J-  
Janssen  
vaccine  
in  
April,  
and  
so  
far  
has  
administered  
more  
than  
1.85  
million  
doses.

The country also uses the Pfizer-BioNTech vaccine and has administered more than 6.77 million doses of that vaccine.

### **REINFECTION AFTER VACCINATION**

Among people previously infected with SARS-CoV-2, full vaccination provides additional protection from reinfection, according to an [early release study](#) published last week in the

US  
CDC's  
*MMWR*.  
The  
findings  
from  
the  
retrospective,  
case-  
control  
study  
underscore  
the  
CDC's  
recommendation  
that  
all  
eligible  
individuals  
receive  
a  
SARS-  
CoV-2  
vaccine.  
Using  
several  
databases,  
researchers  
identified  
246  
case-  
patients,  
all  
adult  
and  
Kentucky  
(US)  
residents  
with  
laboratory-  
confirmed  
SARS-  
CoV-2  
infection  
in  
2020  
and  
a

subsequent  
positive  
nucleic  
acid  
amplification  
test  
or  
antigen  
test  
result  
between  
May  
1  
and  
June  
30,  
2021.  
They  
also  
identified  
492  
control  
participants,  
who  
were  
[adult](#)  
[Kentucky](#)  
[residents](#)  
[matched](#)  
[on](#)  
[a](#)  
[1:2](#)  
[ratio](#)  
based  
on  
sex,  
age,  
and  
date  
of  
initial  
positive  
SARS-  
CoV-2  
test  
but  
who  
did

not  
have  
evidence  
of  
reinfection  
during  
those  
2  
months  
in  
2021.  
Notably,  
the  
data  
were  
collected  
prior  
to  
the  
Delta  
variant  
becoming  
dominant  
in  
the  
US.  
Among  
the  
case-  
patients,  
20.3%  
were  
fully  
vaccinated,  
compared  
with  
34.3%  
of  
the  
control  
participants.  
Unvaccinated  
Kentucky  
residents  
who  
were  
previously  
infected



with  
SARS-  
CoV-2  
had  
2.34  
times  
the  
odds  
of  
reinfection  
(95%  
confidence  
interval  
[CI]=1.58-3.47)  
when  
compared  
with  
those  
who  
were  
previously  
infected  
but  
also  
fully  
vaccinated.  
Partial  
vaccination  
was  
not  
significantly  
associated  
with  
reinfection  
(odds  
ratio=1.56;  
95%  
CI=0.81-3.01),  
according  
to  
the  
researchers.  
They  
warned  
that  
little  
is  
known

about  
the  
durability  
of  
natural  
immunity  
after  
initial  
infection  
and  
noted  
the  
study  
suggests  
that  
vaccination  
offers  
better  
protection  
than  
the  
natural  
immunity  
developed  
post-  
acute  
infection  
for  
people  
who  
have  
recovered  
from  
SARS-  
CoV-2  
infection.

### **COUNTERFEIT VACCINATION CARDS**

As  
more  
employers,  
universities,  
and  
venues  
in  
the

US  
and  
Europe  
implement  
vaccine  
mandates,  
officials  
are  
warning  
of  
a  
[rise](#)  
[in](#)  
[fake](#)  
[SARS-](#)  
[CoV-2](#)  
[vaccination](#)  
[certificates](#).  
According  
to  
investigators  
and  
cybersecurity  
experts,  
the  
past  
few  
weeks  
have  
seen  
a  
number  
of  
ways  
to  
purchase  
counterfeit  
vaccine  
cards  
on  
social  
media,  
messaging  
apps,  
and  
the  
dark  
web.

While the European Union has a digital vaccine passport system that assigns a unique QR code to each individual, the US relies on paper cards distributed by the US CDC, which are easy to forge and were never intended to be used as proof of vaccination. Some US

states  
are  
working  
to  
implement  
digital  
verification  
systems,  
but  
other  
states  
have  
outlawed  
the  
use  
of  
such  
systems  
or  
implemented  
punishments  
for  
businesses  
and  
other  
entities  
that  
ask  
for  
proof  
of  
vaccination.

The  
ease  
with  
which  
US  
vaccination  
cards  
can  
be  
forged  
is  
alarming  
both  
faculty  
and

students  
at  
universities  
and  
colleges

heading  
back

to  
in-  
person  
learning  
this  
fall.

According

to  
an  
estimate  
from  
the

Chronicle  
of

Higher  
Education,  
at

least

675

colleges

and

universities

now

require

proof

of

SARS-

CoV-2

vaccination.

Many

university

administrators

face

challenges

in

identifying

fake

vaccination

cards

digitally

uploaded

to  
students'  
online  
portals.  
The  
proliferation  
of  
counterfeit  
vaccination  
cards  
prompted  
the  
US  
Federal  
Bureau  
of  
Investigation  
and  
the  
US  
Department  
of  
Health  
and  
Human  
Services  
Office  
of  
the  
Inspector  
General  
to  
issue  
a  
statement  
earlier  
this  
year  
warning  
the  
public  
that  
buying,  
creating,  
or  
selling  
fabricated  
cards

is  
a  
federal  
offense.  
For  
people  
in  
the  
US  
with  
a  
valid  
vaccination  
certificate,  
there  
are  
[several  
options  
to  
store  
the  
oddly  
sized  
CDC  
card  
digitally](#)  
on  
a  
smartphone.

### **UNAUTHORIZED THIRD VACCINE DOSES**

In  
the  
US,  
the  
federal  
government  
is  
expected  
to  
release  
a  
[plan  
for  
third](#)



SARS-  
CoV-2  
vaccine  
doses

in  
the  
coming  
weeks.

In  
the  
meantime,  
there  
seems

to  
be  
a  
growing  
divide  
between  
near-  
stagnant  
vaccine  
hesitancy  
and  
people  
seeking  
unauthorized  
additional  
shots,

the  
latter  
underlining  
a

heightened  
anxiety  
over

the  
Delta  
variant's  
spread.

According  
to  
reports,  
some  
people  
who  
received  
the

J&J-  
Janssen  
vaccine  
have  
received  
additional  
doses  
of  
another  
authorized  
vaccine  
over  
fears  
the  
single-  
shot  
dose  
might  
not  
be  
as  
effective  
as  
others.  
And  
it  
appears  
some  
are  
going  
to  
great  
lengths  
to  
obtain  
extra  
doses  
by  
falsifying  
vaccine  
certificates,  
lying  
about  
their  
name  
or  
health  
insurance

status,  
or  
traveling  
to  
other  
cities  
or  
states.  
Most  
experts  
stress  
that  
further  
research  
is  
warranted  
to  
determine  
the  
safety  
and  
efficacy  
of  
second  
or  
third  
doses  
and  
whether  
combining  
doses  
of  
various  
vaccines  
will  
provide  
substantial  
protection.

But  
as  
the  
Delta  
variant  
continues  
to  
drive  
up

the  
number  
of  
new  
COVID-19  
cases  
worldwide,  
calls  
for  
so-  
called  
“booster”  
doses  
are  
highlighting  
global  
inequities  
in  
vaccine  
access,  
as  
wealthier  
nations  
with  
ample  
vaccine  
supplies  
begin  
to  
recommend  
additional  
doses  
for  
some  
populations  
while  
low-  
and  
middle-  
income  
countries  
(LMICs)  
struggle  
to  
obtain  
sufficient  
supplies  
to

vaccinate  
even  
small  
proportions  
of  
their  
populations.  
Worldwide,  
public  
health  
experts,  
international  
organizations,  
and  
ethicists  
caution  
countries  
against  
offering  
booster  
doses  
until  
more  
data  
become  
available  
and  
to  
shore  
up  
supplies  
in  
LMICs.  
The  
[WHO](#)  
[last](#)  
[week](#)  
[called](#)  
[for](#)  
[a](#)  
[moratorium](#)  
on  
offering  
additional  
doses  
for  
most  
people,

but  
it  
appears  
several  
nations

—

including  
Israel,  
Germany,  
France,  
the  
UK,  
and  
Russia

—

will  
move  
ahead  
with  
plans  
to  
offer  
booster  
shots  
to  
some  
populations.

## **HEART INFLAMMATION FOLLOWING VACCINATION**

In  
a  
[research  
letter](#)  
published  
in  
the  
peer-  
reviewed  
journal  
*JAMA*,  
researchers  
examined  
the  
clinical  
records

of  
more  
than  
2  
million  
patients  
who  
received  
at  
least  
1  
dose  
of  
SARS-  
CoV-2  
vaccination  
within  
the  
Providence  
Health  
Care  
System  
or  
recorded  
through  
state  
registries  
in  
Washington,  
Oregon,  
Montana,  
and  
Los  
Angeles  
County,  
California  
(US)  
in  
order  
to  
identify  
post-  
vaccination  
cases  
of  
myocarditis  
(heart  
muscle

inflammation)  
and  
pericarditis  
(heart  
membrane  
inflammation).  
Of  
these  
individuals,  
76.5%  
received  
more  
than  
1  
vaccine  
dose,  
52.6%  
received  
the  
Pfizer-  
BioNTech  
vaccine,  
44.1%  
received  
Moderna,  
and  
3.1%  
received  
J&J-  
Janssen.  
Overall,  
20  
individuals  
had  
vaccine-  
related  
myocarditis  
(1.0  
[95%  
confidence  
interval  
(CI),  
0.61-1.54]  
per  
100,000)  
and  
37  
had



pericarditis  
(1.8  
[95%  
CI,  
1.30-2.55]  
per  
100,000).  
Of  
the  
cases  
of myocarditis,  
75%  
occurred  
in  
males  
with  
a  
median  
age  
of  
36,  
happened  
on  
average  
3.5  
days  
after  
vaccination,  
and  
resulted  
in  
hospitalization  
in  
19  
of  
20  
cases.  
No  
mortality  
was  
reported,  
and  
most  
patients  
were  
discharged  
after  
approximately

2  
days.  
Of  
the  
pericarditis  
cases,  
73%  
occurred  
in  
males  
with  
a  
median  
age  
of  
59,  
happened  
on  
average  
20  
days  
after  
vaccination,  
and  
resulted  
in  
hospitalization  
in  
13  
of  
37  
cases.  
No  
mortality  
was  
reported,  
and  
most  
patients  
were  
discharged  
after  
approximately  
1  
day.  
Notably,  
the  
incidence

of  
myocarditis  
following  
SARS-  
CoV-2  
vaccination  
described  
in  
the  
study  
—  
10  
per  
million  
—  
is  
higher  
than  
the  
US  
CDC's  
estimate  
of  
4.8  
cases  
per  
million,  
[suggesting](#)  
[an](#)  
[underreporting](#)  
of  
cases  
to  
federal  
databases.  
The  
researchers  
stressed  
that  
the  
hospitalizations  
resulting  
from  
heart  
inflammation  
in  
the  
study

were  
unremarkable  
and  
cautioned  
that  
COVID-19-  
related  
heart  
inflammation  
is  
much  
more  
common.

Overall,  
vaccination  
remains  
the  
most  
important  
tool  
for  
protecting  
individuals  
from  
severe  
symptoms  
of  
COVID-19.

### **COVID-19 TREATMENT RESEARCH**

Research  
efforts  
to  
find  
treatments  
for  
people  
with  
mild-  
to-  
severe  
COVID-19  
are  
underway  
worldwide.  
The

WHO  
last  
week  
announced  
it  
is  
restarting  
the  
Solidarity  
clinical  
trial—  
now  
dubbed  
SolidarityPlus  
—  
to  
test  
3  
repurposed  
drugs  
in  
hospitalized  
COVID-19  
patients:  
the  
cancer  
chemotherapy  
drug  
imatinib,  
a  
chimeric  
monoclonal  
antibody  
called  
infliximab  
that  
is  
used  
to  
treat  
several  
autoimmune  
diseases,  
and  
the  
antimalarial  
drug  
artesunate.

The first patients are expected to be enrolled soon in Finland, and 40 other countries are in the process of gaining regulatory and institutional review board approvals. The original Solidarity trial began in March 2020, but in October 2020 researchers published [interim results](#) showing no benefit for

4

repurposed  
drugs

—

remdesivir,  
hydroxychloroquine,  
lopinavir,  
and  
interferon  
beta-1a

—

in  
hospitalized  
COVID-19  
patients.

An  
independent  
expert  
committee  
chose

the

3

new  
medications

at  
the  
beginning  
of

this  
year,

but  
delays

due

to

negotiations

with

drug

manufacturers,

as

well

as

regulatory

and

ethical

approval

processes,

held

up

the

trial's  
restart  
until  
now.

In  
the  
US,  
the  
Duke  
Clinical  
Research  
Institute  
[announced](#)  
the  
expansion  
of  
a  
clinical  
trial  
testing  
repurposed  
medications  
among  
people  
with  
mild-  
to-  
moderate  
COVID-19  
who  
are  
recovering  
at  
home.  
Part  
of  
the  
National  
Institutes  
of  
Health  
(NIH)-  
funded  
Accelerating  
COVID-19  
Therapeutic  
Interventions



and  
Vaccines  
(ACTIV)  
initiative,  
the  
[ACTIV-6  
study](#)  
is  
now  
testing  
3  
drugs  
that  
are  
FDA-  
approved  
for  
other  
conditions  
—  
the  
antiparasitic  
ivermectin,  
the  
inhaled  
steroid  
fluticasone,  
and  
the  
selective  
serotonin  
reuptake  
inhibitor  
fluvoxamine  
—  
and  
expects  
to  
add  
other  
medications  
over  
time.  
The  
study  
is  
recruiting  
participants

ages  
30  
and  
older  
who  
recently  
tested  
positive  
for  
SARS-  
CoV-2  
and  
are  
experiencing  
at  
least  
2  
COVID-19  
symptoms.  
Notably,  
the  
study  
is  
completely  
remote,  
meaning  
people  
recovering  
from  
COVID-19  
at  
home  
can  
participate  
from  
anywhere  
in  
the  
US  
and  
do  
not  
need  
to  
leave  
their  
homes  
while

isolating  
to  
obtain  
medication  
or  
visit  
clinics.  
With  
only  
a  
handful  
of  
medications  
approved  
or  
authorized  
to  
treat  
COVID-19,  
researchers  
are  
hopeful  
these  
trials  
can  
help  
broaden  
the  
tools  
available  
to  
lower  
the  
risk  
of  
complications,  
shorten  
the  
time  
of  
symptoms,  
or  
prevent  
progression  
to  
more  
severe  
disease.

## **US/CANADA TRAVEL RESTRICTIONS**

On  
August  
9,  
[Canada](#)  
[lifted](#)  
[some](#)  
[travel](#)  
[restrictions](#)  
for  
fully  
vaccinated  
US  
citizens  
and  
permanent  
residents.  
However,  
prospective  
travelers  
must  
[adhere](#)  
[to](#)  
[certain](#)  
[pandemic](#)  
[safety](#)  
[standards](#)  
before  
being  
allowed  
to  
cross  
the  
border.  
In  
order  
to  
enter  
Canada,  
Americans  
must  
show  
proof  
of  
a

full  
SARS-  
CoV-2  
vaccine  
regimen  
completed  
at  
least  
14  
days  
prior,  
a  
negative  
molecular  
SARS-  
CoV-2  
test  
taken  
within  
3  
days  
of  
travel  
regardless  
of  
individual  
vaccine  
status,  
and  
an  
in-  
country,  
14-  
day  
quarantine  
plan  
in  
case  
symptoms  
develop.  
They  
must  
also  
fill  
out  
a  
detailed  
application

on  
the  
country's  
[arriveCAN](#)  
[app](#)  
before  
crossing  
the  
border.  
Canadian  
authorities  
have  
issued  
warnings  
to  
prospective  
travelers  
that  
[longer](#)  
[wait](#)  
[times](#)  
can  
be  
expected  
at  
border  
crossings.  
Canada  
plans  
to  
open  
its  
borders  
to  
visitors  
from  
other  
countries  
beginning  
next  
month,  
depending  
on  
conditions.  
The  
US  
government  
[recently](#)

announced  
plans  
to  
extend  
its  
border  
closures  
with  
Canada  
and  
Mexico  
for  
all  
nonessential  
travel  
until  
at  
least  
August  
21,  
but  
a  
plan  
for  
a  
phased  
reopening  
of  
the  
borders  
is  
being  
formulated,  
according  
to  
officials.

**CRUISE  
LINES  
&  
VACCINATION**  
Norwegian  
Cruise  
Lines  
can  
require  
passengers  
to

show  
proof  
of  
SARS-  
CoV-2  
vaccination  
before  
boarding  
any  
of  
its  
ships  
based  
in  
Florida,  
despite  
that  
state's  
law  
banning  
so-  
called  
"vaccine  
passports,"  
a  
US  
District  
Court  
judge  
has  
ruled.  
The  
law,  
signed  
by  
Florida  
Governor  
Ron  
DeSantis  
in  
May,  
fines  
businesses  
\$5,000  
per  
violation  
for  
asking



customers  
to  
prove  
they  
have  
been  
vaccinated  
against  
SARS-  
CoV-2.  
But  
in  
an  
[August](#)  
[8](#)  
[preliminary](#)  
[ruling,](#)  
US  
District  
Court  
Judge  
Kathleen  
M.  
Williams  
of  
the  
Southern  
District  
of  
Florida  
said  
Norwegian  
likely  
will  
prevail  
in  
arguing  
that  
the  
[law](#)  
[risks](#)  
[public](#)  
[health](#)  
and  
qualifies  
as  
an  
unconstitutional

infringement  
on  
the  
company's  
First  
Amendment  
rights.

While  
Norwegian  
"has  
demonstrated  
that  
public  
health  
will  
be  
jeopardized  
if  
it  
is  
required  
to  
suspend  
its  
vaccination  
requirement,"  
Judge  
Williams  
wrote,  
the  
"defendant  
fails  
to  
articulate  
or  
provide  
any  
evidence  
of  
harms  
that  
the  
state  
would  
suffer  
if  
an  
injunction

was entered.”  
The injunction blocks the state government from enforcing the law against Norwegian, which is scheduled to resume port activity on August 15.  
In a [statement](#), Norwegian said the order will allow it “to operate in the safest way possible with 100% vaccination\* of all guests and

crew  
when  
sailing  
from  
Florida  
ports.”  
On  
August  
9,  
Governor  
DeSantis  
said  
[Florida](#)  
[will](#)  
[appeal](#)  
[the](#)  
[ruling](#)  
to  
the  
Eleventh  
Circuit  
Court  
of  
Appeals.

Cruise  
ship  
operators  
are  
working  
to  
keep  
up  
with  
[rapidly](#)  
[changing](#)  
[guidelines](#)  
as  
the  
highly  
transmissible  
Delta  
variant  
drives  
an  
increase  
in  
COVID-19

case  
numbers  
nationwide,  
particularly  
in  
Florida,  
where  
many  
ships  
embark.  
While  
most  
cruise  
lines  
are  
requiring  
passengers  
to  
show  
proof  
of  
vaccination,  
some  
are  
adding  
requirements  
including  
proof  
of  
a  
negative  
SARS-  
CoV-2  
test  
before  
boarding  
and  
masking  
in  
crowded  
indoor  
spaces.  
For  
all  
cruise  
ships  
operating  
in

US  
waters,  
or  
seeking  
to  
operate  
in  
US  
waters,  
the  
US  
CDC  
has  
devised  
a  
[Framework  
for  
Conditional  
Sailing  
Order  
\(CSO\)](#)  
and  
[Technical  
Instructions](#)  
that  
ships  
are  
recommended  
to  
follow  
even  
when  
located  
outside  
of  
US  
waters,  
as  
well  
as  
a  
[color-  
coded  
system  
for  
ships.](#)  
Of  
the

65  
cruise  
ships  
listed,  
25  
are  
categorized  
as  
orange  
or  
yellow  
as  
of  
August  
9,  
indicating  
that  
those  
ships  
have  
reported  
COVID-19  
cases  
and  
the  
CDC  
is  
either  
monitoring  
the  
situation,  
actively  
investigating  
an  
outbreak,  
or  
has  
concluded  
its  
investigation  
and  
continues  
to  
monitor.  
The  
remainder  
of  
the

listed  
ships  
are  
operating  
under  
a  
green  
status,  
meaning  
they  
have  
not  
reported  
any  
COVID-19  
cases  
or  
COVID-19-  
like  
illnesses.  
If  
a  
ship  
reaches  
red  
status,  
it  
has  
been  
determined  
through  
investigation  
to  
be  
“at  
or  
above”  
the  
threshold  
for  
passenger  
and  
crew  
cases  
and  
must  
return  
immediately



to  
port  
or  
delay  
its  
next  
voyage.  
Notably,  
cruise  
lines  
must  
report  
all  
information  
on  
COVID-19  
cases  
aboard  
ships  
to  
the  
CDC.  
If  
a  
cruise  
operator  
chooses  
not  
to  
follow  
the  
CSO  
—  
which  
became  
voluntary  
under  
a  
[court  
order  
issued  
in  
June](#)—  
the  
ships  
are  
marked  
as

gray  
but  
are  
still  
required  
to  
report  
cases  
of  
illnesses  
or  
death  
due  
to  
other  
causes.

*\*In  
a  
footnote  
on  
its  
release,  
Norwegian  
indicated  
"limited  
exceptions"  
for  
vaccination  
requirements  
may  
be  
made  
due  
to  
"valid  
medical  
or  
religious  
exemptions."  
Under  
the  
CDC's  
CSO,  
95%  
of  
crew  
and  
guests*

*must  
be  
vaccinated.*

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

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Date : 8/13/2021 2:32:52 PM

From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu

To : "Ice, Gillian" iceg@ohio.edu

Subject : COVID-19 Updates - August 13, 2021

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
204.6  
million  
cumulative  
cases  
and  
4.32  
million  
deaths  
worldwide  
as  
of  
12:15pm  
EDT  
on  
August  
12.

[Global](#)  
[Vaccination](#)

The  
[WHO](#)

reported

4.43

billion

doses

of

SARS-

CoV-2

vaccines

administered

globally

as

of

August

12.

The

WHO

reports

that

a

total

of

1.70

billion

individuals

have

received

at

least

1

dose,

and

866

million

are

fully

vaccinated.

Analysis

from

Our

World

in

Data

shows

that

the

global

daily

doses

administered

has  
declined  
steadily  
from  
its  
second-  
highest  
peak  
—

43.3  
million  
doses  
per  
day  
—

down  
to  
35.9  
million\*.

The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.

Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.40  
billion

vaccinated  
individuals  
worldwide  
(1+

dose;  
30.8%  
of

the  
global  
population)

and

1.26

billion

who

are

fully

vaccinated

(16.1%

of

the

global

population).

*\*Average*

*doses*

*administered*

*is*

*exhibiting*

*a*

*sharp*

*decrease*

*for*

*the*

*most*

*recent*

*several*

*days,*

*which*

*indicates*

*effects*

*of*

*reporting*

*delays.*

*In*

*an*

*effort*

*to*

*reflect*

*the*

*longer-*

*term*

*trends,*

*the*

*averages*

*reported*

*here*

*may  
not  
correspond  
to  
the  
most  
recent  
data.*

As  
national  
SARS-  
CoV-2  
vaccination  
campaigns  
continue,  
some  
new  
countries  
are  
emerging  
as  
successes,  
while  
some  
that  
were  
among  
the  
top  
countries  
earlier  
in  
the  
year  
have  
tapered  
off.  
This  
week,  
we  
will  
compare  
trends  
among  
the  
[top](#)  
[countries](#)



in  
terms  
of  
full  
vaccination  
over  
the  
past  
several  
months\*\*.

Top  
10  
as  
of  
August  
12

1.  
Malta-  
91%
2.  
Iceland-  
75%
3.  
UAE-  
73%
4.  
San  
Marino-  
70%
5.  
Seychelles-  
70%
6.  
Uruguay-  
68%
7.  
Singapore-  
68%
8.  
Chile-  
67%
9.  
Nauru-  
67%
10.  
Belgium-  
65%

Among these countries, only 4 have remained in the top 10 since May: Chile, Malta, San Marino, and Seychelles. The UAE was only outside the top 10 in June, but this was likely a result of no updated data between April 20 and July 5. While Malta

has remained among the top countries over this period, it climbed steadily through the rankings, up from #9 in May to #1 in August. Iceland also quickly rose through the rankings, from nearly 10 percentage points (pp) outside the top 10 in May to #2 globally in August.

Seychelles' vaccination coverage increased rapidly through the end of April, but progress has slowed considerably since then, causing it to fall from #1 to #5 since May. Interestingly, Qatar was not in the top 10 at any of the dates included in this analysis, but it was consistently

close,  
ranking  
#12  
in  
May  
and  
#11  
from  
June  
through  
August.

In  
May,  
there  
was  
a  
gap  
of  
approximately  
20pp  
between  
Seychelles  
and  
Israel  
and  
the  
rest  
of  
the  
top  
10  
countries

—  
from  
#3  
UAE  
at  
39%  
to  
#2  
Israel  
at  
59%

—  
but  
that  
gap

closed  
over  
the  
past  
several  
months.  
Israel  
was  
#1  
globally  
through  
late  
April,  
but  
after  
reaching  
58%  
by  
the  
end  
of  
that  
month,  
its  
coverage  
increased  
by  
fewer  
than  
5pp  
since  
then,  
with  
most  
of  
that  
occurring  
since  
mid-  
July.  
By  
virtue  
of  
initiating  
vaccination  
earlier  
than  
most

countries,  
the  
US  
was  
among  
the  
top  
3  
globally  
through  
early  
March,  
but  
as  
progress  
slowed,  
it  
fell  
to  
#7  
in  
May  
and  
#10  
in  
June  
before  
falling  
outside  
the  
top  
10  
in  
July.  
Similar  
to  
the  
US,  
slowing  
progress  
in  
the  
UK  
following  
steady  
progress  
earlier  
in

the  
year  
caused  
it  
to  
fall  
out  
of  
the  
top  
10  
between  
June  
and  
July.  
Bahrain  
and  
Hungary  
have  
exhibited  
similar  
trends.

In  
July,  
Singapore  
was  
15pp  
outside  
the  
top  
10,  
but  
rapid  
progress  
resulted  
in  
an  
increase  
in  
coverage  
of  
nearly  
30pp  
in  
just  
a  
month



—  
from  
40%  
to  
68%  
—  
propelling  
Singapore  
to  
#7  
in  
August.  
Similarly,  
Nauru  
reported  
a  
rapid  
increase  
between  
July  
and  
August,  
climbing  
from  
just  
17%  
coverage  
on  
June  
29  
(its  
earliest  
available  
data)  
to  
67%  
on  
July  
27  
(its  
most  
recent  
data),  
good  
enough  
for  
#9  
globally

in  
August.  
After  
a  
relatively  
slow  
start,  
Belgium's  
vaccination  
coverage  
increased  
rapidly  
starting  
in  
early  
May,  
[outpacing  
the  
European  
average](#)  
and  
moving  
the  
country  
up  
to  
#10  
globally.  
Among  
the  
countries  
currently  
in  
the  
top  
10,  
Uruguay  
and  
Mongolia  
initiated  
vaccination  
efforts  
later  
than  
most  
others,  
with  
less

than  
1%  
coverage  
reported  
on  
March  
30  
and  
April  
22,  
respectively.

Both  
countries  
exhibited  
rapid  
progress,  
however,  
and  
have  
been  
among  
the  
global  
top  
10  
since  
June.

*\*\*Data  
and  
rankings  
correspond  
to  
the  
12th  
of  
each  
month,  
unless  
noted  
otherwise.*

UNITED  
STATES  
The  
US  
CDC  
reported  
36.3

million  
cumulative  
COVID-19  
cases  
and  
617,096  
deaths.  
The  
current  
average  
of  
114,190  
new  
cases  
per  
day  
is  
the  
highest  
since  
February  
6  
and  
nearly  
10  
times  
the  
most  
recent  
low  
—  
11,606  
on  
June  
19.  
It  
appears  
as  
though  
the  
US  
may  
be  
passing  
an  
inflection  
point,  
but

it  
is  
difficult  
to  
determine  
whether  
this  
is  
an  
artifact  
of  
reporting  
frequency  
or  
an  
early  
indication  
of  
a  
longer-  
term  
trend.  
Daily  
mortality  
appears  
to  
continue  
its  
exponential  
increase  
up  
to  
492  
deaths  
per  
day,  
the  
highest  
average  
since  
May  
22\*.  
*\*Changes  
in  
the  
frequency  
of  
state-*

level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.

In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.

#### US Vaccination

The  
US  
has  
administered  
353.9  
million  
cumulative  
doses  
of  
SARS-

CoV-2  
vaccines.  
[Daily  
vaccinations](#)  
continue  
to  
increase  
steadily,  
up  
to  
640,617  
doses  
per  
day\*.  
A  
total  
of  
196.5  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
59.2%  
of  
the  
entire  
US  
population.  
Among  
adults,  
71.5%  
have  
received  
at  
least  
1  
dose,  
as  
well

as  
11.9  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
167.4  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
50.4%  
of  
the  
total  
population.

Approximately  
61.3%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
8.9  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the*



*average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**THIRD  
DOSE  
AMONG  
IMMUNOCOMPROMISED**

The  
US  
FDA  
on  
August  
12  
[authorized](#)  
the  
administration  
of  
an  
[additional](#)  
[dose](#)  
[of](#)  
[SARS-](#)  
[CoV-2](#)  
[mRNA](#)  
[vaccines](#)  
for

certain  
people  
with  
compromised  
immune  
systems,  
“specifically,  
solid  
organ  
transplant  
recipients  
or  
those  
who  
are  
diagnosed  
with  
conditions  
that  
are  
considered  
to  
have  
an  
equivalent  
level  
of  
immunocompromise.”

The  
FDA  
amended  
the  
emergency  
use  
authorizations  
(EUAs)  
for  
both  
the  
[Pfizer-](#)  
[BioNTech](#)  
and  
[Moderna](#)  
vaccines  
to  
allow  
for  
a

third  
dose  
for  
this  
population,  
which  
is  
estimated  
to  
be  
about  
2.7%  
of  
the  
US  
adult  
population.  
[Several  
studies](#),  
including  
one  
published  
this  
week  
in  
the  
[New  
England  
Journal  
of  
Medicine](#),  
[show](#)  
that  
immunocompromised  
people  
experience  
a  
significant  
increase  
in  
their  
immune  
response  
after  
a  
third  
dose  
of

vaccine.  
The  
agency  
noted  
that  
other  
fully  
vaccinated  
people  
do  
not  
need  
an  
additional  
dose  
at  
this  
time,  
but  
several  
US  
health  
officials  
believe  
extra  
doses  
might  
be  
needed  
in  
the  
future.  
According  
to  
the  
FDA,  
the  
EUA  
for  
the  
J&J-  
Janssen  
vaccine  
was  
not  
updated  
because  
there

is  
not  
yet  
sufficient  
evidence  
to  
support  
additional  
doses  
in  
any  
population.

The  
[US  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
\(ACIP\)](#)  
is  
[meeting  
today](#)  
to  
further  
discuss  
and  
vote  
on  
clinical  
recommendations  
regarding  
who  
will  
be  
eligible  
for  
extra  
shots  
and  
how  
they  
will  
be  
administered,  
with

CDC  
Director  
Dr.  
Rochelle  
Walensky  
expected  
to  
sign  
off  
on  
any  
decisions  
later  
in  
the  
day.  
The  
ACIP  
also  
is  
expected  
to  
discuss  
what  
type  
of  
evidence  
is  
needed  
to  
inform  
a  
decision  
about  
whether  
additional  
vaccine  
doses  
are  
needed  
for  
a  
larger  
portion  
of  
the  
population  
and,

if  
so,  
which  
populations  
should  
get  
them  
first.

## **US SURGE**

The  
US  
COVID-19  
surge  
continues,  
its  
second  
largest  
to  
date,  
and  
concerns  
are  
growing  
regarding  
the  
impact  
on  
health  
systems  
and  
schools.  
Analysis  
from  
[\*The  
Washington  
Post\*](#)  
illustrates  
a  
close  
correlation  
between  
low  
vaccination  
coverage  
and  
elevated

SARS-CoV-2 transmission, with the vast majority of hotspot areas located in counties with full vaccination coverage less than 40%, including much of the South and Southeast regions, and relatively few in counties with moderate or high coverage. Even as the surge grows, some state lawmakers are continuing



efforts  
to  
curb  
the  
authority  
of  
local  
governments  
and  
health  
officials.

[In  
Tennessee,](#)  
all  
73  
Republican  
members  
of  
the  
state  
House  
of  
Representatives  
called  
for  
a  
special  
legislative  
session  
in  
order  
to  
pass  
measures  
that  
would  
limit  
local  
officials'  
ability  
to  
implement  
COVID-19  
protective  
measures  
such  
as

mask  
mandates.

In  
severely  
affected  
areas,  
hospitals  
are  
being  
forced  
to  
implement  
emergency  
plans  
to  
manage  
the  
influx  
of  
COVID-19  
patients.

In  
Florida,  
which  
represents  
22%  
of  
the  
national  
daily  
incidence,  
[state](#)  
[health](#)  
[officials](#)  
[requested](#)  
[200](#)  
[ventilators](#)  
and  
100  
high-  
flow  
nasal  
cannula  
kits  
from  
the  
federal

Strategic  
National  
Stockpile  
(SNS).  
The  
state  
is  
not  
yet  
experiencing  
a  
shortage  
of  
this  
equipment,  
but  
statewide  
hospitalizations  
continue  
to  
set  
new  
records.  
Reportedly,  
officials  
in  
Brevard  
County,  
Florida,  
are  
emphasizing  
that  
the  
9-1-1  
telephone  
number  
should  
be  
used  
only  
for  
emergencies  
and  
encouraging  
residents  
to  
seek  
care

through  
other  
means  
for  
less  
urgent  
conditions  
in  
order  
to  
reduce  
the  
burden  
on  
ambulance  
services  
and  
emergency  
departments.  
Despite  
having  
the  
country's  
largest  
surge,  
[Florida](#)  
[Governor](#)  
[Ron](#)  
[DeSantis](#)  
continues  
to  
resist  
protective  
measures,  
including  
mask  
mandates,  
to  
slow  
transmission.  
Rather,  
he  
touted  
a  
state  
plan  
to  
expand

infusion  
centers  
for  
monoclonal  
antibody  
treatments  
to  
mitigate  
the  
impact  
on  
hospitals.  
Notably,  
these  
treatments  
require  
a  
prescription  
and  
could  
cost  
thousands  
of  
dollars,  
whereas  
mask  
use  
is  
relatively  
inexpensive  
and  
vaccination  
is  
provided  
free  
of  
charge.

Daily  
incidence  
among  
children  
continues  
to  
increase,  
setting  
new  
records

nationally  
and  
in  
severely  
affected  
states.

In  
Mississippi,  
one  
school  
district

—  
notably,  
with  
no  
mask  
mandate

—  
is  
transitioning  
to  
virtual  
learning  
only

1  
week  
into  
the  
school  
year,  
after  
40%  
of  
students  
at  
one  
high  
school  
were  
required  
to  
quarantine.

As  
of  
August  
12,  
at  
least

10  
cohorts  
of  
students  
at  
the  
high  
school  
are  
under  
quarantine,  
but  
the  
school  
elected  
to  
resume  
in-  
person  
classes  
and  
continue  
quarantining  
students  
following  
exposures  
prior  
to  
the  
district  
order  
to  
go  
virtual  
beginning  
August  
16.

**VACCINE  
MANDATES  
FOR  
PUBLIC  
SCHOOL  
STAFF**  
California  
(US)  
Governor  
Gavin

Newsom  
on  
August  
11  
announced  
the  
state  
will  
require  
all  
teachers  
and  
school  
staff  
to  
show  
proof  
of  
SARS-  
CoV-2  
vaccination  
or  
undergo  
weekly  
testing.

The  
move  
—  
which  
applies  
to  
more  
than  
800,000  
employees,  
including  
about  
320,000  
public  
school  
teachers  
and  
many  
other  
support  
and  
administrative  
staff



—  
comes  
after  
several  
large  
state  
school  
districts  
(San  
Jose  
Unified,  
San  
Francisco  
Unified,  
Sacramento  
City  
Unified,  
and  
Long  
Beach  
Unified)  
announced  
similar  
requirements  
for  
their  
employees.  
The  
state's  
2  
major  
teachers  
unions

—  
the  
California  
Teachers  
Association  
and  
the  
California  
Federation  
of  
Teachers

—  
among  
other  
unions,

support  
the  
plan,  
citing  
state  
and  
national  
data  
showing  
that  
nearly  
90%  
of  
educators  
have  
been  
vaccinated.  
There  
is  
debate  
over  
whether  
California  
is  
the  
first  
state  
with  
such  
a  
requirement  
for  
public  
school  
employees,  
as  
Hawai'i  
Governor  
David  
Ige  
last  
week  
announced  
his  
intention  
to  
require  
vaccinations

for  
all  
public  
sector  
workers,  
including  
school  
staff.  
However,  
several  
public  
workers  
unions,  
including  
those  
representing  
teachers,  
pushed  
back  
on  
the  
announcement,  
saying  
they  
were  
not  
consulted  
and  
arguing  
there  
is  
no  
detailed  
plan  
on  
implementation.

Over  
the  
weekend,  
Randi  
Weingarten,  
President  
of  
the  
American  
Federation  
of

Teachers,  
announced  
support  
for  
vaccine  
mandates  
for  
educators  
as  
the  
first  
line  
of  
prevention  
for  
unvaccinated,  
younger  
students  
as  
they  
return  
to  
in-  
person  
learning,  
saying  
mask  
wearing  
is  
the  
second  
most  
important  
factor  
for  
keeping  
kids  
in  
school.  
Weingarten  
cited  
an  
increasing  
number  
of  
new  
COVID-19  
cases

among  
children

over  
the  
past  
few  
weeks,  
as  
compiled  
by  
the  
American  
Academy  
of  
Pediatrics  
(AAP).  
Last  
week,  
Becky  
Pringle,  
President  
of  
the  
National  
Education  
Association,  
the  
largest  
teachers  
union  
in  
the  
US,  
said  
vaccine  
and  
mask  
mandates  
should  
be  
decided  
on  
local  
levels.  
In  
an  
interview  
on

August  
10,  
Dr.  
Anthony  
Fauci,  
Chief  
Medical  
Adviser  
to  
the  
President,  
voiced  
support  
for  
vaccination  
mandates  
for  
public  
school  
employees,  
saying  
vaccination  
of  
all  
eligible  
adults  
would  
help  
children  
more  
safely  
return  
to  
classrooms  
this  
fall.  
In  
most  
states,  
there  
are  
laws  
dictating  
vaccination  
requirements  
for  
school  
children

but,  
to  
our  
knowledge,  
none  
requiring  
teachers  
and  
school  
staff  
workers  
to  
undergo  
immunizations.

Some  
states  
provide  
public  
school  
employees  
a  
list  
of  
recommended  
vaccines

—  
such  
as  
those  
for  
diphtheria,  
tetanus  
and  
pertussis  
(DTaP);  
influenza;  
and  
measles,  
mumps  
and  
rubella  
(MMR)

—  
but  
there  
is  
no  
requirement

or  
follow-  
up.

Much  
of  
the  
urgency  
over  
vaccinating  
public  
school  
employees  
centers  
on  
the  
fact  
that  
children  
under  
the  
age  
of  
12  
remain  
ineligible  
for  
vaccination  
in  
the  
US.  
In  
a  
[letter](#)  
sent  
last  
week  
to  
the  
US  
FDA,  
AAP  
President  
Lee  
Savio  
Beers  
[urged](#)  
[the](#)



agency  
to  
fast-  
track  
vaccine  
authorization  
for  
this  
age  
group,  
saying  
the  
Delta  
variant  
“changes  
the  
risk-  
benefit  
analysis.”  
In  
May,  
the  
FDA  
authorized  
the  
emergency  
use  
of  
the  
Pfizer-  
BioNTech  
vaccine  
for  
young  
people  
aged  
12  
to  
15  
years,  
but  
the  
companies  
have  
not  
yet  
applied  
for

authorization  
among  
children  
aged  
5  
to  
11  
years.  
A  
Pfizer  
spokesperson  
said  
the  
company  
plans  
to  
submit  
an  
emergency  
use  
authorization  
(EUA)  
application  
for  
that  
age  
group  
by  
the  
end  
of  
September.  
For  
now,  
the  
timeline  
for  
a  
vaccine  
EUA  
for  
school-  
aged  
children  
is  
amorphous,  
but  
experts

remain  
hopeful  
that  
authorization  
and  
recommendations  
could  
still  
come  
before  
the  
end  
of  
the  
year.

### **COVID-19 AMONG CHILDREN**

Public  
health  
experts,  
state  
officials,  
and  
healthcare  
providers  
are  
[warning  
about  
a  
surge  
in  
COVID-19-  
related  
hospitalizations  
among  
children](#)  
and  
cautioning  
that  
the  
Delta  
variant  
could  
be  
more  
dangerous

for  
younger  
individuals.  
As  
of  
August  
10,  
US  
hospitals  
admitted  
an  
average  
of  
246  
children  
with  
COVID-19  
every  
day  
over  
the  
previous  
week,  
representing  
a  
27.3%  
increase  
over  
the  
week  
ending  
August  
3,  
[according  
to  
CDC  
data.](#)  
While  
children  
ages  
12  
and  
older  
are  
eligible  
to  
receive  
the

Pfizer-  
BioNTech  
SARS-  
CoV-2  
vaccine,  
rates  
of  
vaccination  
in  
that  
age  
group  
remain  
below  
the  
national  
average,  
around  
31%  
fully  
vaccinated.

States  
experiencing  
the  
largest  
increases  
in  
overall  
COVID-19  
cases,  
such  
as  
Louisiana  
and  
Florida,  
also  
are  
seeing  
the  
greatest  
increases  
in  
hospitalizations  
among  
children.  
Dr.  
Mark

Kline  
of  
Children's  
Hospital  
in  
New  
Orleans  
said  
children  
with  
COVID-19  
account  
for  
about  
20%  
of  
the  
facility's  
hospitalized  
patients,  
with  
most  
of  
them  
under  
age  
10  
and  
too  
young  
to  
be  
vaccinated.

In  
Texas,  
more  
children  
are  
being  
treated  
in  
hospitals  
for  
COVID-19  
than  
ever  
before,  
and

many  
also  
are  
infected  
with  
respiratory  
syncytial  
virus  
(RSV).

One  
physician,  
warning  
of  
dwindling  
hospital  
capacity,  
said  
the  
2  
viruses  
are  
"spreading  
like  
wildfire"  
among  
younger  
children,  
particularly  
those  
under  
age  
2.

According  
to  
the  
American  
Academy  
of  
Pediatrics,  
nearly  
94,000  
cases  
among  
children  
were  
recorded  
in  
the

week  
ending  
August  
5,  
continuing  
a  
“substantial  
increase”  
in  
the  
number  
of  
new  
cases  
since  
the  
beginning  
of  
July.

Although  
children  
continue  
to  
account  
for  
a  
small  
percentage  
of  
total  
COVID-19  
hospitalizations—  
between  
1.5%  
and  
3.5%  
—  
the  
disease  
impacts  
kids  
of  
different  
ages  
differently,  
and  
even



those  
who  
have  
asymptomatic  
or  
mild  
infections  
could  
experience  
so-  
called  
“long  
COVID,”  
or  
post-  
acute  
sequelae  
of  
COVID-19  
(PASC).  
Experts  
are  
still  
learning  
about  
the  
condition,  
which  
is  
characterized  
by  
a  
variety  
of  
symptoms  
including  
memory  
or  
concentration  
difficulties  
(ie,  
“brain  
fog”),  
trouble  
sleeping,  
fatigue,  
dizziness,  
headaches,

gastrointestinal  
problems,  
or  
changes  
to  
smell  
or  
taste.  
The  
impacts  
of  
these  
long-  
lasting  
symptoms  
could  
be  
“huge,”  
according  
to  
some  
pediatric  
experts,  
with  
the  
symptoms  
disrupting  
school  
and  
extracurricular  
activities  
especially  
among  
those  
in  
their  
formative  
teen  
years.  
Concern  
over  
the  
rising  
number  
of  
COVID-19  
cases  
and

hospitalizations  
among  
younger  
populations,  
and  
the  
potential  
for  
long-  
term  
impacts,  
is  
amplified  
by  
anecdotal  
evidence  
the  
Delta  
variant  
might  
cause  
more  
severe  
disease  
among  
children  
and  
that  
many  
are  
returning  
to  
in-  
person  
learning.  
These  
factors,  
and  
the  
fact  
that  
about  
50  
million  
children  
remain  
ineligible  
for

vaccination,  
places  
even  
more  
importance  
on  
utilizing  
other  
risk  
reduction  
methods,  
including  
vaccination  
among  
those  
who  
are  
eligible,  
mask  
wearing,  
and  
physical  
distancing.

**US  
CDC  
VACCINATION  
GUIDANCE  
FOR  
PREGNANT  
WOMEN**

The  
US  
CDC  
on  
August  
11  
recommended  
that  
all  
people  
who  
are  
pregnant,  
breastfeeding,  
trying  
to  
get

pregnant,  
or  
might  
become  
pregnant  
in  
the  
future  
be  
vaccinated  
for  
SARS-  
CoV-2.  
The  
agency  
cited  
a  
growing  
body  
of  
evidence  
showing  
vaccination  
during  
pregnancy  
is  
safe,  
noting  
new  
data  
that  
found  
no  
increased  
risk  
of  
miscarriage  
among  
pregnant  
people  
who  
received  
a  
SARS-  
CoV-2  
mRNA  
vaccine  
during

the  
first  
20  
weeks  
of  
gestation.  
[Previously](#),  
the  
CDC  
said  
the  
vaccine  
could  
be  
offered  
during  
pregnancy,  
but  
the  
new  
recommendation  
urges  
all  
pregnant  
people  
to  
be  
vaccinated.  
According  
to  
CDC  
data,  
only  
about  
[23%](#)  
[of](#)  
[pregnant](#)  
[people](#)  
[have](#)  
[received](#)  
[at](#)  
[least](#)  
[one](#)  
[dose](#)  
[of](#)  
[a](#)  
[vaccine](#).  
The

new  
recommendation  
comes  
amid  
a  
surge  
of  
new  
COVID-19  
cases,  
hospitalizations,  
and  
deaths  
in  
the  
US,  
driven  
by  
the  
highly  
transmissible  
Delta  
variant.  
The  
CDC's  
updated  
recommendation  
came  
2  
days  
after  
the  
release  
of  
a  
joint  
statement  
by  
the  
American  
College  
of  
Obstetricians  
and  
Gynecologists,  
American  
Academy  
of

Pediatrics,  
and  
20  
other  
health  
organizations  
“strongly”  
urging  
pregnant  
and  
recently  
pregnant  
individuals,  
as  
well  
as  
those  
planning  
to  
become  
pregnant,  
to  
be  
vaccinated.  
The  
groups  
noted  
that  
pregnant  
individuals  
are  
at  
an  
increased  
risk  
of  
severe  
COVID-19  
disease,  
including  
death,  
and  
the  
best  
way  
to  
protect  
themselves



is  
through  
vaccination.

## **US GOVERNMENT VACCINE MANDATES**

The  
US  
Department  
of  
Health  
and  
Human  
Services  
(HHS)  
became  
the  
latest  
federal  
agency  
to  
[announce](#)  
a  
vaccine  
mandate  
for  
some  
of  
its  
employees,  
[requiring](#)  
[more](#)  
[than](#)  
[25,000](#)  
[members](#)  
[of](#)  
[its](#)  
[health](#)  
[care](#)  
[workforce](#)  
[to](#)  
[be](#)  
[vaccinated](#)  
against  
SARS-  
CoV-2.

Staff  
of  
the  
Indian  
Health  
Services  
(IHS)  
and  
National  
Institutes  
of  
Health  
(NIH)  
who  
work  
in  
health  
and  
clinical  
research  
facilities  
or  
who  
have  
direct  
contact  
with  
patients  
and  
members  
of  
the  
US  
Public  
Health  
Service  
Commissioned  
Corps  
who  
respond  
to  
public  
health  
crises  
nationwide  
are  
included  
in

the  
mandate.  
The  
HHS  
mandate  
also  
applies  
to  
contractors,  
trainees,  
and  
volunteers  
who  
might  
have  
patient  
contact  
at  
federal  
clinical  
research  
or  
medical  
facilities.  
IHS,  
NIH,  
and  
Commissioned  
Corps  
staff  
already  
are  
required  
to  
receive  
seasonal  
influenza  
and  
other  
routine  
vaccinations,  
with  
allowances  
for  
certain  
medical  
and

religious  
exemptions.

The  
[US](#)  
[Department](#)  
[of](#)  
[Veterans](#)  
[Affairs](#)  
[\(VA\)](#)

announced

a  
similar  
vaccine  
mandate

at

the

end

of

July,

and

on

August

12

[expanded](#)

[the](#)

[requirement](#)

to

apply

to

most

Veterans

Health

Administration

(VHA)

employees,

volunteers,

and

contractors

who

work

in

VHA

facilities,

visit

such

facilities,

or

otherwise  
come  
into  
contact  
with  
VA  
patients  
and  
healthcare  
workers  
as  
part  
of  
their  
jobs.  
The  
[US](#)  
[Department](#)  
[of](#)  
[Defense](#)  
earlier  
this  
week  
announced  
a  
plan  
to  
require  
all  
military  
members  
to  
be  
vaccinated  
by  
mid-  
September  
or  
earlier.  
All  
[other](#)  
[US](#)  
[government](#)  
[employees](#)  
are  
required  
to  
show

proof  
of  
vaccination  
or  
be  
subject  
to  
other  
precautions,  
including  
regular  
testing,  
mask  
wearing,  
and  
travel  
restrictions.

**VACCINE  
EFFECTIVENESS  
&  
VOCs**

New  
information  
continues  
to  
emerge  
regarding  
the  
effectiveness  
of  
different  
SARS-  
CoV-2  
vaccines,  
particularly  
with  
respect  
to  
variants  
of  
concern  
(VOCs).  
This  
week,  
several  
articles  
were

published  
in  
academic  
journals  
and  
on  
preprint  
servers.

In  
one  
[study](#),  
published  
in

*The  
New  
England  
Journal  
of  
Medicine*,  
UK

researchers  
examined  
vaccine  
effectiveness  
against  
symptomatic  
disease  
for  
both  
the  
Alpha  
and  
Delta  
SARS-  
CoV-2  
variants.

They  
included  
data  
on  
participants  
who  
received  
either  
the  
Pfizer-  
BioNTech  
or

AstraZeneca-Oxford vaccines and stratified the sample for those who had received partial or full doses. The research team found that both vaccines were less effective against the Delta variant than the Alpha variant when the individual only had one dose (30.7% vs 48.7%), and also saw reduced



effectiveness  
against  
Delta  
for  
fully  
vaccinated  
individuals  
when  
compared  
to  
Alpha.  
The  
Pfizer-  
BioNTech  
vaccine  
was  
93.7%  
effective  
in  
preventing  
symptomatic  
disease  
against  
Alpha  
and  
88%  
against  
Delta  
among  
fully  
vaccinated  
individuals,  
while  
the  
AstraZeneca-  
Oxford  
vaccine  
was  
74.5%  
and  
64%  
effective,  
respectively.

Another  
study,  
conducted  
in

Utah  
(US)  
and  
posted  
on  
the  
preprint  
server  
*medRxiv*,  
[suggested](#)  
[similar](#)  
[findings](#).

The  
researchers  
found  
a  
modest  
reduction  
in  
overall  
vaccine  
effectiveness  
for  
all  
US  
FDA-  
authorized  
vaccines  
corresponding  
to  
the  
expansion  
of  
the  
Delta  
variant  
in  
the  
state,  
saying  
the  
reduction  
in  
effectiveness  
due  
to  
the  
VOC,

and  
not  
waning  
immunity,  
is  
“highly  
concerning.”

A  
[third  
study](#),  
conducted  
in  
Qatar  
and  
also  
posted  
to  
*medRxiv*,  
examined  
the  
effectiveness  
of  
the  
Pfizer-  
BioNTech  
and  
Moderna  
vaccines  
against  
the  
Delta  
variant.  
The  
research  
team  
estimated  
the  
effectiveness  
against  
symptomatic  
COVID-19  
to  
be  
79.0%  
for  
the  
Pfizer-  
BioNTech

vaccine  
and  
84.8%  
for  
the  
Moderna  
vaccine.  
The  
Pfizer-  
BioNTech  
vaccine  
exhibited  
89.7%  
effectiveness  
against  
severe,  
critical,  
or  
fatal  
COVID-19  
disease  
due  
to  
Delta,  
and  
the  
Moderna  
exhibited  
100%  
effectiveness,  
although  
this  
analysis  
had  
a  
very  
small  
sample  
size.

A  
[fourth  
preprint  
study](#),  
posted  
to  
*medRxiv*  
and

based  
on  
data  
collected  
by  
the  
Mayo  
Clinic,  
retrospectively  
examined  
SARS-  
CoV-2  
PCR  
test  
data  
collected  
between  
January  
and  
July  
2021  
from  
645,109  
individuals  
vaccinated  
with  
either  
the  
Pfizer-  
BioNTech  
or  
Moderna  
vaccines.  
Both  
vaccines  
were  
highly  
effective  
during  
the  
study  
period  
for  
preventing  
infection,  
with  
Moderna  
exhibiting

86% effectiveness and Pfizer-BioNTech 76% effectiveness. Additionally, the vaccines worked well to prevent COVID-19 hospitalizations, with an estimated effectiveness of 91.6% for the Moderna vaccine and 85% for the Pfizer-BioNTech vaccine. However, effectiveness against infection dropped in July with the rise of the Delta variant, with

Moderna  
at  
76%  
and  
Pfizer-  
BioNtech  
at  
42%.  
All  
of  
these  
papers  
reinforce  
that  
current  
SARS-  
CoV-2  
vaccines  
are  
effective  
at  
preventing  
COVID-19  
disease  
—  
particularly  
severe  
disease,  
hospitalization,  
and  
death  
—  
even  
in  
the  
face  
of  
increasing  
prevalence  
of  
VOCs,  
including  
the  
Delta  
variant.

**SARS-  
CoV-2**

## **RAPID ANTIGEN TESTS**

Researchers from Germany published ([preprint](#)) findings from a study on the accuracy of 2 commercially available SARS-CoV-2 antigen rapid diagnostic tests (RDTs), comparing them to the "gold standard" real-time reverse transcription-polymerase chain reaction (rRT-PCR)-based tests. The SD Biosensor SARS-CoV-2



Rapid  
Antigen  
Test  
by  
Roche  
Diagnostics  
and  
Panbio  
COVID-19  
Ag  
Rapid  
Test  
by  
Abbott  
Diagnostics  
were  
compared  
in  
a  
German  
diagnostic  
center  
between  
February  
1  
and  
March  
31,  
2021.  
Of  
2,215  
tests  
conducted,  
338  
(15%)  
were  
rRT-  
PCR  
positive  
for  
SARS-  
CoV-2.  
The  
Roche  
RDT  
exhibited  
60.4%  
sensitivity

and  
99.7%  
specificity,  
and  
the  
Abbott  
RDT  
exhibited  
56.8%  
sensitivity  
and  
99.8%  
specificity.  
The  
sensitivities  
of  
the  
RDTs  
were  
higher  
among  
individuals  
referred  
by  
physicians  
and  
health  
departments  
compared  
to  
the  
total  
study  
population,  
where  
the  
Roche  
RDT  
performed  
at  
79.5%  
and  
the  
Abbott  
RDT  
at  
78.7%.  
The

RDTs had substantially lower sensitivities in individuals with at least one comorbidity (Roche 38.2%, Abbott 34.4%) compared to those without comorbidities (Roche 74.4%, Abbott 71.0%). Higher unadjusted sensitivities in RDTs were also observed in symptomatic individuals (Roche 75.2%, Abbott 74.3%) compared to asymptomatic individuals (Roche 23.8%, Abbott 31.9%).

To  
put  
these  
results  
in  
context,  
if  
10,000  
symptomatic  
individuals  
were  
tested,  
of  
which  
500  
were  
truly  
positive,  
these  
RDTs  
would  
yield  
38  
false-  
positive  
and  
124  
false-  
negative  
results.  
If  
10,000  
asymptomatic  
individuals  
were  
tested,  
of  
which  
50  
are  
true  
positives,  
the  
RDTs  
would  
yield  
18  
false-

positive  
and  
34  
false-  
negative  
results.  
Based  
on  
the  
study,  
the  
authors  
call  
into  
question  
whether  
the  
widespread  
use  
of  
RDTs  
for  
screening  
purposes  
is  
beneficial.  
Since  
screening  
often  
is  
recommended  
for  
asymptomatic  
individuals,  
the  
results  
of  
the  
study  
are  
of  
crucial  
importance  
in  
assessing  
tests  
best  
suited

for  
this  
use.

**CANADA  
VACCINE  
MANUFACTURING  
FACILITY**

Pharmaceutical  
company  
Moderna  
and  
the  
Government  
of  
Canada  
on  
August  
10  
[announced](#)  
a  
memorandum  
of  
understanding  
to  
build  
a  
[“state-  
of-  
the-  
art”  
manufacturing  
facility](#)  
in  
Canada  
to  
make  
the  
company’s  
SARS-  
CoV-2  
vaccine  
and  
possibly  
other  
respiratory  
virus  
vaccines

that  
use  
the  
mRNA  
platform.  
Moderna  
said  
the  
facility  
will  
help  
provide  
Canada  
with  
supplies  
of  
its  
SARS-  
CoV-2  
vaccine,  
"direct  
access"  
to  
pandemic  
response  
capabilities  
in  
the  
future,  
and  
access  
to  
any  
vaccines  
currently  
in  
development  
that  
might  
receive  
approval.  
About  
30%  
of  
the  
SARS-  
CoV-2  
vaccine

doses  
distributed  
in  
Canada  
are  
from  
Moderna,  
and  
that  
proportion  
could  
go  
up  
depending  
on  
regulatory  
approval  
of  
additional  
doses.  
Though  
the  
location  
of  
the  
manufacturing  
plant  
has  
not  
yet  
been  
decided,  
it  
will  
likely  
be  
similar  
to  
Moderna's  
main  
facility  
in  
Norwood,  
Massachusetts  
(US),  
and  
will  
employ



a  
couple  
hundred  
people.  
Moderna  
CEO  
Stéphane  
Bancel  
said  
the  
company  
is  
in  
talks  
to  
build  
similar  
manufacturing  
facilities  
in  
other  
nations  
in  
Europe  
and  
Asia,  
although  
he  
did  
not  
specify  
which  
ones,  
adding  
they  
expect  
to  
build  
5  
to  
10  
such  
plants  
worldwide  
over  
the  
coming  
years.

Earlier  
this  
year,  
Canada  
announced  
an  
[agreement](#)  
[with](#)  
[Novavax](#),  
which  
is  
working  
on  
its  
own  
SARS-  
CoV-2  
vaccine,  
to  
[produce](#)  
[its](#)  
[doses](#)  
[at](#)  
[a](#)  
[government-](#)  
[owned](#)  
[facility](#)  
in  
Montreal  
either  
late  
this  
year  
or  
early  
next  
year.  
Notably,  
Novavax  
has  
delayed  
its  
submission  
for  
authorization  
to  
the  
US

FDA  
3  
times,  
most  
recently  
citing  
efforts  
to  
[validate  
production  
consistency.](#)

## **SENEGAL**

The  
Senegalese  
health  
system  
[continues  
to  
struggle](#)  
under  
a  
third  
wave  
of  
SARS-  
CoV-2  
infections,  
where  
cases  
have  
skyrocketed.  
More  
than  
15,000  
cases  
and  
139  
deaths  
were  
reported  
in  
July,  
according  
to  
the  
Ministry  
of

Health.  
Prior  
to  
July,  
Senegal  
reported  
fewer  
than  
44,000  
cases  
and  
1,166  
deaths.  
[Ambulance  
services  
in  
Dakar](#),  
the  
current  
epicenter  
of  
the  
outbreak,  
also  
are  
feeling  
the  
strain.  
Since  
the  
beginning  
of  
the  
third  
wave,  
more  
than  
90%  
of  
calls  
to  
the  
Mobile  
Emergency  
Care  
Service  
(SAMU)  
have

been  
for  
respiratory  
distress.  
With  
the  
influx  
of  
emergency  
calls,  
hospitals  
are  
low  
on  
bed  
space  
with  
supplemental  
oxygen  
to  
care  
for  
patients,  
and  
delivery  
workers  
have  
been  
working  
through  
the  
night  
to  
keep  
up  
with  
the  
oxygen  
demand.  
[Cemetery  
workers](#)  
also  
are  
among  
personnel  
working  
around  
the

clock  
to  
keep  
up  
with  
demand.

A  
cemetery  
manager  
close  
to  
the  
Dakar  
hospital  
reports  
an  
average  
of  
30  
burials  
per  
day  
during  
this  
wave  
of  
infections.  
During  
the  
last  
surge,  
the  
average  
was  
20  
burials  
a  
day,  
and  
prior  
to  
the  
pandemic,  
10  
each  
day.

Last month, the government announced construction of a vaccine manufacturing plant in the capital, which is expected to produce 25 million doses per month by the end of 2022. The Institut Pasteur in Dakar will run the plant to reduce outside dependence on vaccine supply. As of August

9,  
just  
under  
2%  
of  
the  
Senegalese  
population  
was  
fully  
vaccinated  
against  
SARS-  
CoV-2.

### **GLOBAL VACCINE ACCESS**

The  
WHO  
is  
continuing  
to  
press  
wealthier  
nations  
and  
SARS-  
CoV-2  
vaccine  
manufacturers  
to  
reverse  
the  
“disgraceful”  
inequity  
in  
global  
access  
to  
vaccines  
to  
help  
low-  
and  
middle-  
income  
countries



(LMICs)  
vaccinate  
at  
least  
10%  
of  
their  
populations  
by  
the  
end  
of  
September.  
Speaking  
during  
an  
[online  
Q&A  
session  
with  
WHO  
officials,](#)  
Dr.  
Bruce  
Aylward,  
Senior  
Adviser  
to  
the  
WHO  
Director-  
General  
and  
head  
of  
the  
Access  
to  
COVID-19  
Tools  
(ACT)  
Accelerator  
initiative,  
criticized  
wealthier  
nations,  
saying  
they

should  
be  
“disgusted”  
by  
the  
imbalance  
in  
the  
available  
tools  
to  
address  
the  
pandemic  
and  
calling  
for  
US  
\$.7.7  
billion  
to  
help  
the  
WHO  
supply  
vaccines,  
oxygen,  
and  
other  
medical  
supplies  
to  
LMICs.  
Dr.  
Aylward’s  
comments  
come  
a  
week  
after  
WHO  
Director-  
General  
Dr.  
Tedros  
Adhanom  
Ghebreyesus  
called

for  
a  
moratorium  
on  
providing  
additional,  
or  
booster,  
doses  
to  
most  
people  
in  
order  
to  
improve  
global  
access.

Researchers  
with  
the  
Council  
on  
Foreign  
Relations  
identified

37  
high-  
and  
middle-  
income  
countries  
that  
are  
considering  
or  
already  
administering  
booster  
shots

as  
of  
August  
12.  
They  
warn

—  
as

does  
the  
WHO  
in  
a  
recently  
released  
[interim  
statement](#)  
on  
booster  
doses  
—  
that  
offering  
third  
doses  
to  
large  
swaths  
of  
populations,  
beyond  
vulnerable  
groups  
such  
as  
the  
immunocompromised  
or  
people  
over  
the  
age  
of  
80,  
threatens  
to  
further  
widen  
the  
gap  
between  
“vaccine-  
haves  
and  
vaccine-

have-  
notes.”

The  
Pan  
American  
Health  
Organization  
(PAHO)  
this  
week  
[announced](#)  
[a](#)  
[plan](#)  
to  
increase  
SARS-  
CoV-2  
vaccine  
availability  
for  
its  
member  
countries.  
The  
new  
COVID-19  
initiative,  
which  
will  
be  
operated  
through  
the  
organization’s  
well-  
established  
[Revolving](#)  
[Fund](#),  
will  
purchase  
“tens  
of  
millions”  
of  
vaccine  
doses,  
syringes,

and  
related  
supplies  
and  
begin  
delivering  
them  
in  
October  
to  
the  
more  
than  
20  
countries  
in  
the  
region  
that  
have  
expressed  
interest  
in  
joining.  
In  
making  
the  
announcement,  
PAHO  
recognized  
it  
is  
not  
clear  
whether  
the  
COVAX  
facility  
will  
succeed  
in  
providing  
the  
necessary  
vaccine  
doses  
to  
its

member  
nations.

On  
August  
10,  
more  
than  
175  
public  
health  
experts,  
scientists,  
and  
civil  
society  
leaders  
as  
well  
as  
more  
than  
50  
organizations  
sent  
a  
[letter](#)  
to  
officials  
in  
the  
administration  
of  
US  
President  
Joe  
Biden,  
[calling](#)  
[on](#)  
[them](#)  
[to](#)  
[immediately](#)  
[ramp](#)  
[up](#)  
[a](#)  
[global](#)  
[vaccine](#)  
[manufacturing](#)

program

to  
help  
vaccinate  
the  
rest  
of  
the  
world  
and  
reduce  
the  
likelihood  
of  
newer,  
possibly  
more  
dangerous  
variants  
emerging.

In  
a  
separate  
letter  
addressed  
to  
President  
Biden,  
they  
urge  
him  
to  
release  
millions  
of  
stockpiled  
doses  
each  
week  
to  
countries  
in  
need,  
noting  
the  
US  
has  
more



than  
55  
million  
doses  
of  
mRNA  
vaccines  
stockpiled  
but  
is  
administering  
fewer  
than  
900,000  
per  
day.  
While  
many  
experts  
are  
focused  
on  
the  
threat  
of  
emerging  
new  
variants,  
the  
UN  
Development  
Programme  
(UNDP)  
[warns](#)  
[vaccine](#)  
[inequities](#)  
[will](#)  
[have](#)  
[long-](#)  
[term](#)  
[economic](#)  
[and](#)  
[social](#)  
[impacts](#)  
[in](#)  
[LMICs,](#)  
including  
a

widening  
poverty  
gap,  
increased  
divides  
in  
health  
care  
spending,  
and  
swollen  
public  
debt.

**HERD  
IMMUNITY  
IMPOSSIBLE**

[Consensus](#)

is  
forming  
among  
public  
health  
experts  
and  
scientists  
worldwide:  
the  
[highly](#)  
[transmissible](#)  
[Delta](#)  
[variant](#)  
[of](#)  
[SARS-](#)  
[CoV-2](#)  
[changed](#)  
[the](#)  
[COVID-19](#)  
[pandemic,](#)  
dashing  
hopes  
of  
widespread  
vaccination  
creating  
herd  
immunity  
that

could  
protect  
people  
from  
infection  
and  
guaranteeing  
the  
novel  
coronavirus  
will  
become  
endemic.  
While  
the  
vaccines  
are  
highly  
effective  
at  
preventing  
serious  
illness  
or  
death,  
they  
do  
not  
fully  
protect  
the  
vaccinated  
from  
infection.  
Additionally,  
people  
who  
had  
previous  
SARS-  
CoV-2  
infections  
are  
not  
necessarily  
protected  
from  
infection

from  
future  
variants.  
And  
because  
infected  
people  
can  
in  
turn  
infect  
others,  
whether  
vaccinated  
or  
not,  
the  
concept  
of  
herd  
or  
population  
immunity  
with  
COVID-19  
"is  
not  
a  
possibility,"  
according  
to  
experts  
who  
recently  
spoke  
to  
the  
UK's  
All-  
Party  
Parliamentary  
Group.  
However,  
the  
vaccines  
still  
work,  
and

work  
well,  
protecting  
those  
fully  
vaccinated  
from  
death  
and  
keeping  
them  
out  
of  
the  
hospital,  
and  
vaccine  
doses  
should  
be  
urgently  
distributed  
to  
"where  
they  
can  
have  
the  
greatest  
impact,"  
especially  
to  
countries  
in  
need,  
Professor  
Sir  
Andrew  
John  
Pollard,  
Director  
of  
the  
Oxford  
Vaccine  
Group,  
urged.  
In

the  
meantime,  
“the  
world  
needs  
to  
stay  
alert,”  
Ed  
Yong  
writes  
in  
[The  
Atlantic](#),  
and  
make  
use  
of  
all  
available  
protective  
measures  
that  
could  
help  
stave  
off  
the  
emergence  
of  
new,  
potentially  
more  
dangerous  
variants.

[Weekly Updates on SARS-CoV-2 Vaccines](#)

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|

You]

|

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**Date : 8/17/2021 1:47:41 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - August 17, 2021**

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)

reports  
207.2  
million  
cumulative  
cases  
and  
4.36  
million  
deaths  
worldwide  
as  
of  
12:45pm  
EDT  
on  
August  
16.  
Global  
weekly  
incidence  
continues  
to



increase,  
but  
it  
appears  
to  
be  
approaching  
a  
peak  
or  
plateau,  
however  
this  
could  
be  
a  
function  
of  
reporting  
delays.  
Last  
week,  
the  
weekly  
total  
increased  
less  
than  
2%  
compared  
to  
the  
previous  
week.  
Global  
weekly  
mortality  
held  
relatively  
steady  
last  
week,  
decreasing  
less  
than  
0.5%  
compared  
to

the  
previous  
week.  
The  
dashboard  
indicates  
that  
there  
are  
delayed  
reports  
from  
multiple  
countries  
in  
the  
African  
Region  
for  
August  
15,  
which  
are  
likely  
impacting  
the  
global  
trends.  
Notably,  
the  
weekly  
incidence  
for  
the  
African  
Region  
was  
nearly  
23%  
lower  
than  
the  
previous  
week  
—  
a  
difference  
of

more  
than  
40,000  
new  
cases  
—  
and  
weekly  
mortality  
was  
nearly  
18%  
lower  
—  
a  
difference  
of  
834  
deaths.  
The  
global  
trends  
could  
shift  
upward  
once  
reporting  
is  
complete  
for  
Africa  
for  
last  
week.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
4.46  
billion  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered

globally  
as  
of  
August  
16.  
The  
WHO  
reports  
that  
a  
total  
of  
1.70  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
880  
million  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
shows  
that  
the  
global  
[daily  
doses  
administered](#)  
has  
leveled  
off  
after  
a  
week  
of  
decline,

holding  
relatively  
steady  
at  
approximately  
37  
million  
doses  
per  
day\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.47  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
31.7%  
of  
the  
global  
population)  
and  
1.85  
billion  
who  
are  
fully  
vaccinated

(23.7%  
of  
the  
global  
population).

Notably,  
the  
global  
total  
jumped  
from  
1.25  
million  
fully  
vaccinated  
individuals  
on  
August  
11  
to  
1.81  
million  
on  
August  
12  
due  
to  
newly  
reported  
data  
from  
China\*\*.

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
several  
days,  
which*

*indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.  
\*\*The  
previous  
report  
from  
China's  
National  
Health  
Commission  
was  
on  
June  
10.  
China  
has  
not  
updated  
data  
regarding  
its  
partially  
vaccinated  
population*

(1+  
dose)  
since  
June  
10.

UNITED  
STATES

The

US

CDC

reported

36.7

million

cumulative

COVID-19

cases

and

619,564

deaths.

The

daily

average

is

up

to

121,873

new

cases

per

day,

the

highest

since

February

4.

Daily

incidence

continues

to

increase

rapidly,

but

it

appears

as

though

the



US  
may  
be  
passing  
an  
inflection  
point.  
It  
is  
difficult  
to  
determine,  
however,  
whether  
this  
is  
an  
artifact  
of  
reporting  
frequency  
—  
particularly  
over  
the  
weekend  
—  
or  
an  
early  
indication  
of  
a  
longer-  
term  
trend.  
Daily  
mortality  
continues  
to  
increase  
as  
well,  
although  
it  
is  
difficult  
to

determine  
whether  
the  
current  
trend  
is  
a  
linear  
or  
exponential  
increase.

The  
current  
average  
of  
548  
deaths  
per  
day  
is  
the  
highest  
since  
May  
13\*.

*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort*

*to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

US  
Vaccination

The  
US  
has  
administered  
357.3  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines.  
After  
approximately  
5  
weeks  
of  
steady  
increase,  
the  
daily  
vaccinations  
leveled  
off  
over  
the  
past

several  
days,  
holding  
relatively  
steady  
at  
approximately  
650-660,000  
doses  
per  
day\*.

A  
total  
of  
198.6  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
59.8%  
of  
the  
entire  
US  
population.

Among  
adults,  
72.1%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
12.4  
million

adolescents  
aged  
12-17  
years.  
A  
total  
of  
168.7  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
50.8%  
of  
the  
total  
population.  
Approximately  
61.8%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
9.2  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses*

*administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**THIRD  
DOSE  
FOR  
IMMUNOCOMPROMISED  
INDIVIDUALS**

[The  
US  
CDC  
approved  
a  
recommendation](#)  
to  
provide  
a  
third  
dose  
of  
mRNA-  
based  
SARS-  
CoV-2  
vaccines  
to  
individuals  
with  
moderate-

to-  
severe  
compromised  
immune  
systems  
on  
August  
13.  
CDC  
Director  
Dr.  
Rochelle  
Walensky's  
approval  
of  
the  
recommendation  
followed  
a  
unanimous  
vote  
by  
the  
agency's  
Advisory  
Committee  
on  
Immunization  
Practices  
(ACIP)  
and  
an  
emergency  
use  
authorization  
by  
the  
US  
FDA.  
The  
Pfizer-  
BioNTech  
vaccine  
is  
authorized  
for  
use  
among

individuals  
aged  
12  
and  
older,  
and  
the  
Moderna  
vaccine  
is  
authorized  
for  
individuals  
aged  
18  
and  
older.  
The  
FDA  
did  
not  
extend  
the  
authorization  
for  
a  
third  
dose  
to  
the  
J&J-  
Janssen  
vaccine  
due  
to  
a  
lack  
of  
efficacy  
data,  
but  
officials  
have  
stated  
they  
are  
working  
to



develop  
a  
recommendation.

A  
third  
dose  
of  
the  
mRNA-  
based  
SARS-  
CoV-2  
vaccines  
is  
recommended  
for  
moderately  
to  
severely  
immunocompromised  
individuals,  
including  
those  
receiving  
cancer  
treatment,  
recent  
recipients  
of  
an  
organ  
or  
stem  
cell  
transplant,  
those  
with  
advanced  
or  
untreated  
HIV  
infection,  
individuals  
taking  
a  
high  
dose

of  
corticosteroid,  
and  
people  
who  
are  
anticipating  
treatment  
that  
may  
weaken  
their  
immune  
system.  
However,  
a  
third  
dose  
of  
vaccine  
is  
not  
recommended  
for  
adults  
with  
chronic  
conditions  
that  
may  
cause  
mild  
immunosuppression,  
such  
as  
people  
with  
diabetes  
and  
heart  
disease  
or  
residents  
in  
long-  
term  
care  
facilities.

According to the guidance, the third dose should be given at least 28 days after the second dose for the best results. The CDC urges eligible individuals to try to get the same vaccine for their third dose, but receiving a different vaccine for the third dose is

acceptable  
if  
the  
original  
is  
unavailable.  
Notably,  
immunocompromised  
people  
will  
not  
need  
a  
prescription  
or  
doctor's  
note  
to  
get  
a  
third  
dose  
but  
will  
need  
to  
attest  
to  
their  
eligibility,  
raising  
questions  
about  
the  
potential  
for  
people  
to  
lie  
about  
their  
immune  
status  
in  
order  
to  
receive  
a

third  
vaccine  
dose.

**PFIZER-  
BIONTECH  
THIRD  
DOSE**

Pfizer-  
BioNTech  
[submitted](#)

[early-  
stage  
clinical  
trial  
data](#)

[to  
the  
US  
FDA](#)

on  
August  
16  
to  
seek  
emergency  
use  
authorization  
for

a  
third  
SARS-  
CoV-2  
vaccine  
dose

for  
all  
people  
aged  
16  
years  
and  
older.

The  
companies  
claim  
the  
trial

data  
show  
a  
third  
dose  
administered  
6  
to  
12  
months  
after  
the  
second  
dose  
generates  
higher  
levels  
of  
neutralizing  
antibodies  
against  
the  
Alpha,  
Beta,  
and  
Delta  
variants  
of  
SARS-  
CoV-2.  
The  
companies  
state  
that  
late-  
stage  
trial  
data  
will  
be  
submitted  
to  
the  
FDA  
and  
additional  
worldwide  
regulatory

authorities  
once  
available.

The  
US  
government  
is  
not  
yet  
officially  
recommending  
third  
doses  
of  
mRNA-  
based  
vaccines  
for  
the  
general  
public  
despite  
the  
recent  
guidance  
for  
booster  
vaccinations  
for  
people  
with  
moderate-  
to-  
severely  
compromised  
immune  
systems.  
However,  
officials  
are  
reportedly  
developing  
plans  
to  
start  
offering  
third

doses  
of  
vaccines  
to  
more  
of  
the  
general  
public  
as  
early  
as  
the  
fall.  
Initial  
doses  
given  
under  
the  
plan  
likely  
would  
be  
reserved  
for  
healthcare  
workers  
and  
long-  
term  
care  
facility  
residents  
who  
are  
at  
increased  
risk  
of  
severe  
disease.  
The  
FDA  
must  
first  
review  
the  
data



submitted  
by  
Pfizer-  
BioNTech  
before  
an  
emergency  
use  
authorization  
can  
be  
approved  
and  
before  
the  
US  
CDC  
can  
make  
an  
official  
recommendation.

## **US EVICTION MORATORIUM**

The  
[new](#)  
[version](#)  
[of](#)  
[a](#)  
[US](#)  
[CDC](#)  
[eviction](#)  
[moratorium](#)  
faced  
its  
first  
legal  
challenge  
last  
week,  
with  
US  
District  
Judge  
Dabney  
Friedrich

in  
Washington,  
DC,  
allowing  
the  
order  
to  
stay  
in  
place  
because  
she  
is  
bound  
by  
a  
ruling  
from  
the  
US  
Court  
of  
Appeals  
for  
the  
District  
of  
Columbia  
(DC)  
Circuit  
that  
allowed  
the  
previous  
version  
of  
the  
moratorium  
to  
continue.  
In  
May,  
Judge  
Friedrich  
ruled  
the  
previous  
nationwide

moratorium  
exceeded  
the  
CDC's  
authority  
but  
she  
stayed  
the  
judgment  
pending  
appeal,  
which  
allowed  
the  
moratorium  
to  
remain  
in  
force.  
The  
plaintiffs  
then  
asked  
the  
US  
Court  
of  
Appeals  
to  
vacate  
the  
stay,  
but  
the  
court  
declined,  
again  
allowing  
the  
moratorium  
to  
continue.  
In  
doing  
so,  
the  
court

said  
the  
moratorium  
falls  
within  
a  
1944  
public  
health  
emergencies  
law  
and  
that  
the  
US  
government  
“made  
a  
strong  
showing  
that  
it  
is  
likely  
to  
succeed  
on  
the  
merits.”  
At  
this  
point,  
the  
plaintiffs  
asked  
US  
Supreme  
Court  
Chief  
Justice  
John  
Roberts  
to  
vacate  
Judge  
Friedrich’s  
stay,  
but

Chief  
Justice  
Roberts  
denied  
relief

on  
June  
29.  
Notably,  
5  
justices  
indicated  
they  
would  
grant  
the  
application  
to  
vacate  
the  
stay.

When  
a  
group  
of  
property  
managers  
and  
realtors  
asked  
Judge  
Friedrich  
to  
put  
a  
hold  
on  
the  
new  
eviction  
ban  
—  
which  
is  
set  
to  
expire

October  
3  
and  
applies  
only  
to  
places  
in  
the  
country  
experiencing  
significant  
SARS-  
CoV-2  
transmission,  
instead  
of  
the  
entire  
nation  
—  
she  
wrote  
that  
“the  
minor  
differences  
between  
the  
current  
and  
previous  
moratoria  
do  
not  
exempt  
the  
former  
from  
this  
Court’s  
order.”  
Judge  
Friedrich  
indicated  
she  
would  
vacate

the  
stay  
but  
that  
she  
does  
not  
have  
the  
authority  
to  
act  
on  
a  
higher  
court's  
decision.

The  
plaintiffs  
are  
expected  
to  
ask  
the  
US  
Court  
of  
Appeals  
to  
reconsider  
its  
ruling  
and  
likely  
will  
go  
to  
the  
US  
Supreme  
Court  
if  
they  
don't  
get  
their  
desired  
outcome.

In  
a  
[statement](#),  
White  
House  
Press  
Secretary  
Jen  
Psaki  
said  
the  
administration  
of  
US  
President  
Joe  
Biden  
“believes  
that  
CDC’s  
new  
moratorium  
is  
a  
proper  
use  
of  
its  
lawful  
authority  
to  
protect  
the  
public  
health.  
We  
are  
pleased  
that  
the  
district  
court  
left  
the  
moratorium  
in  
place,  
though



we  
are  
aware  
that  
further  
proceedings  
in  
this  
case  
are  
likely.”  
She  
said  
President  
Biden  
is  
calling  
on  
all  
officials  
to  
urgently  
distribute  
US  
\$46.5  
billion  
in  
emergency  
rental  
assistance  
funds  
made  
available  
through  
Congressional  
action  
on  
COVID  
relief.

**US  
SUPREME  
COURT  
VACCINE  
MANDATE  
CHALLENGE**

The  
US

Supreme  
Court  
last  
week  
[refused](#)  
[to](#)  
[block](#)  
Indiana  
University's  
[requirement](#)  
that  
all  
students,  
faculty,  
and  
staff  
have  
a  
SARS-  
CoV-2  
vaccination,  
unless  
they  
qualify  
for  
one  
of  
several  
exemptions.  
The  
decision  
to  
turn  
down  
a  
group  
of  
students'  
[request](#)  
[for](#)  
[emergency](#)  
[relief](#)  
was  
issued  
independently  
by  
Justice  
Amy

Coney  
Barrett,  
who  
handles  
emergency  
requests  
from  
Indiana,  
without  
explanation,  
without  
dissents  
from  
other  
justices,  
and  
without  
asking  
the  
university  
for  
a  
response.  
All  
of  
these  
moves  
could  
signal  
the  
request  
does  
not  
stand  
on  
solid  
legal  
ground.  
Both  
a  
federal  
district  
judge  
and  
an  
unanimous  
panel  
of

the  
US  
Court  
of  
Appeals  
for  
the  
7th  
Circuit  
previously  
rejected  
requests  
for  
emergency  
relief  
while  
the  
issue  
moved  
through  
the  
courts.  
This  
was  
the  
first  
case  
involving  
mandatory  
SARS-  
CoV-2  
vaccinations  
to  
reach  
the  
Supreme  
Court.

**FUNDING  
FOR  
US  
RURAL  
HEALTHCARE**

The  
Administration  
of  
US  
President

Joe  
Biden  
on  
August  
13  
announced  
the  
US  
Department  
of  
Health  
and  
Human  
Services  
(HHS)  
will  
provide  
US  
\$8.5  
billion  
in  
American  
Rescue  
Plan  
(ARP)  
spending  
to  
help  
aid  
healthcare  
providers  
who  
serve  
rural  
Medicare,  
Medicaid,  
and  
Children's  
Health  
Insurance  
Plan  
(CHIP)  
patients  
for  
lost  
revenue  
and  
increased

expenses  
associated  
with  
COVID-19.  
Additionally,  
the  
US  
Department  
of  
Agriculture  
(USDA)  
will  
use  
US  
\$500  
million  
in  
ARP  
funding  
to  
[establish  
the  
Emergency  
Rural  
Health  
Care  
Grant  
Program](#)  
to  
help  
rural  
healthcare  
facilities  
increase  
access  
to  
SARS-  
CoV-2  
vaccines  
and  
testing,  
medical  
supplies,  
telehealth,  
and  
food  
assistance;  
support

construction  
or  
renovation;  
compensate  
for  
lost  
revenue  
or  
staffing  
expenses  
due  
to  
the  
pandemic;  
and  
plan  
and  
implement  
models  
to  
improve  
long-  
term  
viability.  
The  
announcement  
also  
included  
funding  
to  
train  
new  
rural  
healthcare  
providers  
and  
expand  
telehealth  
services.  
In  
a  
[fact  
sheet](#),  
the  
White  
House  
said  
the

funding  
“builds  
on  
efforts  
the  
Administration  
has  
already  
taken  
to  
help  
rural  
communities  
tackle  
the  
COVID-19  
crisis  
and  
improve  
access  
to  
health  
care,”  
including  
a  
previous  
announcement  
of  
US  
\$100  
in  
funding  
to  
assist  
rural  
health  
facilities  
conduct  
vaccine  
outreach.

**VACCINE  
INCENTIVES**

Mercer,  
an  
employee  
benefit  
consultant



company,  
recently  
stated  
that  
at  
least  
20  
companies  
have  
approached  
them  
to  
ask  
about  
implementing  
health  
insurance  
coverage  
surcharges  
of  
US  
\$20-50  
per  
month  
for  
employees  
who  
refuse  
to  
get  
a  
SARS-  
CoV-2  
vaccine.  
Employers  
have  
offered  
benefits  
and  
incentives  
such  
as  
cash  
payments  
and  
paid  
time  
off

to  
encourage  
vaccination  
among  
their  
ranks,  
but  
stalling  
vaccination  
rates  
have  
some  
companies  
reconsidering  
their  
approach.

Health  
coverage  
surcharges  
already  
are

a  
tool  
used  
when  
insured  
individuals  
act  
against  
common  
medical  
advice,  
such  
as  
continuing  
to  
smoke  
cigarettes.

For  
example,  
the  
Affordable  
Care  
Act  
allows  
insurers  
to  
charge

smokers  
up  
to  
50%  
more  
than  
non-  
smokers  
for  
health  
coverage.  
The  
likelihood  
of  
health  
coverage  
surcharges  
for  
not  
receiving  
a  
SARS-  
CoV-2  
vaccine  
remains  
unclear,  
but  
employers  
or  
insurers  
may  
decide  
to  
implement  
these  
measures  
if  
the  
cost  
of  
hospitalization  
for  
unvaccinated  
insurance  
recipients  
gets  
too  
high.

**FLORIDA  
SCHOOL  
DISTRICT**

The Hillsborough County School District, which includes Tampa, Florida (US), is expected to hold an [emergency school board meeting on August 18](#) to discuss COVID-19 protective measures only 1 week after resuming in-person classes for the fall semester. Since the start of classes,

nearly  
6,000  
students  
and  
employees  
have  
been  
asked  
to  
isolate  
or  
quarantine  
due  
to  
SARS-  
CoV-2  
infection  
or  
exposure.

COVID-19  
data  
from  
the  
school  
district  
indicate  
that  
nearly  
1,300  
new  
cases  
have  
been  
reported  
among  
students  
and  
staff  
since  
August  
2,  
including  
399  
students  
and  
88  
staff  
reported

on  
August  
16  
alone.  
The  
school  
district  
reported  
8,771  
cumulative  
cases  
from  
March  
2020  
to  
August  
1,  
2021.  
Notably,  
the  
cases  
are  
distributed  
relatively  
evenly  
across  
the  
county's  
250  
schools,  
with  
only  
one  
school  
exceeding  
50  
cases.  
The  
district  
announced  
on  
August  
7  
that  
it  
was  
implementing  
a

mask  
requirement

through  
September  
3,  
but  
parents  
would  
be  
able  
to  
opt  
their  
children  
out  
of  
the  
requirement.

So  
far,  
the  
district

—  
the  
7th  
largest  
in  
the  
nation  
with  
208,000  
students

—  
has  
received  
27,915  
opt-  
out  
submissions.

Florida  
Governor  
Ron  
DeSantis's  
office  
has  
said  
the  
state

Board  
of  
Education  
could  
[withhold](#)  
[the](#)  
[salaries](#)  
of  
district  
superintendents  
or  
school  
board  
members  
who  
disregard  
the  
governor's  
[executive](#)  
[order](#)  
that  
effectively  
prohibits  
school  
districts  
from  
implementing  
mask  
mandates.  
Statewide,  
Florida's  
epidemic  
continues  
to  
surge  
to  
record  
levels.

### **GLOBAL VACCINE DISTRIBUTION**

Australia  
has  
[purchased](#)  
[and](#)  
[received](#)  
[500,000](#)



doses  
of  
SARS-  
CoV-2  
vaccine  
from  
the  
COVAX  
facility,  
raising  
questions  
about  
how  
many  
of  
the  
vaccine-  
sharing  
mechanism's  
doses  
should  
go  
to  
low-  
and  
middle-  
income  
countries  
(LMICs).  
Australia  
received  
the  
doses  
in  
COVAX's  
third  
round  
of  
vaccine  
distributions.  
Also  
in  
that  
round,  
the  
UK  
received  
nearly

540,000 doses and New Zealand received nearly 101,000 doses. Australia is domestically producing the AstraZeneca-Oxford vaccine and has plentiful supplies but has been trying to obtain more doses of the Pfizer-BioNTech vaccine due to medical advice that the vaccine is preferred for people under age 59

and  
hesitancy  
among  
some  
to  
receive  
the  
AstraZeneca-  
Oxford  
vaccine.  
According  
to  
a  
report  
in  
*The  
New  
York  
Times*,  
Pfizer-  
BioNTech  
expressed  
its  
desire  
for  
a  
COVAX  
shipment  
of  
its  
vaccine  
to  
go  
only  
to  
LMICs,  
but  
the  
facility  
allegedly  
insisted  
it  
first  
fulfill  
orders  
from  
higher-  
income

nations  
that  
paid  
more  
for  
the  
doses.  
Concerns  
remain  
whether  
COVAX  
can  
move  
beyond  
pressures  
from  
wealthy  
countries  
and  
pharmaceutical  
companies,  
manufacturing  
delays,  
and  
bureaucratic  
infighting  
to  
help  
reach  
its  
goal  
of  
supplying  
2  
billion  
vaccine  
doses  
by  
the  
end  
of  
2021.

In  
the  
meantime,  
millions  
of

J&J-  
Janssen  
vaccine  
doses  
being  
“filled  
and  
finished”  
by  
South  
African-  
based  
Aspen  
Pharmacare  
are  
being  
shipped  
to  
Europe  
for  
distribution  
because  
of  
“an  
unusual  
stipulation”  
in  
the  
contract  
between  
the  
country’s  
government  
and  
the  
vaccine  
company.  
Reportedly,  
the  
contract  
required  
South  
Africa  
to  
waive  
its  
right  
to

impose  
export  
restrictions  
on  
vaccine  
doses  
finished  
in-  
country.

A  
South  
African  
health  
ministry  
official  
said  
the  
government  
was  
not  
pleased  
with  
the  
contract's  
stipulation  
but  
did  
not  
have  
the  
leverage  
to  
change  
it.

J&J-  
Janssen  
has  
shipped  
32  
million  
doses  
to  
Europe  
in  
recent  
months,  
according  
to

an  
investigation  
by  
*The  
New  
York  
Times.*

The  
company  
had  
agreed  
to  
sell  
enough  
of  
its  
vaccine  
to  
African  
countries  
to  
eventually  
vaccinate  
about  
one-  
third  
of  
the  
continent's  
residents.  
However,  
Africa  
continues  
to  
struggle  
to  
obtain  
enough  
supplies,  
and  
only  
about  
2%  
of  
Africans  
are  
fully  
vaccinated.

According  
to  
a  
J&J  
official,  
the  
Aspen  
plant  
will  
begin  
exclusively  
supplying  
doses  
to  
African  
countries  
later  
this  
year.  
In  
a  
[Guardian](#)  
[opinion](#)  
[piece](#),  
former  
UK  
Prime  
Minister  
Gordon  
Brown  
[criticized](#)  
[Europe](#)  
for  
taking  
a  
“neocolonial  
approach”  
to  
global  
health,  
saying  
the  
shipments  
of  
J&J-  
Janssen  
vaccine  
from



South  
Africa  
to  
Europe  
represent  
a  
“shocking  
symbol  
of  
the  
west’s  
failure  
to  
honor  
its  
promise  
of  
equitable  
vaccine  
distribution.”

### **GERMANY PEDIATRIC VACCINATION**

Germany’s  
vaccine  
advisory  
committee,  
known  
as  
STIKO,  
on  
August  
16  
updated  
its  
guidance  
to  
recommend  
that  
all  
individuals  
aged  
12  
to  
17  
years  
receive

a  
SARS-  
CoV-2  
vaccine.

The  
recommendation  
expands  
on  
the  
committee's  
previous  
guidance  
for  
that  
age  
group,  
which  
advised  
only  
those  
children  
and  
young  
adults  
who  
had  
an  
increased  
risk  
of  
severe  
COVID-19  
disease,  
including  
those  
with  
compromised  
immune  
systems  
or  
those  
who  
might  
have  
professional  
exposure  
to  
the

virus,  
be  
vaccinated.  
STIKO  
said  
its  
decision  
was  
based  
on  
surveillance  
data  
from  
the  
US  
showing  
the  
benefits  
of  
vaccination  
outweigh  
the  
risk  
of  
very  
rare  
side  
effects,  
including  
heart  
inflammation,  
and  
modeling  
data  
showing  
children  
and  
adolescents  
have  
a  
higher  
risk  
of  
infection  
from  
the  
Delta  
variant.

Germany's

16

state

health

ministers

decided

on

August

2

that

all

children

and

teenagers

ages

12

and

older

should

be

eligible

for

vaccination,

but

the

STIKO

held

off

on

recommending

the

same

until

now.

The

European

Medicines

Agency

(EMA)

has

authorized

both

the

Pfizer-

BioNTech

and

Moderna

vaccines

for  
that  
age  
group.

## **IRAN**

The  
spread  
of  
the  
highly  
transmissible  
SARS-  
CoV-2  
Delta  
variant  
in  
Iran  
has  
led  
to  
[record  
numbers  
of  
COVID-19  
cases  
and  
deaths,](#)  
forcing  
the  
country's  
[health  
system](#)  
to  
the  
edge  
of  
[collapse.](#)  
On  
August  
16,  
Iran's  
Ministry  
of  
Health  
reported  
a  
daily

record  
of  
655  
deaths,  
although  
some,  
including  
Iran's  
state  
television,  
estimate  
the  
daily  
totals  
to  
be  
higher,  
between  
720  
and  
1,000.

A  
[6-  
day  
nationwide  
lockdown](#)

began  
August  
16,  
including  
the  
closure  
of  
offices,  
banks,  
bazaars,  
and  
non-  
essential  
businesses  
such  
as  
theaters,  
gyms,  
and  
restaurants  
in  
all

Iranian cities, and a separate 6-day ban on intra-city travel began on August 15.

According to the Ministry of Health, nearly 15.5 million Iranians have received at least one dose of a SARS-CoV-2 vaccine, with 4.4 million having received 2 doses, less than 5%

of  
the  
total  
population.  
Supreme  
Leader  
Ayatollah  
Ali  
Khamenei  
earlier  
this  
year  
banned  
vaccines  
made  
in  
the  
US  
and  
Britain,  
saying  
the  
shots  
were  
designed  
to  
"contaminate  
other  
nations."  
Last  
week,  
Khamenei  
appeared  
to  
backpedal  
slightly,  
calling  
the  
pandemic  
the  
country's  
top  
priority  
and  
saying  
"efforts  
must  
be



redoubled  
so  
vaccines  
can  
be  
provided  
for  
the  
people  
through  
any  
means  
necessary.”  
Following  
his  
comments,  
a  
health  
official  
said  
vaccines  
developed  
by  
Western  
countries  
would  
be  
allowed  
if  
they  
are  
manufactured  
in  
other  
nations.  
So  
far,  
Iran  
has  
accepted  
more  
than  
21  
million  
doses  
of  
various  
vaccines

from  
China,  
Russia,  
India,  
Cuba,  
Japan,  
and  
the  
COVAX  
initiative.  
The  
country  
also  
is  
using  
its  
domestically  
developed  
COVIran  
Barekat  
vaccine,  
which  
the  
government  
has  
said  
is  
85%  
effective  
at  
preventing  
COVID-19  
but  
has  
not  
released  
any  
clinical  
data.  
In  
the  
absence  
of  
sufficient  
vaccine  
and  
medication  
supplies,

private  
dealers  
and  
black  
markets  
are  
filling  
the  
gaps,  
affordable  
only  
to  
more  
wealthy  
Iranians,  
with  
each  
vaccine  
dose  
costing  
up  
to  
US  
\$1,200.

More  
Iranians  
are  
trying  
to  
raise  
awareness  
about  
the  
country's  
plight,  
using  
the  
hashtag  
#SOSIran  
on  
social  
media  
and  
speaking  
anonymously  
to  
media

outlets.  
[Iranian  
security  
forces  
arrested](#)

5  
lawyers  
and  
a  
civil  
rights  
advocate  
over  
the  
weekend,  
allegedly  
for  
planning  
to  
take  
legal  
action  
against  
Iranian  
authorities  
for  
mismanagement  
of  
the  
pandemic  
and  
a  
slow  
vaccination  
campaign  
rollout.

[Critics  
blame](#)

both  
Khamenei  
and  
newly  
elected  
President  
Ebrahim  
Raisi  
for  
the

current  
crisis,  
while  
some  
officials  
recently  
shifted  
blame  
to  
the  
previous  
government  
of  
President  
Hassan  
Rouhani.

## **AFGHANISTAN**

The  
WHO  
today  
expressed  
concern  
over  
the  
Taliban's  
rapid  
advance  
and  
seizure  
of  
power  
in  
Afghanistan,  
as  
the  
security  
situation  
deteriorates  
and  
humanitarian  
needs  
increase.  
At  
a  
UN  
briefing,  
a

WHO  
spokesperson  
said  
the  
agency  
is  
"extremely  
concerned  
over  
the  
unfolding  
safety  
and  
humanitarian  
needs  
in  
the  
country,  
including  
risk  
of  
disease  
outbreaks  
and  
rise  
in  
[COVID-19  
transmission](#)."  
He  
indicated  
WHO  
mobile  
teams  
are  
on  
hold  
in  
the  
capital,  
but  
the  
agency  
remains  
committed  
to  
staying  
in  
the

country.  
The  
Taliban  
reportedly  
has  
[banned](#)  
[SARS-](#)  
[CoV-2](#)  
[vaccines](#)  
in  
Paktia  
province,  
one  
of  
the  
nation's  
34  
provinces  
located  
in  
the  
country's  
eastern  
region.  
In  
recent  
weeks  
and  
since  
the  
withdrawal  
of  
US  
troops  
from  
Afghanistan,  
the  
Taliban  
have  
captured  
much  
of  
the  
northern,  
western,  
and  
southern  
regions

of  
the  
country.

## **NEW ZEALAND LOCKDOWN**

Following  
its  
[first](#)  
[domestic](#)  
[case](#)  
[of](#)  
[COVID-19](#)  
[in](#)  
[6](#)  
[months,](#)  
New  
Zealand  
is  
entering  
a  
[nationwide](#)  
[lockdown.](#)  
[Prime](#)  
[Minister](#)  
[Jacinda](#)  
[Ardern](#)  
announced  
the  
[Alert](#)  
[Level](#)  
[4](#)  
[restrictions](#)  
earlier  
today,  
which  
will  
apply  
to  
the  
entire  
country  
for  
a  
period  
of  
3



days.  
The  
restrictions  
are  
scheduled  
to  
last  
for  
7  
days  
in  
Auckland  
and  
the  
Coromandel  
Peninsula  
where  
the  
case  
was  
identified  
and  
traveled  
in  
the  
days  
prior  
to  
testing  
positive.  
The  
individual  
was  
unvaccinated  
but  
was  
in  
the  
process  
of  
scheduling  
an  
appointment  
when  
he  
tested  
positive.  
His

wife,  
who  
is  
vaccinated,  
has  
tested  
negative.  
Prime  
Minister  
Ardern  
noted  
that  
it  
is  
not  
yet  
known  
if  
the  
case  
was  
a  
result  
of  
the  
Delta  
variant,  
but  
she  
emphasized  
that  
all  
recent  
infections  
identified  
among  
quarantined  
travelers  
have  
been  
a  
result  
of  
the  
Delta  
variant.

## **AIR POLLUTION & COVID**

Wildfires continue to rage across several western US states, and exposure to smoke and soot from the blazes could be associated with an increased risk of COVID-19 disease, including severe disease and death. Like smoking tobacco, exposure to smoke from wildfires can impair lung

function,  
especially  
due  
to  
tiny  
airborne  
particles  
that  
can  
penetrate  
deep  
into  
lung  
tissue.  
Smoke  
from  
wildfires  
can  
contain  
high  
concentrations  
of  
this  
fine  
particulate  
matter,  
known  
as  
PM  
2.5  
(ie,  
particulate  
matter  
with  
a  
diameter  
of  
2.5  
microns  
or  
less),  
and  
exposure  
to  
high  
concentrations  
of  
PM

2.5  
can  
impede  
the  
exchange  
of  
oxygen  
in  
the  
lungs.

The  
study,  
published  
on  
August  
13  
in  
[Science  
Advances](#),  
evaluated  
COVID-19  
data  
and  
PM  
2.5  
concentration  
data  
from  
92  
counties  
in  
California,  
Oregon,  
and  
Washington  
from  
March-  
December  
2020.  
The  
researchers  
from  
Harvard  
University  
estimated  
air  
pollution

levels  
based  
on  
satellite  
imagery  
from  
the  
US  
National  
Oceanic  
and  
Atmospheric  
Administration  
(NOAA),  
and  
they  
defined  
“wildfire  
days”  
as  
heavy  
PM  
2.5  
concentration  
(21-32  
 $\mu\text{g}/\text{m}^3$ ).  
Based  
on  
the  
smoke  
exposure  
data,  
the  
researchers  
developed  
a  
model  
to  
estimate  
the  
effect  
of  
higher-  
than-  
expected  
PM  
2.5  
concentration

on  
COVID-19  
incidence  
and  
mortality.  
The  
researchers  
observed  
increased  
daily  
COVID-19  
incidence  
and  
mortality  
for  
up  
to  
4  
weeks  
following  
exposure  
to  
high  
concentrations  
of  
PM  
2.5  
particles,  
although  
they  
noted  
several  
differences  
across  
counties.  
They  
estimated  
that  
even  
relatively  
short-  
term  
exposure  
to  
smoke  
from  
wildfires  
(typically

on  
the  
order  
of  
days  
or  
weeks)  
was  
associated  
with  
nearly  
20,000  
extra  
COVID-19  
cases  
and  
750  
deaths.  
Numerous  
complex  
environmental,  
social,  
and  
epidemiological  
factors  
drive  
COVID-19  
incidence  
and  
mortality,  
but  
the  
study  
provides  
evidence  
that  
short-  
term  
exposure  
to  
elevated  
concentrations  
of  
air  
pollution,  
including  
from  
wildfire



smoke,  
potentially  
can  
increase  
the  
risk  
of  
COVID-19  
disease  
and  
death.

**Weekly Updates on SARS-CoV-2 Vaccines**

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|  
You  
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**Date : 8/20/2021 2:26:58 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - August 20, 2021**

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
209.2  
million  
cumulative  
cases  
and  
4.39  
million  
deaths  
worldwide  
as  
of  
August  
20.

As  
we  
previously  
covered,  
COVID-19  
data  
from

August  
15  
was  
delayed  
for  
multiple  
countries  
in  
the  
African  
Region,  
which  
gave  
the  
appearance  
of  
decreasing  
trends  
in  
last  
week's  
data.  
It  
appears  
that  
reporting  
for  
last  
week  
is  
now  
complete,  
which  
corrected  
the  
weekly  
trends.  
Weekly  
incidence  
increased  
for  
the  
eighth  
consecutive  
week  
—  
an  
increase

of  
3.2%  
over  
the  
previous  
week

—

although  
the  
trend  
is  
tapering  
off  
toward  
a  
peak  
or  
plateau.  
Weekly  
mortality  
increased  
for  
the  
sixth  
consecutive  
week\*,  
0.7%  
higher  
than  
the  
previous  
week.

*\*With  
the  
exception  
of  
the  
week  
of  
July  
19,  
when  
[Ecuador](#)  
reported  
8,786  
deaths.*

Global  
Vaccination

More  
than  
1  
billion  
individuals  
worldwide  
are  
fully  
vaccinated.

The  
[WHO](#)  
[reported](#)  
4.56  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
August  
20.

The  
WHO  
reports  
that  
a  
total  
of  
1.78  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
1.03  
billion  
are

fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
global  
[daily](#)  
[doses](#)  
[administered](#)  
continues  
to  
hold  
relatively  
steady  
at  
approximately  
35-40  
million  
doses  
per  
day\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.51  
billion

vaccinated  
individuals  
worldwide  
(1+  
dose;  
32.2%  
of  
the  
global  
population)  
and  
1.88  
billion  
who  
are  
fully  
vaccinated  
(24.2%  
of  
the  
global  
population).  
We  
expect  
the  
global  
total  
to  
surpass  
one-  
third  
of  
the  
population  
with  
1+  
dose  
and  
one-  
quarter  
with  
full  
vaccination  
in  
the  
coming  
days.

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
several  
days,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

UNITED  
STATES  
The  
US  
CDC



reported  
37.3  
million  
cumulative  
COVID-19  
cases  
and  
623,244  
deaths.  
Daily  
incidence  
is  
up  
to  
133,055  
new  
cases  
per  
day,  
the  
highest  
since  
February  
2.  
Daily  
incidence  
continues  
to  
increase  
rapidly,  
but  
it  
appears  
that  
the  
US  
has  
passed  
an  
inflection  
point  
and  
is  
now  
tapering  
off.  
Based  
on

the  
timeline  
from  
the  
previous  
peak,  
this  
could  
indicate  
that  
the  
current  
surge  
could  
peak  
in  
the  
next  
several  
weeks.  
While  
some  
severely  
affected  
states  
are  
beginning  
to  
peak  
—  
including  
Arkansas,  
Florida,  
and  
Louisiana  
—  
many  
others  
are  
still  
exhibiting  
increasing  
trends  
as  
the  
surge  
spreads  
to

other parts of the country, with some states still early in their respective surges. Daily mortality continues to increase as well, although it is difficult to determine whether the current trend is a linear or exponential increase. The current average of 640 deaths per day is the highest

since  
April  
24.  
On  
August  
18,  
the  
US  
reported  
more  
than  
1,000  
deaths  
in  
a  
single  
day  
for  
the  
first  
time  
since  
March  
19\*.

*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort  
to*

*reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

As  
the  
US  
continues  
to  
combat  
its  
ongoing  
surge  
hospitalizations  
are  
setting  
new  
records  
at  
the  
national  
and  
state  
level,  
particularly  
for  
individuals  
under  
the  
age  
of  
50.  
At  
the

national  
level,  
[new](#)  
[daily](#)  
[hospitalizations](#)  
are  
at  
record  
highs  
for  
all  
age  
groups  
aged  
49  
years  
and  
younger,  
and  
the  
50-59  
years  
age  
group  
is  
at  
91%  
of  
its  
record  
high.  
Notably,  
the  
0-17  
years  
age  
group  
—  
most  
of  
whom  
are  
still  
not  
eligible  
for  
vaccination  
—

is currently 40% higher than its previous peak and still increasing rapidly, just as schools are resuming classes across the country. In terms of the percent of emergency department (ED) visits for COVID-19, most age groups appear to be peaking at the national level. Similar to new hospitalizations,

all  
age  
groups  
aged  
49  
years  
and  
younger  
are  
setting  
new  
records,  
ranging  
from  
3.2%  
for  
0-11  
years  
to  
8.1%  
for  
40-49  
years.  
The  
CDC's  
COVID-19  
dashboard  
does  
not  
provide  
data  
for  
[current  
hospitalizations](#)  
broken  
down  
by  
age  
group,  
but  
the  
current  
average  
across  
all  
age  
groups  
(76,077



hospitalized patients) is within 40% of the previous peak and still increasing.

Similar trends are evident across the whole of HHS Region 4 (Southeast), where the current surge is most severe. Current hospitalizations in the region set a new record high last week, and the current average

is  
just  
shy  
of  
30,000  
patients  
and  
still  
increasing.  
We  
have  
paid  
considerable  
attention  
to  
Region  
4,  
but  
Region  
10  
(Northwest)  
is  
also  
exhibiting  
concerning  
trends.  
While  
Region  
10  
is  
not  
setting  
records  
for  
new  
daily  
hospitalizations  
in  
the  
0-11  
years  
age  
group  
—  
suggesting  
lower  
transmission  
among

children

—

all  
other  
age  
groups  
59  
years  
and  
younger  
are  
surpassing  
their  
previous  
records  
and  
still  
increasing  
sharply.

Region  
10

is  
also  
setting  
new  
records  
in  
terms  
of  
the  
percent  
of  
ED  
visits  
for  
COVID-19,  
both  
averaged  
across  
all  
ages  
and  
individually  
for  
all  
age  
groups  
64

years  
and  
younger.  
Regions  
4  
and  
10  
also  
are  
both  
reporting  
record  
high  
current  
hospitalizations,  
and  
Region  
6  
(South)  
is  
11%  
below  
its  
highest  
peak  
and  
still  
increasing  
steadily.  
While  
these  
3  
regions  
are  
exhibiting  
similar  
trends,  
the  
magnitude  
of  
the  
epidemics  
are  
quite  
different,  
with  
Region  
10

reporting  
2,000  
hospitalizations  
compared  
to  
30,000  
and  
17,000  
in  
Regions  
4  
and  
6,  
respectively.

On  
a  
per  
capita  
basis\*\*,  
COVID-19  
hospitalizations  
in  
Regions  
4  
and  
6  
are  
2.3  
and  
1.9  
times  
higher  
than  
in  
Region  
10,  
respectively.

*\*\*Based  
on  
2020  
census  
data.*

At  
the  
state  
level,  
Arkansas,

Florida,  
Hawai'i,  
Louisiana,  
Mississippi,  
Oregon,  
and  
Washington  
are  
all  
setting  
new  
records  
in  
terms  
of  
current  
hospitalizations.

A  
total  
of  
5  
other  
states  
—

3  
from  
Region  
4  
and  
2  
others  
that  
border  
it  
—

are  
within  
20%  
of  
their  
records  
and  
still  
increasing.

Among  
the  
states  
setting

new  
records  
for  
current  
hospitalizations,  
all  
are  
setting  
new  
records  
in  
terms  
of  
new  
daily  
hospitalizations  
among  
most  
age  
groups  
59  
years  
and  
younger.  
Notably,  
all  
of  
these  
states,  
with  
the  
exception  
of  
Oregon  
and  
Washington,  
are  
setting  
new  
records  
for  
the  
0-11  
years  
age  
group.  
As  
with

the regional trends, the magnitude of these epidemics varies widely at the state level. Hawai'i, Oregon, and Washington are reporting between 1.7 and 3.5 new daily hospitalizations per 100,000 population, whereas Arkansas, Florida, Louisiana, and Mississippi range from 6 to more than 10. In Florida, all age groups



—  
with  
the  
exception  
of  
0-11  
years  
—  
have  
equaled  
or  
surpassed  
the  
record  
peak  
for  
percent  
of  
ED  
visits  
for  
COVID-19  
set  
by  
the  
65-74  
years  
and  
75+  
years  
age  
groups  
in  
the  
previous  
surge  
—  
ie,  
higher  
than  
the  
highest  
peak  
for  
the  
most  
vulnerable  
age

groups.  
Notably,  
the  
40-49  
years  
and  
50-64  
years  
age  
groups  
are  
more  
than  
60%  
higher  
than  
that  
previous  
record.

A  
similar  
trend  
is  
evident  
in  
Louisiana,  
with  
all  
age  
groups  
except  
0-11  
years  
and  
75+  
years  
equaling  
or  
surpassing  
the  
previous  
record.

### US Vaccination

The  
US  
has

administered  
359.6  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines.  
After  
approximately  
5  
weeks  
of  
steady  
increase,  
the  
daily  
vaccinations  
leveled  
off  
over  
the  
past  
several  
days,  
holding  
relatively  
steady  
at  
approximately  
670,000  
doses  
per  
day\*.  
A  
total  
of  
199.9  
million  
individuals  
in  
the  
US  
have  
received  
at  
least

1  
dose,  
equivalent  
to  
60.2%  
of  
the  
entire  
US  
population.  
Among  
adults,  
72.5%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
12.6  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
169.6  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
51.1%  
of  
the  
total  
population.  
Approximately  
62.0%  
of

adults  
are  
fully  
vaccinated,  
as  
well  
as  
9.4  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**US  
PLANS**

**FOR  
THIRD  
DOSES**

US health officials on August 18 announced plans to make [third doses of SARS-CoV-2 mRNA vaccines available to all US residents](#) as soon as the week of September 20. The third dose is meant to bolster individuals' immune responses at least 8 months from

their  
second  
dose  
of  
either  
the  
Pfizer-  
BioNTech  
or  
Moderna  
vaccines.  
People  
who  
received  
the  
J&J-  
Janssen  
vaccine  
likely  
will  
need  
an  
additional  
dose,  
but  
officials  
are  
waiting  
on  
results  
from  
a  
clinical  
trial  
expected  
to  
be  
available  
later  
this  
month.  
US  
officials  
based  
their  
decision  
to  
offer

booster  
doses  
on  
published  
and  
unpublished  
data  
showing  
vaccine  
effectiveness  
across  
age  
groups  
appears  
to  
wane  
over  
time  
and  
particularly  
amid  
the  
spread  
of  
the  
highly  
transmissible  
Delta  
variant.  
While  
they  
stressed  
the  
vaccines  
remain  
highly  
effective  
at  
preventing  
severe  
disease,  
hospitalizations,  
and  
death,  
they  
said  
the  
vaccines'



ability  
to  
prevent  
infection  
or  
symptomatic  
disease  
has  
declined  
since  
the  
spring.  
Some  
of  
the  
breakthrough  
infections  
seen  
among  
vaccinated  
individuals  
could  
be  
due  
to  
weakening  
immunity,  
lapses  
in  
protective  
measures  
such  
as  
mask  
wearing,  
or  
the  
now  
widespread  
Delta  
variant,  
or  
a  
combination  
of  
such  
factors,  
experts

noted,  
contending  
that  
no  
vaccine  
was  
meant  
to  
be  
100%  
effective  
in  
preventing  
infection.

At  
a  
White  
House  
COVID-19  
Task  
Force  
briefing,  
US  
CDC  
Director  
Dr.  
Rochelle  
Walensky  
presented  
data  
from  
3  
early  
release  
*Morbidity  
and  
Mortality  
Weekly  
Report  
(MMWR)*  
studies,  
1  
not-  
yet-  
peer-  
reviewed  
study

published  
on  
*medRxiv*,  
and  
unpublished  
CDC  
data.

One  
of  
the  
*MMWR*  
studies

included  
data  
from  
New  
York  
collected  
between  
May  
3

and  
July  
25,  
2021,  
showing  
vaccine  
effectiveness  
(VE)  
against  
infection  
declined  
from  
91.7%  
to  
79.8%.

A  
second  
*MMWR*  
study  
showed  
the  
mRNA  
vaccines'  
protection  
against  
infection  
among

nursing  
home  
residents  
declined  
from  
75%  
between  
March  
1  
and  
May  
9,  
2021,  
before  
Delta  
became  
the  
dominant  
strain,  
to  
53% between  
June  
21  
and  
August  
1,  
when  
Delta  
accounted  
for  
at  
least  
half  
of  
new  
COVID-19  
cases.  
In  
positive  
news,  
a  
[third](#)  
[MMWR](#)  
[publication](#)  
showed  
no  
significant  
decline

in  
the  
vaccines'  
effectiveness  
against  
COVID-19  
hospitalization  
over  
a  
24-  
week  
period,  
ranging  
from  
85%  
2-12  
weeks  
post-  
vaccination  
and  
84%  
at  
13-24  
weeks.  
However,  
data  
from  
a  
Mayo  
Clinic  
[preprint](#)  
[in](#)  
[medRxiv](#)  
showed  
Moderna  
VE  
fell  
from  
86%  
in  
January  
2021  
to  
76%  
in  
July,  
while  
Pfizer-

BioNTech  
VE  
dropped  
from  
76%  
to  
42%  
during  
the  
same  
time.  
According  
to  
a  
[joint  
statement](#)  
from  
US  
Department  
of  
Health  
and  
Human  
Services  
(HHS)  
experts,  
data  
from  
these  
sources  
make  
the  
argument  
for  
booster  
doses  
“very  
clear”  
that  
protection  
against  
SARS-  
CoV-2  
infection  
waned  
over  
time.  
However,

some  
experts  
argued  
the  
case  
for  
third  
doses  
remains  
unclear,  
saying  
officials  
presented  
no  
data  
regarding  
how  
much  
third  
doses  
boost  
immune  
responses  
or  
how  
long  
any  
benefits  
might  
last.  
US  
officials  
previously  
said  
the  
logistics  
of  
rolling  
out  
a  
booster  
dose  
program  
are  
too  
complex  
to  
wait

for  
scientific  
certainty  
that  
the  
extra  
doses  
are  
actually  
necessary.

Third  
doses  
initially  
will  
be  
available  
for  
about  
5  
million  
people  
who  
were  
first  
to  
receive  
vaccines  
over  
the  
2020-2021  
winter,  
including  
healthcare  
workers,  
nursing  
home  
residents,  
and  
older  
adults.  
Last  
week,  
regulators  
authorized  
third  
doses  
for



people  
with  
compromised  
immune  
systems,  
such  
as  
cancer  
patients  
and  
organ  
transplant  
recipients,  
who  
represent  
less  
than  
3%  
of  
the  
US  
population.  
The  
plan  
to  
provide  
booster  
doses  
is  
contingent  
upon  
the  
US  
FDA  
authorizing  
a  
third  
dose  
of  
either  
mRNA  
vaccine  
and  
the  
CDC's  
Advisory  
Committee  
on

Immunization  
Practices  
(ACIP)  
making  
subsequent  
recommendations.

Only  
earlier  
this  
week  
did  
Pfizer-  
BioNTech  
[submit](#)  
[initial](#)  
[data](#)  
[to](#)  
[the](#)  
[FDA](#)

supporting  
the  
evaluation  
of  
a  
booster  
dose  
of  
its  
vaccine.

Moderna  
has  
yet  
to  
submit  
data.

Some  
experts  
speculate  
that

a  
third  
dose  
given  
8  
months  
from  
the  
second

dose  
could  
provide  
a  
more  
robust  
and  
long-  
lasting  
immune  
response,  
potentially  
requiring  
few  
or  
no  
future  
boosters,  
although  
US  
Surgeon  
General  
Vivek  
Murthy  
said  
“there’s  
nothing  
magical”  
about  
the  
8-  
month  
timeframe.  
Some  
of  
the  
same  
experts,  
as  
well  
as  
others,  
expressed  
additional  
concerns  
over  
the  
plan

for multiple reasons, including that all US residents might not immediately need boosters, that a timeframe for providing extra doses apparently has been decided prior to regulatory decisions, and that more focus should be placed on vaccinating more people in the US and globally.

### **THIRD DOSE CONCERNS**

The  
announcement  
reignited  
criticism  
about  
global  
vaccine  
inequity,  
with  
some  
experts  
expressing  
fear,  
frustration,  
and  
even  
anger  
over  
wealthier  
nations'  
continuing  
disregard  
for  
a  
WHO  
call  
for  
a  
moratorium  
on  
booster  
doses.  
WHO  
officials  
and  
other  
experts  
continue  
to  
argue  
that  
booster  
programs  
—  
also  
implemented  
in  
Israel,

France,  
Germany,  
and  
other  
nations

—

will  
further  
deplete  
scarce  
vaccine  
resources

and  
deprive  
low-  
and  
middle-  
income  
countries  
(LMICs)  
of  
needed  
doses.

The  
WHO  
estimates

11  
billion  
vaccine  
doses

are  
needed  
to  
help  
control  
the  
pandemic.

WHO  
Regional  
Director  
for  
Africa  
Dr.  
Matshidiso  
Moeti  
chastised  
wealthier  
nations,

saying  
“they  
make  
a  
mockery  
of  
vaccine  
equity”  
by  
stockpiling  
vaccine  
doses  
while  
the  
situation  
in  
Africa  
remains  
“very  
fragile.”  
WHO  
chief  
scientist  
Dr.  
Soumya  
Swaminathan  
and  
other  
researchers  
warned  
that  
a  
focus  
on  
booster  
programs  
in  
wealthy  
nations  
could  
lead  
to  
the  
development  
of  
more  
viral  
variants

and  
“an  
even  
more  
dire  
situation”  
globally,  
because  
the  
virus  
continues  
to  
spread  
unabated  
in  
unvaccinated

—  
not  
vaccinated  
—  
populations.  
Other  
experts  
said  
there  
was  
still  
not  
enough  
conclusive  
evidence  
supporting  
third  
doses  
to  
recommend  
them  
to  
everyone.

But  
US  
officials  
pushed  
back  
at  
the  
disapproval.



White  
House  
Press  
Secretary  
Jen  
Psaki  
said  
the  
notion  
the  
US  
would  
not  
be  
able  
to  
provide  
boosters  
and  
simultaneously  
donate  
doses  
to  
countries  
in  
need  
represented  
a  
"false  
choice."  
US  
CDC  
Director  
Dr.  
Rochelle  
Walensky  
agreed,  
saying,  
"We're  
going  
to  
do  
both  
and  
we  
have  
been  
doing

both,"  
noting  
the  
country  
plans  
to  
distribute  
200  
million  
doses  
worldwide  
and  
administer  
100  
million  
booster  
doses  
by  
the  
end  
of  
the  
year.  
Global  
health  
advocates  
continue  
to  
[call](#)  
[on](#)  
[the](#)  
[US](#)  
[to](#)  
[be](#)  
[more](#)  
[of](#)  
[a](#)  
[leader](#)  
in  
efforts  
to  
bolster  
global  
vaccine  
supplies,  
including  
by  
pressuring

pharmaceutical  
companies  
to  
share  
technologies  
with  
LMICs  
and  
help  
scale  
up  
manufacturing  
in  
those  
countries.

**US  
CDC  
DISEASE  
FORECASTING  
CENTER**

On  
August  
18,  
the  
US  
CDC  
officially  
announced  
its  
new  
[Center  
for  
Forecasting  
and  
Outbreak  
Analytics](#).  
The  
center  
will  
leverage  
advanced  
data  
and  
modeling  
capacities  
to  
provide

health  
officials  
with  
projections  
and  
other  
analysis  
during  
outbreaks  
and  
epidemics,  
aiming  
to  
“accelerate  
access  
to  
and  
use  
of  
data  
for  
public  
health  
decision-  
makers.”  
The  
center  
also  
will  
provide  
forecasting  
capacity  
for  
emerging  
infectious  
disease  
threats,  
as  
the  
pandemic  
response  
highlighted  
the  
need  
to  
[streamline](#)  
[and](#)  
[modernize](#)

data  
collection  
reporting  
at  
the  
state  
and  
local  
levels.  
Prior  
to  
establishing  
this  
center,  
the  
US  
government  
had  
relatively  
little  
internal  
capacity  
for  
infectious  
disease  
modeling,  
genomic  
surveillance,  
and  
other  
real-  
time  
analytics,  
requiring  
it  
to  
draw  
on  
external  
support  
from  
academic  
institutions,  
think  
tanks,  
and  
other  
organizations,

which  
often  
volunteered  
their  
time  
and  
effort.

The  
new  
center  
will  
continue  
to  
draw  
on  
these  
external  
resources,  
but  
it  
establishes

a  
[central  
point  
within  
the  
CDC](#)

to  
provide  
coordination  
and  
support.

Initial  
funding  
for  
the  
program  
comes  
from  
the  
[American  
Rescue  
Plan](#),  
part  
of  
a  
series  
of

emergency  
funding  
packages  
approved  
during  
the  
COVID-19  
pandemic.  
The  
center  
will  
be  
led  
by  
Dr.  
Marc  
Lipsitch,  
Dr.  
Dylan  
George,  
Dr.  
Rebecca  
Kahn,  
and  
the  
Johns  
Hopkins  
Center  
for  
Health  
Security's  
own  
Dr.  
Caitlin  
Rivers.

**US  
NURSING  
HOME  
FUNDING**

US  
President  
Joe  
Biden  
announced  
on  
August  
18

that  
nursing  
home  
staff  
must  
be  
vaccinated  
against  
SARS-  
CoV-2  
or  
their  
facilities  
risk  
losing  
federal  
funding  
that  
many  
facilities  
rely  
on  
to  
maintain  
operations.  
The  
vaccine  
requirement  
would  
affect  
more  
than  
15,000  
facilities  
and  
1.3  
million  
employees  
nationwide.  
According  
to  
the  
Centers  
for  
Medicare  
and  
Medicaid  
Services



(CMS),  
nursing  
home  
residents  
have  
a  
higher  
rate  
of  
vaccination  
compared  
to  
staff,  
with  
nearly  
83%  
of  
residents  
vaccinated  
per  
facility  
compared  
to  
60%  
of  
staff  
per  
facility.  
But  
that  
represents  
the  
national  
average;  
vaccination  
rates  
vary  
by  
state  
since  
many  
nursing  
homes  
have  
not  
implemented  
vaccine  
requirements.

Florida  
has  
the  
lowest  
percentage  
of  
staff  
with  
completed  
vaccinations  
per  
facility  
at  
40%.

At  
the  
other  
end  
of  
the  
spectrum,  
Hawai'i  
boasts  
the  
highest  
percentage,  
with  
nearly  
87%  
of  
staff  
vaccinated  
per  
facility.

[The  
new  
mandate](#)  
is  
expected  
to  
be  
formalized  
by  
CMS  
regulation.  
An  
official  
deadline

for  
the  
requirement  
has  
not  
been  
set,  
although  
it  
could  
take  
effect  
as  
soon  
as  
next  
month.

## **MASKS IN SCHOOLS**

US  
President  
Joe  
Biden  
this  
week  
[ordered](#)  
[Secretary](#)  
[of](#)  
[Education](#)  
[Miguel](#)  
[Cardona](#)  
[to](#)  
[use](#)  
[all](#)  
[available](#)  
[tools](#)  
to  
ensure  
that  
governors  
and  
other  
state  
officials  
are  
taking

appropriate  
actions  
to  
safeguard  
students'  
return  
to  
in-  
person  
schooling,  
including  
possibly  
taking  
legal  
action  
against  
governors  
who  
ban  
universal  
masking  
in  
schools.  
Secretary  
Cardona  
said  
he  
will  
use  
the  
department's  
[civil](#)  
[rights](#)  
[enforcement](#)  
[capacity](#)  
[to](#)  
[investigate](#)  
states  
that  
ban  
masking.  
The  
Biden  
administration  
plans  
to  
send  
letters

to  
the  
governors  
of  
Arizona,  
Iowa,  
Oklahoma,  
South  
Carolina,  
Tennessee,  
and  
Utah

—  
in  
addition  
to  
those  
Secretary  
Cardona  
already  
sent  
to  
Florida  
and  
Texas

—  
reprimanding  
their  
efforts  
to  
block  
universal  
masking  
in  
schools  
and  
expressing  
support  
for  
local  
officials  
who  
defy  
mask  
bans.  
Secretary  
Cardona  
also

noted  
that  
the  
department  
would  
pay  
the  
full  
salaries  
of  
educators  
if  
their  
“states  
move  
to  
withhold  
pay  
or  
levy  
financial  
penalties  
on  
their  
schools.”  
Earlier  
this  
year,  
the  
department’s  
Office  
of  
Civil  
Rights  
published  
a  
[report](#)  
outlining  
the  
impacts  
of  
the  
COVID-19  
pandemic  
on  
US  
students,  
warning

that  
existing  
educational  
gaps  
are  
widening  
during  
the  
pandemic,  
falling  
disproportionately  
on  
those  
students  
with  
the  
greatest  
educational  
needs  
and  
fewest  
opportunities,  
many  
from  
historically  
marginalized  
and  
underserved  
populations.

In  
Miami-  
Dade  
County,  
the  
largest  
county  
in  
Florida,  
the  
school  
board  
on  
August  
18  
[voted](#)  
[to](#)  
[require](#)

[masks](#)

for  
students  
when  
in-  
person  
learning  
resumes  
next  
week,  
defying  
an  
order  
from  
Governor  
Ron  
DeSantis  
that  
effectively  
bans  
mask  
mandates.

[Miami-  
Dade](#)

[joins](#)

Alachua,  
Broward,  
and  
Hillsborough  
as  
Florida  
counties  
requiring  
masks  
for  
students,  
employees,  
and  
visitors,  
with  
only  
medical  
exemptions  
accepted.  
The  
school  
districts  
cited



updated  
CDC  
guidance  
and  
the  
rise  
in  
pediatric  
infections,  
including  
record  
high  
hospitalizations,  
as  
the  
basis  
for  
requiring  
face  
coverings.

In  
Texas,  
the  
State  
Supreme  
Court  
on  
August  
19  
denied  
Governor  
Greg  
Abbott's  
request  
to  
block  
temporary  
restraining  
orders  
on  
his  
ban  
on  
mask  
mandates  
issued  
by

Travis  
County  
Judge  
Jan  
Soifer.  
As  
a  
result,  
the  
lower  
court's  
ruling  
stands,  
for  
now,  
allowing  
school  
districts  
to  
continue  
their  
requirements.  
The  
governor  
now  
must  
appeal  
to  
the  
Texas  
Court  
of  
Appeals.  
On  
the  
same  
day,  
the  
[Texas  
Education  
Agency  
suspended  
enforcement  
of  
Governor  
Abbott's  
ban  
in](#)

the  
state's  
public  
school  
system.  
The  
State  
Supreme  
Court's  
[order](#)  
comes  
only  
days  
after  
it  
sided  
with  
Governor  
Abbott,  
granting  
a  
temporary  
emergency  
stay  
of  
an  
appellate  
court  
ruling  
and  
[allowing](#)  
[his](#)  
[ban](#)  
[on](#)  
[mask](#)  
[mandates](#),  
including  
those  
in  
public  
schools.  
Following  
that  
order,  
the  
Dallas  
and  
San

Antonio school districts, 2 of the largest in the state, said they would continue to require masks until a final ruling is made. Since then, several other districts have implemented universal masking requirements. The legal battles over masking in schools undoubtedly will continue to work their way through

the  
courts.

## **SCHOOL VACCINE MANDATES**

As  
states  
around  
the  
country  
return  
or  
prepare  
to  
return  
to  
school  
in  
the  
coming  
weeks,  
some  
state  
legislatures  
are  
taking  
final  
steps  
to  
increase  
the  
proportion  
of  
vaccinated  
public  
school  
employees.

In  
Washington  
state,  
[Governor  
Jay  
Inslee  
announced  
a  
vaccination  
requirement](#)

for  
all  
employees  
in  
K-12  
schools  
at  
the  
private,  
public,  
and  
charter  
levels  
and  
those  
working  
in  
childcare  
settings  
and  
higher  
education  
institutions.  
Employees  
must  
show  
proof  
of  
full  
vaccination  
prior  
to  
October  
18  
or  
possibly  
face  
dismissal.  
The  
policy  
has  
limited  
medical  
and  
religious  
exemptions,  
and  
there

is  
no  
test  
out  
option,  
possibly  
representing  
the  
most  
widespread  
and  
strict  
requirements  
implemented  
by  
a  
state  
yet.  
Governor  
Inslee  
also  
expanded  
a  
statewide  
mask  
mandate,  
applicable  
to  
all  
individuals  
regardless  
of  
vaccination  
status.  
Other  
states  
with  
vaccine  
requirements  
for  
school  
staff,  
such  
as  
California  
and  
[Connecticut](#),  
have

allowed

employees

the

option

of

choosing

between

mandatory

vaccination

or

routine

testing

for

those

who

wish

not

to

comply.

Several

major

cities

across

the

country,

including

Los

Angeles

and

Chicago,

also

are

requiring

public

school

employees

to

get

vaccinated.

Other

states

likely

will

implement

vaccine

requirements

for

school



staff  
as  
students  
return  
to  
in-  
person  
learning,  
with  
[rumors](#)  
that  
New  
Jersey  
could  
be  
next.

**MODERNA  
VACCINE  
FOR  
UK  
ADOLESCENTS**

The  
UK  
Medicines  
and  
Healthcare  
products  
Regulatory  
Agency  
(MHRA)  
granted  
Conditional  
Marketing  
Authorization  
(CMA)  
for  
the  
use  
of  
the  
[Moderna  
SARS-  
CoV-2  
vaccine  
in  
children  
aged](#)

12-17  
years.

The  
CMA  
was  
granted  
through  
the  
European  
Commission  
(EC)  
Decision  
Reliance  
Route,  
which  
allows  
for  
new  
Marketing  
Authorizations  
based  
on  
previous  
authorizations  
through  
the  
centralized  
EC  
process,  
but  
it  
means  
that  
the  
CMA  
only  
applies  
to  
Great  
Britain.  
Northern  
Ireland  
issued  
a  
CMA  
for  
12-  
to

17-year-olds via the same process on July 23. The approval in Great Britain comes a week after the England Department of Health announced 16- and 17-year-olds will be offered a first dose of SARS-CoV-2 vaccine by August 23, before schools resume classes in

September.  
MHRA  
Chief  
Executive  
Dr.  
June  
Raine  
said  
“the  
vaccine  
is  
safe  
and  
effective  
in  
this  
age  
group”  
and  
that  
it  
will  
be  
[up  
to  
the  
Joint  
Committee  
on  
Vaccination  
and  
Immunization  
\(JCVI\)](#)  
to  
advise  
on  
whether  
adolescents  
aged  
12  
and  
older  
should  
receive  
the  
Moderna  
vaccine  
as

part  
of  
the  
deployment  
program.  
The  
Moderna  
vaccine  
has  
not  
yet  
been  
authorized  
for  
use  
in  
individuals  
aged  
12  
to  
17  
years  
in  
the  
US,  
but  
the  
European  
Medicines  
Agency  
(EMA)  
recommended  
its  
use  
in  
this  
age  
group  
on  
July  
23.

## **ISRAEL**

Throughout  
the  
COVID-19  
pandemic,  
Israel

has been one of the countries on the forefront of disease control. Following an early and successful SARS-CoV-2 vaccination campaign, Israel saw a drop in the incidence of new COVID-19 cases. Unfortunately, the region has now seen a [drastic increase in cases](#), despite a large proportion of

its  
adult  
population  
having  
received  
a  
SARS-  
CoV-2  
vaccine.  
With  
worries  
that  
waning  
vaccine  
effectiveness  
contributed  
to  
the  
new  
surge,  
Israel  
announced  
a  
campaign  
of  
so-  
called  
booster  
doses  
for  
senior  
residents  
that  
started  
at  
the  
end  
of  
July.  
However,  
there  
is  
minimal  
evidence  
to  
support  
the  
application

of  
booster  
doses,  
leading  
some  
experts  
to  
question  
the  
decision.  
So  
far,  
37  
individuals  
have  
tested  
positive  
for  
COVID-19  
following  
their  
third  
dose.  
These  
recent  
developments  
have  
increased  
concerns  
over  
the  
longevity  
of  
vaccine  
efficacy,  
especially  
against  
more  
transmissible  
SARS-  
CoV-2  
variants  
of  
concern.

**POPE  
ENCOURAGES  
VACCINATION**



In  
a  
new  
[public](#)  
[service](#)  
[campaign](#)  
made  
in  
coordination  
with  
the  
Ad  
Council  
and  
directed  
specifically  
at  
the  
Americas,  
Pope  
Francis  
encourages  
people  
to  
get  
vaccinated,  
saying  
it  
is  
“an  
act  
of  
love.”  
The  
[video](#)  
features  
Pope  
Francis  
speaking  
Spanish  
with  
English  
subtitles  
in  
the  
Ad  
Council’s  
first

campaign  
outside  
of  
the  
United  
States.  
The  
Pope  
is  
joined  
by  
church  
officials  
from  
Brazil,  
Mexico,  
the  
United  
States,  
and  
other  
countries  
who  
[describe](#)  
[getting](#)  
[vaccinated](#)  
[as](#)  
[a](#)  
["moral](#)  
[responsibility."](#)  
Vaccine  
hesitancy  
among  
religious  
groups  
has  
been  
a  
barrier  
to  
vaccination  
during  
the  
pandemic,  
but  
a  
[survey](#)  
by

the  
Public  
Religion  
Research  
Institute  
and  
Interfaith  
Youth  
Core  
nonprofit  
groups  
conducted  
in  
June  
suggests  
acceptance  
may  
be  
on  
the  
rise.  
Of  
more  
than  
5,000  
people  
surveyed  
in  
the  
US,  
acceptance  
rose  
from  
56%  
in  
March  
to  
80%  
in  
June  
among  
Hispanic  
Catholics,  
and  
from  
68%  
to  
79%

among  
White  
Catholics.  
Vaccine-  
hesitant  
participants  
also  
told  
researchers  
that  
faith-  
based  
arguments  
may  
convince  
them  
to  
get  
vaccinated,  
underlining  
the  
importance  
of  
the  
Pope's  
message.  
The  
ad  
will  
be  
run  
on  
Telemundo,  
Universo,  
and  
WarnerMedia  
platforms,  
and  
media  
outlets  
in  
various  
Spanish-  
speaking  
countries.

## **FAKE VACCINATIONS/CARDS**

As  
more  
SARS-  
CoV-2  
vaccine  
requirements  
are  
enacted  
for  
everything  
from  
employment,  
to  
travel,  
to  
restaurant  
dining,  
the  
[black  
market  
for  
vaccine  
cards  
is  
growing.](#)  
US  
Customs  
and  
Border  
Protection  
(CBP)  
agents  
in  
Memphis,  
Tennessee  
(US),  
recently  
[announced](#)  
they  
have  
seized  
more  
than  
3,000  
fake  
vaccination

cards  
shipped  
from  
China  
and  
destined  
for  
various  
US  
cities  
since  
the  
end  
of  
June.

Additionally,  
a  
Chicago  
pharmacist  
was  
charged  
with  
12  
counts  
of  
theft  
of  
government  
property  
after  
allegedly  
stealing  
and  
selling  
official  
US  
CDC  
vaccination  
cards  
on  
eBay.  
The  
FBI  
has  
warned  
that  
buying,  
selling,

or  
using  
counterfeit  
vaccination  
cards  
is  
a  
crime,  
punishable  
by  
a  
fine  
and  
up  
to  
5  
years  
in  
prison.  
In  
France,  
fake  
vaccine  
passes  
are  
being  
sold  
through  
social  
media  
platforms  
such  
as  
Snapchat  
and  
Facebook  
for  
up  
to  
€400  
(US  
\$467).  
If  
caught,  
those  
who  
distribute  
counterfeit

passes  
face  
up  
to  
5  
years  
in  
prison  
and  
fines  
up  
to  
€150,000  
(US  
\$175,000),  
and  
users  
could  
spend  
3  
years  
in  
prison.  
Officials  
in  
the  
US  
and  
France  
reminded  
the  
public  
that  
SARS-  
CoV-2  
vaccines  
are  
available  
at  
no  
cost.

In  
more  
disturbing  
developments,  
the  
[WHO](#)



identified  
counterfeit  
versions  
of  
Covishield—  
the  
Indian-  
made  
version  
of  
the  
AstraZeneca-  
Oxford  
SARS-  
CoV-2  
vaccine  
—  
in  
India  
and  
Africa  
in  
recent  
months.  
The  
Indian  
government  
said  
it  
has  
launched  
an  
investigation  
into  
the  
allegations.  
Last  
month,  
around  
4,000  
people  
in  
India  
paid  
to  
receive  
a  
SARS-

CoV-2  
vaccine  
at  
a  
“vaccination  
camp”  
but  
instead  
got  
shots  
of  
saline  
solution.  
Authorities  
arrested  
14  
people  
in  
connection  
with  
the  
scheme.  
In  
Germany,  
a  
Red  
Cross  
nurse  
is  
believed  
to  
have  
injected  
more  
than  
8,000  
residents  
with  
shots  
of  
saline  
rather  
than  
a  
SARS-  
CoV-2  
vaccine,  
authorities

there  
say,  
although  
it  
is  
unclear  
whether  
any  
arrests  
have  
been  
made  
or  
charges  
filed.  
Officials  
continue  
their  
work  
to  
stop  
the  
counterfeiting  
of  
vaccine  
cards  
and  
shots  
worldwide.

## **NFL VACCINATION**

This  
week  
the  
[Atlanta  
Falcons  
became  
the  
first](#)  
and  
reportedly  
only  
US  
National  
Football  
League  
(NFL)

team  
to  
achieve  
100%  
SARS-  
CoV-2  
vaccination  
of  
its  
roster.  
Now,  
all  
players  
are  
able  
to  
work  
out  
and  
eat  
together  
and  
are  
exempt  
from  
daily  
testing,  
mask  
use  
in  
team  
facilities,  
and  
quarantine  
following  
close  
contact  
with  
someone  
who  
tests  
positive,  
the  
team  
confirmed  
in  
a  
statement.

As we previously reported, the NFL implemented [strict consequences](#) for teams with unvaccinated players, potentially including forfeiting games that are canceled because of outbreaks. Additionally, unvaccinated players could lose pay for games missed due to testing positive. On August 18, [Tampa Bay Buccaneers](#) Head Coach Bruce Arians said

his  
team  
likely  
would  
reach  
100%  
vaccination  
before  
the  
start  
of  
the  
regular  
season  
on  
September  
9.

The  
NFL  
Network  
on  
August  
11  
reported  
that  
92%  
of  
NFL  
players  
have  
at  
least  
1  
dose  
of  
vaccine,  
well  
above  
the  
national  
average  
of  
60%.  
NFL  
teams  
could  
provide  
insight

into  
vaccine  
effectiveness  
in  
close-  
contact  
settings  
where  
every  
individual  
is  
vaccinated.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 8/24/2021 2:15:54 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - August 24, 2021**

**Applications  
Now  
Open  
for  
Johns  
Hopkins  
Center  
for  
Health  
Security  
Educational  
Opportunities  
for  
2022-2023  
Academic  
Year**

In  
a  
world  
of  
rapid  
innovation  
in  
the  
biological  
sciences,  
the  
emergence  
of  
new  
diseases,  
and



changing  
environmental  
pressures,  
health  
security  
risks  
to  
the  
global  
community  
are  
a  
rising  
concern.

The  
field  
of  
health  
security  
has  
a  
growing  
need  
for  
trained  
expertise  
that  
can  
provide  
science-  
based  
solutions  
and  
inform  
global  
policies  
to  
shape  
preparedness  
and  
response  
efforts.

The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
is  
pleased  
to  
announce  
it  
is

now  
accepting  
applications  
for  
its  
educational  
opportunities  
for  
the  
2022-2023  
academic  
year.

The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
provides  
2  
Masters  
of  
Public  
Health  
scholarships  
and  
funds  
2  
PhD  
candidates  
for  
the  
Health  
Security  
PhD  
track  
at  
the  
Johns  
Hopkins  
Bloomberg  
School  
of  
Public  
Health.

[Click  
here  
for  
more  
information  
and  
application  
details.](#)

These  
funding  
opportunities  
are  
supported  
by  
Open  
Philanthropy  
and  
are  
targeted  
toward  
students  
with  
an  
interest  
in  
the  
field  
of  
health  
security,  
particularly  
in  
pandemics  
and  
global  
catastrophic  
biological  
risks.

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
212.4  
million  
cumulative  
cases  
and  
4.44  
million  
deaths  
worldwide  
as  
of  
August

24.  
The  
global  
weekly  
incidence  
increased  
for  
the  
ninth  
consecutive  
week,  
up  
1.1%  
over  
the  
previous  
week.  
The  
trend  
continues  
to  
taper  
off  
toward  
a  
peak  
or  
plateau.  
Over  
the  
past  
several  
weeks,  
weekly  
incidence  
has  
decreased  
in  
Africa  
and  
South  
East  
Asia,  
held  
relatively  
steady  
or  
peaked

in  
the  
Eastern  
Mediterranean  
region  
and  
Europe,  
and  
increased  
steadily  
or  
exponentially  
in  
the  
Americas  
and  
the  
Western  
Pacific  
region.  
Global  
weekly  
mortality  
increased  
for  
the  
seventh  
consecutive  
week\*,  
up  
1.8%  
compared  
to  
the  
previous  
week.  
If  
the  
global  
mortality  
continues  
on  
this  
trajectory,  
the  
cumulative  
total  
could

surpass  
4.5  
million  
deaths  
in  
the  
next  
week.  
*\*With  
the  
exception  
of  
the  
week  
of  
July  
19,  
when  
[Ecuador](#)  
reported  
8,786  
deaths.*

*Global  
Vaccination*  
The  
[WHO](#)  
[reported](#)  
4.62  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
August  
23.  
The  
WHO  
reports  
that  
a  
total

of  
1.80  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
1.06  
billion  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
global  
[daily  
doses  
administered](#)  
is  
decreasing  
steadily  
from  
its  
second-  
highest  
peak,  
down  
from  
42.7  
million  
doses  
per  
day  
on  
August  
4  
to

35.8  
million\*.

The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.

Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.55  
billion  
vaccinated  
individuals  
worldwide

(1+  
dose;  
32.7%  
of  
the  
global  
population)

and  
1.92  
billion  
who

are  
fully  
vaccinated  
(24.6%

of  
the  
global  
population).

We  
expect  
the



global  
total  
to  
surpass  
one-  
third  
of  
the  
population  
with  
1+  
dose  
and  
one-  
quarter  
with  
full  
vaccination  
in  
the  
next  
week.

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the*

*longer-term trends, the numbers reported here may not correspond to the most recent data.*

#### *UNITED STATES*

The

[US CDC](#)

reported

37.8

million

cumulative

COVID-19

cases

and

626,833

deaths.

Daily

incidence

continues

to

increase,

surpassing

140,000

new

cases

per

day,

the

highest

average

since

January

30.

After

reaching  
a  
low  
of  
11,653  
new  
cases  
per  
day  
on  
June  
18,  
the  
current  
surge  
is  
more  
than  
50%  
of  
the  
way  
back  
to  
the  
United  
States'  
highest  
peak  
—  
254,111  
on  
January  
10.  
Daily  
incidence  
continues  
to  
taper  
off,  
however,  
and  
if  
the  
trend  
continues  
on  
this

trajectory,  
we  
expect  
the  
surge  
to  
peak  
in  
the  
next  
several  
weeks.  
Daily  
mortality  
continues  
to  
increase  
as  
well,  
up  
to  
745  
deaths  
per  
day,  
the  
highest  
average  
since  
March  
22\*.  
The  
current  
average  
is  
now  
higher  
than  
it  
was  
during  
the  
lull  
between  
the  
summer  
2020  
and

winter  
2020  
surges.  
*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
averages  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

US  
Vaccination

The  
US  
has  
administered  
363.3  
million  
[cumulative  
doses](#)  
of  
SARS-  
CoV-2  
vaccines.  
[Daily  
vaccinations](#)  
continue  
to  
increase  
slowly,  
up  
to  
more  
than  
730,000  
doses  
per  
day\*.  
Now  
that  
the  
US  
FDA  
has  
issued  
full  
approval  
for  
the  
Pfizer-  
BioNTech  
vaccine,  
we  
will  
monitor  
vaccination  
trends  
closely  
to  
see

if  
there  
is  
any  
associated  
increase  
in  
vaccinations.

On  
August  
17,  
the  
US  
surpassed  
200  
million  
cumulative  
vaccinated  
individuals  
(1+  
dose).

The  
total  
is  
now  
up  
to  
201.7  
million,  
equivalent  
to  
60.8%  
of  
the  
entire  
US  
population.

Among  
adults,  
73.1%  
have  
received  
at  
least  
1  
dose,  
as  
well

as  
12.9  
million  
adolescents  
aged  
12-17  
years.  
The  
US  
also  
surpassed  
50  
million  
vaccinated  
(1+  
dose)  
adults  
aged  
65  
years  
and  
older,  
equivalent  
to  
91.4%  
of  
that  
age  
group.  
A  
total  
of  
171.1  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
51.5%  
of  
the  
total  
population.  
Approximately  
62.5%



of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
9.7  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**US  
FDA  
APPROVAL  
FOR  
PFIZER-  
BIONTECH  
VACCINE**

The  
US  
FDA  
on  
August  
23  
[granted](#)  
[full](#)  
[approval](#)  
to  
Pfizer-  
BioNTech's  
2-  
dose  
SARS-  
CoV-2  
vaccine,  
which  
will  
be  
marketed  
as  
Comirnaty,  
for  
the  
prevention  
of  
COVID-19  
disease  
among  
individuals  
aged  
16  
and  
older.  
The  
US  
regulator's  
approval  
of  
the

vaccine  
places  
it  
on  
par  
with  
other  
marketed  
vaccines,  
possibly  
reassuring  
some  
who  
have  
been  
hesitant  
to  
receive  
the  
shots,  
and  
opens  
the  
door  
for  
employers  
and  
other  
entities  
to  
mandate  
vaccination.  
In  
a  
statement,  
FDA  
Acting  
Commissioner  
Dr.  
Janet  
Woodcock  
said  
the  
vaccine,  
the  
first  
for  
SARS-

CoV-2  
to  
receive  
full  
regulatory  
approval,  
“meets  
the  
high  
standards  
for  
safety,  
effectiveness,  
and  
manufacturing  
quality  
the  
FDA  
requires  
of  
an  
approved  
product.”  
Notably,  
the  
FDA’s  
approval  
came  
only  
97  
days  
after  
Pfizer-  
BioNTech  
finished  
filing  
its  
360,000-  
page  
biologic  
license  
application,  
about  
two-  
fifths  
the  
usual  
time

for  
such  
an  
evaluation.  
Despite  
the  
speedy  
approval,  
the  
agency  
assured  
that  
it  
kept  
with  
its  
“existing  
high  
standards  
for  
vaccines  
in  
the  
US.”  
Regulators  
are  
reviewing  
Moderna’s  
application  
for  
full  
approval  
of  
its  
SARS-  
CoV-2  
vaccine,  
and  
J&J-  
Janssen  
is  
expected  
to  
submit  
its  
application  
soon.

The  
Pfizer-  
BioNTech  
vaccine  
will  
continue  
to  
be  
available  
under  
an  
emergency  
use  
authorization  
for  
12-  
to  
15-  
year-  
olds  
until  
the  
company  
files  
for  
full  
approval  
for  
that  
age  
group.  
Usually,  
physicians  
can  
prescribe  
FDA-  
approved  
products  
for  
“off-  
label”  
purposes,  
for  
reasons  
other  
than  
their  
original

intent.  
However,  
the  
FDA  
and  
the  
[American  
Academy  
of  
Pediatrics](#)  
warned  
against  
such  
use  
for  
children  
under  
age  
12.  
Pfizer  
said  
it  
expects  
results  
from  
studies  
involving  
younger  
children,  
ages  
5  
to  
11,  
to  
be  
available  
by  
the  
end  
of  
September.  
Additionally,  
the  
FDA  
reminded  
doctors  
that  
third,

or  
“booster,”  
doses  
of  
the  
Pfizer-  
BioNTech  
and  
Moderna  
vaccines  
have  
only  
been  
authorized  
for  
people  
with  
compromised  
immune  
systems,  
not  
for  
the  
general  
population,  
and  
strongly  
recommended  
against  
providing  
them  
until  
agency  
regulators  
can  
review  
whether  
they  
are  
safe  
and  
effective  
and  
the  
CDC  
makes  
a  
recommendation.



More  
than  
92  
million  
people  
in  
the  
US  
have  
been  
fully  
vaccinated  
using  
the  
Pfizer-  
BioNTech  
vaccine.

## **VACCINE MANDATES**

The  
US  
FDA's  
approval  
of  
the  
Pfizer-  
BioNTech  
SARS-  
CoV-2  
vaccine,  
which  
comes  
amid  
a  
fourth  
pandemic  
wave  
fueled  
by  
the  
highly  
transmissible  
Delta  
variant,  
spurred  
a  
string

of  
vaccination  
requirement  
announcements  
by  
corporations,  
universities,  
hospitals,  
and  
other  
organizations.

In  
an  
address  
on  
the  
vaccine's  
approval,  
US  
President  
Joe  
Biden  
called  
on  
more  
employers  
and  
state  
and  
local  
officials  
to  
implement  
mandates,  
saying,  
"Do  
what  
I  
did  
last  
month.  
Require  
your  
employees  
to  
get  
vaccinated  
or

face  
strict  
requirements.”

In  
late  
July,  
President  
Biden

implemented  
requirements  
for  
all  
federal  
workers

to  
be  
vaccinated  
or  
face  
regular  
testing,  
social  
distancing,  
mask  
wearing,  
and  
limits  
on  
official  
travel.

A  
recent  
survey  
from  
the  
National  
Association  
for  
Business  
Economics

showed  
79%  
of  
the  
group’s  
members  
favor  
vaccine

requirements  
for  
workers  
before  
they  
return  
to  
the  
workplace,  
and  
the  
US  
Chamber  
of  
Commerce  
also  
has  
expressed  
its  
support  
for  
vaccine  
requirements  
or  
weekly  
testing.

Shortly  
after  
the  
FDA's  
announcement  
on  
August  
23,  
several  
entities  
announced  
vaccine  
requirements:

- The  
US  
Department  
of  
Defense  
will  
mandate  
SARS-

CoV-2  
vaccination  
for  
all  
military  
service  
members  
now  
that  
a  
vaccine  
has  
full  
approval,  
with  
a  
timeline  
to  
be  
provided  
in  
the  
coming  
days.

- In [New York City](#), Mayor Bill DeBlasio announced all of the city's public school teachers and staff must be vaccinated with at least one

dose  
by  
September  
27,  
with  
no  
option  
to  
choose  
weekly  
testing.

The  
decree  
affects  
about  
148,000  
employees,  
as  
well  
as  
contractors,  
of  
the  
New  
York  
City  
Department  
of  
Education.

At  
least  
2  
large  
city  
workers'  
groups  
are  
expected  
to  
[file](#)  
[labor](#)  
[complaints](#)  
or  
[take](#)  
[legal](#)  
[action.](#)

- In  
[New](#)

Jersey,  
Governor  
Phil  
Murphy  
said  
all  
employees  
of  
any  
school  
in  
the  
state,  
including  
public  
and  
private,  
will  
be  
required  
to  
be  
fully  
vaccinated  
by  
October  
18  
or  
be  
tested  
once  
or  
twice  
weekly  
“at  
a  
minimum.”

- Several  
major  
US  
energy  
companies—  
including  
Chevron  
Corporation,  
Valero  
Energy  
Corporation,

Pioneer  
Natural  
Resources,  
Schlumberger,  
and  
Hess

—

announced  
they  
will  
require  
vaccinations  
for  
at  
least  
some  
of  
their  
employees,  
several  
as  
a  
condition  
of  
employment.

- Pharmacy  
chain  
[CVS](#)  
[Health](#)  
is  
requiring  
its  
pharmacists  
to  
be  
fully  
vaccinated  
by  
November  
30,  
while  
all  
other  
employees  
who  
interact  
with  
patients



and  
corporate  
staff  
must  
be  
vaccinated  
by  
October  
31.

- Announcing  
an  
agreement  
with  
unions  
representing  
more  
than  
30,000  
employees,  
[Disney  
World](#)  
will  
require  
workers  
to  
get  
the  
shots  
by  
October  
22.

- The  
[University  
of  
Minnesota  
System](#)  
announced  
the  
SARS-  
CoV-2  
vaccine  
will  
be  
added  
to  
its  
list  
of

mandatory  
immunizations  
for  
its  
60,000  
students.  
The  
[Louisiana  
State  
University,  
University  
of  
Louisiana  
and  
Southern  
University  
systems  
and  
the  
State  
University  
of  
New  
York  
system](#)  
all  
announced  
vaccines  
will  
be  
mandatory  
for  
students  
after  
previously  
saying  
they  
would  
require  
the  
shots  
once  
the  
FDA  
granted  
final  
approval.

- At least [145 hospitals and health systems](#) nationwide will require the shots for their employees now that the Pfizer-BioNTech vaccine is approved.

[More mandates are expected,](#) as some say they might be the only way to significantly increase vaccination rates amid continued hesitancy. A recent [Kaiser](#)

Family  
Foundation  
poll

showed  
that  
3  
out  
of  
10  
unvaccinated  
people  
indicated  
they  
would  
be  
more  
likely  
to  
get  
a  
vaccine  
if  
it  
were  
FDA-  
approved.  
However,  
whether  
full  
approval  
spurs  
the  
approximately  
85  
million  
unvaccinated  
but  
eligible  
US  
residents  
to  
get  
the  
shots  
remains  
to  
be  
seen.

## HEALTHCARE WORKER RESILIENCY

As  
the  
Delta  
variant  
drives  
surges  
in  
new  
COVID-19  
cases  
across  
the  
US,  
the  
nation's  
hospitals  
are  
overwhelmed.

Some  
hospitals  
have  
reported  
emergency  
departments  
with  
wait  
times  
up  
to  
30  
hours,  
dwindling  
intensive  
care  
unit  
(ICU)  
capacity,  
and  
unstaffed  
beds  
due  
to  
staffing  
shortages.

Frontline healthcare workers are facing burnout and frustration over unvaccinated patients, who represent the sickest and most likely to die due to COVID-19. Their perseverance through the 3 previous surges is turning to distress during this fourth wave. However exhausted, hospital staff continue to treat people with COVID-19,

but  
say  
they  
are  
disturbed  
over  
the  
rising  
number  
of  
advanced  
cases  
among  
young  
people  
and  
the  
unvaccinated.  
Doctors  
say  
this  
surge  
could  
have  
been  
avoided  
if  
more  
people  
were  
vaccinated  
and  
continued  
following  
preventive  
measures  
such  
as  
masking  
and  
physically  
distancing.  
One  
infectious  
disease  
specialist  
at  
the

University  
of  
North  
Carolina  
likened  
going  
to  
work  
to  
“watching  
the  
same  
house  
burn  
down  
time  
and  
time  
again.”  
The  
mental  
health  
harm  
to  
healthcare  
workers  
who  
must  
watch  
people  
die  
who  
likely  
would  
not  
have  
had  
they  
been  
vaccinated  
is  
difficult  
to  
quantify,  
but  
the  
relentless  
nature



of  
the  
pandemic  
will  
no  
doubt  
have  
long-  
term  
impacts  
on  
medical  
care  
in  
the  
US.

### **US NURSING SHORTAGE**

Nursing  
shortages  
in  
the  
US  
are  
not  
new,  
but  
the  
COVID-19  
pandemic  
has  
exacerbated  
the  
problem,  
testing  
the  
physical  
and  
mental  
health  
of  
the  
nation's  
nurses  
as  
patients

flood  
emergency  
departments  
and  
fill  
hospital  
beds  
amid  
a  
fourth  
surge  
of  
cases  
driven  
by  
the  
Delta  
variant.  
More  
than  
a  
year  
and  
a  
half  
into  
the  
pandemic,  
myriad  
nurses  
have  
retired,  
made  
career  
shifts,  
[taken](#)  
[higher](#)  
[paying](#)  
[jobs](#)  
[with](#)  
[staffing](#)  
[agencies](#)  
or  
hospitals  
with  
more  
resources,  
or

simply  
walked  
off  
the  
job,  
increasing  
staffing  
shortages  
and  
contributing  
to  
burnout  
among  
all  
healthcare  
workers.  
Nurses  
also  
say  
they  
are  
angered  
that  
many  
people  
—  
in  
the  
general  
public  
and  
among  
their  
ranks—  
refuse  
to  
get  
vaccinated  
or  
wear  
masks.  
Additionally,  
more  
than  
1,200  
nurses  
have  
died

of  
COVID-19.

The  
staffing  
shortages  
are  
impacting  
care  
not  
only  
for  
COVID-19  
patients  
but  
also  
others  
who  
need  
urgent  
medical  
care  
because  
of  
increased  
emergency  
room  
wait  
times,  
postponed  
surgeries,  
and,  
in  
some  
cases,  
an  
inability  
to  
provide  
adequate  
care  
due  
to  
the  
time  
and  
attention  
needed

for  
COVID-19  
patients.  
According  
to  
[analysis](#)  
[from](#)  
[The](#)  
[New](#)  
[York](#)  
[Times](#),  
1  
in  
5  
intensive  
care  
units  
nationwide  
is  
at  
95%  
capacity,  
a  
level  
at  
which  
experts  
say  
it  
is  
difficult  
to  
maintain  
minimum  
care  
standards.  
Various  
states  
across  
the  
country  
—  
including  
[Georgia](#),  
[Texas](#),  
[South](#)  
[Dakota](#),  
[Arkansas](#),

and  
South  
Carolina,  
among  
others  
—  
have  
said  
nursing  
shortages  
have  
worsened  
during  
the  
pandemic.  
Officials  
indicate  
that  
finding  
ways  
to  
recruit,  
hire,  
and  
keep  
nurses  
are  
the  
main  
problems,  
with  
some  
hospitals  
noting  
they  
could  
increase  
bed  
capacity  
with  
sufficient  
nursing  
staff.  
Many  
experts  
fear  
the  
nursing

shortage  
will  
worsen  
as  
the  
pandemic  
continues  
to  
deepen  
burnout.

**IVERMECTIN  
WARNING:  
YOU  
ARE  
NOT  
A  
HORSE**

Over  
the  
weekend,  
the  
US  
FDA  
[renewed  
its  
warning](#)  
that  
the  
anti-  
parasitic  
animal  
drug  
ivermectin  
should  
not  
be  
used  
to  
treat  
or  
prevent  
SARS-  
CoV-2  
infection  
in  
humans.  
The

FDA's  
[message](#)  
appeared  
on  
[Twitter](#)  
with  
the  
statement  
"You  
are  
not  
a  
horse.  
You  
are  
not  
a  
cow.  
Seriously,  
y'all.  
Stop  
it."  
The  
tweet  
linked  
to  
the  
agency's  
[previous](#)  
[statement](#)  
posted  
in  
March  
2021.  
The  
reiterated  
[warning](#)  
[came](#)  
[a](#)  
[day](#)  
[after](#)  
the  
Mississippi  
State  
Department  
of  
Health  
issued



an  
[alert](#)  
warning  
people  
against  
using  
the  
drug.  
Ivermectin  
is  
commonly  
used  
to  
prevent  
heartworm  
and  
other  
parasites  
in  
animals,  
and  
the  
drug  
is  
FDA-  
approved  
to  
treat  
humans  
with  
intestinal  
complications  
caused  
by  
parasitic  
worms  
and  
for  
topical  
use  
for  
conditions  
such  
as  
head  
lice  
and  
rosacea.

However,  
ivermectin  
is  
not  
approved  
for  
nor  
recommended  
by  
the  
FDA  
to  
treat  
or  
prevent  
COVID-19.

According  
to  
[internal  
US  
CDC  
data  
reviewed  
by  
ABC  
News,](#)  
distribution  
of  
the  
drug  
during  
the  
first  
week  
of  
August  
increased  
19-  
fold.

If  
used  
improperly,  
ivermectin  
can  
cause  
several  
[potentially  
serious](#)

side  
effects,  
including  
seizures,  
coma,  
or  
death.

## **BREAKTHROUGH INFECTIONS & TRANSMISSIBILITY**

There  
have  
been  
growing  
levels  
of  
concern  
and  
conversation  
surrounding  
“breakthrough  
infections,”  
which  
are  
confirmed  
SARS-  
CoV-2-  
positive  
cases  
in  
fully  
vaccinated  
individuals.  
While  
these  
cases  
are  
still  
comparatively  
rare  
among  
the  
larger  
COVID-19  
case  
burden,

experts  
and  
the  
public  
alike  
are  
worried  
about  
implications  
for  
vaccinated  
individuals.

Most  
of  
the  
recorded  
breakthrough  
cases  
are  
linked  
to  
the  
Delta  
variant  
of  
concern,  
which  
is  
currently  
responsible  
for  
nearly  
all  
new  
cases  
in  
the  
United  
States.  
Encouragingly,  
a  
small  
percentage  
of  
breakthrough  
cases  
have  
resulted

in  
severe  
manifestations  
of  
COVID-19  
that  
needed  
hospitalization.

While  
the  
primary  
objective  
of  
vaccination

—  
preventing  
severe  
COVID-19  
or  
death

—  
seems  
to  
be  
holding  
against  
the  
Delta  
variant,  
the  
secondary  
goal  
of  
preventing  
person-  
to-  
person  
transmission  
may  
not  
be  
as  
strong  
against  
Delta  
infections  
as

for  
other  
variants  
or  
wild-  
type  
SARS-  
CoV-2.  
Some  
preliminary  
studies  
have  
found  
that  
vaccinated  
individuals  
with  
breakthrough  
infections  
can  
[exhibit](#)  
[similar](#)  
[viral](#)  
[loads](#)  
(measured  
in  
PCR  
Ct  
values)  
as  
those  
in  
infected  
unvaccinated  
individuals.  
While  
higher  
viral  
loads  
can  
be  
correlated  
with  
the  
amount  
of  
virus  
shed

during  
normal  
person-  
to-  
person  
interactions,  
[another](#)  
[preprint](#)  
[study](#)  
found  
that  
high  
viral  
load  
did  
not  
necessarily  
result  
in  
shed  
infectious  
viral  
particles.  
More  
research  
is  
needed  
to  
understand  
the  
risk  
of  
transmission  
from  
breakthrough  
cases  
to  
both  
vaccinated  
and  
unvaccinated  
persons  
and  
to  
understand  
the  
viral  
dynamics

in  
the  
immune  
systems  
of  
vaccinated  
individuals.  
Experts  
maintain  
that,  
given  
the  
current  
evidence,  
[vaccination](#)  
[remains](#)  
[the](#)  
[best](#)  
[tool](#)  
in  
defeating  
SARS-  
CoV-2  
and  
the  
Delta  
variant  
surge.

### **SARS- CoV-2 HOUSEHOLD TRANSMISSION**

A  
[study](#)  
published  
last  
week  
in  
the  
*Journal*  
*of*  
*the*  
*American*  
*Medical*  
*Association*  
*(JAMA)*  
found



that  
younger  
children  
are  
more  
likely  
to  
transmit  
SARS-  
CoV-2  
to  
other  
household  
members  
than  
older  
adolescents.  
Between  
June  
1  
and  
December  
31,  
2020,  
researchers  
in  
Ontario,  
Canada,  
conducted  
a  
population-  
based  
cohort  
study  
involving  
6,280  
households  
that  
had  
one  
index  
case  
of  
confirmed  
SARS-  
CoV-2  
infection  
in

a member younger than 18 years old. The mean age of the children with COVID-19 was 10.7 years, and 45.6% were female. Of the total households, secondary transmission occurred in 27.3% of households. According to the researchers, children aged 0 to 3 years had the highest odds of

transmitting  
SARS-  
CoV-2  
to  
other  
household  
members  
when  
compared  
with  
older  
children  
aged  
14  
to  
17  
years  
(odds  
ratio  
[OR],  
1.43;  
95%  
confidence  
interval  
[CI],  
1.17-1.75).  
Additionally,  
children  
aged  
4  
to  
8  
years  
and  
9  
to  
13  
years  
also  
had  
increased  
odds  
of  
transmission  
when  
compared  
with  
older

children  
(aged  
4-8  
years:  
OR,  
1.40;  
95%  
CI,  
1.18-1.67;  
aged  
9-13  
years:  
OR,  
1.13;  
95%  
CI,  
0.97-1.32).

Household  
settings  
may  
aid  
SARS-  
CoV-2  
transmission  
due  
to  
poor  
or  
limited  
ventilation,  
shared  
spaces  
or  
materials,  
and  
frequent  
close  
contact  
with  
household  
members.  
Additionally,  
it  
is  
often  
challenging  
to

implement  
non-  
pharmaceutical  
interventions  
such  
as  
physical  
distancing  
or  
mask  
wearing  
within  
homes.  
Experts  
note  
that  
children  
are  
more  
likely  
to  
be  
underdiagnosed  
for  
COVID-19  
because  
many  
have  
asymptomatic  
or  
mildly  
symptomatic  
cases.  
As  
children  
return  
to  
school  
amid  
a  
surge  
driven  
by  
the  
highly  
transmissible  
Delta  
variant,

parents  
are  
concerned  
about  
the  
potential  
for  
household  
transmission.

The  
study's  
findings  
have  
implications  
for  
infection  
prevention  
within  
households,  
schools,  
and  
daycares,  
especially  
those  
with  
infants  
and  
toddlers  
who  
appear  
to  
have  
the  
highest  
infectivity.

The  
researchers  
note  
that  
further  
research  
is  
required  
to  
determine  
the  
differences  
in

viral  
shedding  
and  
presentation  
of  
symptoms  
among  
age  
groups  
in  
order  
to  
better  
prevent  
secondary  
transmission  
in  
these  
settings.

In  
an  
[editorial](#)  
in  
the  
same  
*JAMA*  
issue,  
scientists  
from  
the  
University  
of  
Pennsylvania  
said  
vaccination  
for  
eligible  
household  
members  
should  
help  
alleviate  
fears  
of  
SARS-  
CoV-2  
secondary  
transmission

from  
infected  
children.

## **FLORIDA OXYGEN SHORTAGE**

Florida's  
COVID-19  
surge  
appears  
to  
have  
peaked  
over  
the  
past  
week  
in  
terms  
of  
daily  
incidence,  
but  
increasing  
new  
hospitalizations  
and  
current  
hospitalizations  
are  
placing  
a  
major  
burden  
on  
hospital  
and  
health  
system  
operations,  
particularly  
in  
severely  
affected  
areas.  
On  
August



20,  
the  
Orlando  
Utilities  
Commission  
(OUC)  
and  
Orlando  
Mayor  
Buddy  
Dyer  
requested  
that  
customers  
limit  
water  
use,  
particularly  
for  
watering  
lawns  
and  
washing  
cars,  
in  
order  
to  
conserve  
liquid  
oxygen  
to  
support  
local  
health  
systems'  
COVID-19  
responses.  
Liquid  
oxygen  
is  
used  
to  
treat  
the  
city's  
potable  
water  
—"to

remove  
the  
slight  
discoloration  
and  
rotten-  
egg  
smell  
that  
is  
found  
naturally  
in  
Florida's  
water  
supply"—  
and  
OUC  
typically  
consumes  
10  
trucks  
of  
liquid  
oxygen  
per  
week.  
The  
company  
is  
aiming  
to  
reduce  
its  
liquid  
oxygen  
consumption  
by  
25-50%  
in  
order  
to  
divert  
the  
remainder  
to  
hospitals  
that

are  
struggling  
to  
meet  
the  
demand  
due  
to  
the  
COVID-19  
patient  
surge.

As  
we  
covered  
previously,  
high-  
flow  
oxygen  
therapy  
has  
emerged  
as  
a  
primary  
clinical  
treatment  
option  
for  
severe  
COVID-19  
patients,  
and  
hospitals,  
cities,  
and  
countries  
have  
faced  
major  
challenges  
securing  
sufficient  
oxygen  
supply  
during  
major  
surges.

The  
OUC  
request  
indicates  
that  
customers  
should  
expect  
the  
conservation  
efforts  
to  
last  
at  
least  
2  
weeks.

### **AVERTED DEATHS**

Researchers  
from  
[Indiana  
University  
\(US\)](#)  
and  
the  
[RAND  
Corporation](#)  
published  
findings  
from  
their  
analysis  
on  
the  
impact  
of  
early  
SARS-  
CoV-2  
vaccinations  
in  
the  
US.  
The  
study,  
published

in  
*Health  
Affairs*,  
included  
data  
on  
state-  
level  
weekly  
vaccination  
rates  
and  
COVID-19  
mortality  
during  
the  
first  
5  
months  
that  
SARS-  
CoV-2  
vaccines  
were  
available  
to  
the  
public.  
The  
researchers  
developed  
a  
series  
of  
multivariate  
regression  
models  
to  
identify  
any  
associated  
effects  
on  
COVID-19  
mortality  
that  
accounted  
for

state-level variations in state policies and environments as well as the anticipated lag between vaccine administration and any effects on mortality.

The researchers observed a significant association between higher vaccination rates and decreasing mortality across all states, although the magnitude of the benefit varied from state

to  
state.  
On  
average,  
states  
exhibited  
a  
decrease  
in  
the  
expected  
COVID-19  
mortality  
of  
5  
deaths  
per  
100,000  
population,  
equivalent  
to  
nearly  
140,000  
averted  
deaths  
nationally  
over  
the  
study  
period.  
At  
the  
state  
level,  
the  
decreased  
mortality  
ranged  
from  
Hawai'i  
with  
1.1  
fewer  
deaths  
per  
100k  
to  
New

York  
with  
11.7.  
Not  
surprisingly,  
the  
effect  
of  
vaccination  
increased  
over  
time,  
as  
individuals  
received  
their  
second  
doses  
and  
developed  
the  
full  
protective  
immune  
response.  
The  
impact  
of  
vaccination  
began  
to  
increase  
noticeably  
starting  
in  
early-  
to-  
mid  
February.  
Notably,  
vaccine  
availability  
was  
limited  
to  
priority  
populations  
during



most  
of  
the  
period  
from  
December  
2020-  
May  
2021;  
however,  
this  
period  
does  
cover  
the  
majority  
of  
the  
initial  
wave  
of  
vaccinations  
in  
the  
US.

## **ORIGINS OF NOVEL PATHOGENS**

The  
WHO  
on  
August  
20  
issued  
a  
call  
for  
experts  
to  
join  
its  
new  
Scientific  
Advisory  
Group  
for

the  
Origins  
of  
Novel  
Pathogens  
(SAGO),  
which  
will  
advise  
the  
UN  
health  
agency  
on  
technical  
and  
scientific  
considerations  
regarding  
the  
origins  
of  
emerging  
and  
re-  
emerging  
pathogens  
capable  
of  
causing  
epidemics  
or  
pandemics.  
The  
group  
also  
will  
guide  
the  
WHO  
on  
next  
steps  
for  
investigating  
the  
origins  
of

SARS-CoV-2. The multidisciplinary effort is an attempt to depoliticize future investigations into disease origins by creating a global framework for conducting scientific-based studies and data-driven efforts to better predict, detect, prevent, and respond to future outbreaks. SAGO, which will include 25 experts from various fields

and  
with  
different  
technical  
skills,  
is  
expected  
to  
hold  
its  
first  
meeting  
virtually  
in  
late  
September  
or  
early  
October.

## **BOTSWANA VACCINATION**

With  
52  
African  
countries  
rolling  
out  
SARS-  
CoV-2  
vaccination  
campaigns,  
[lessons](#)  
[from](#)  
[the](#)  
[challenges](#)  
[and](#)  
[successes](#)  
in  
each  
country  
will  
help  
other  
nations  
learn  
about  
how

to  
implement  
their  
own  
vaccine  
rollouts.  
[Botswana](#),  
along  
with  
3  
other  
African  
nations,  
has  
[completed  
an  
intra-  
action  
review  
\(IAR\)](#)  
of  
its  
early  
vaccine  
rollout  
with  
support  
from  
the  
WHO.  
According  
to  
Dr.  
Malebogo  
Kebabonye,  
Director  
of  
Health  
Services  
at  
the  
country's  
Ministry  
of  
Health  
and  
Wellness,  
having

a  
National  
Vaccine  
Deployment  
Plan  
with  
multi-  
sectoral  
involvement  
and  
coordination  
in  
place  
before  
receiving  
the  
first  
shipment  
of  
vaccines  
helped  
communities  
take  
ownership  
and  
improve  
acceptance  
of  
vaccines.  
Additionally,  
solid  
financing  
and  
monitoring  
and  
evaluation  
tools  
helped  
strengthen  
Botswana's  
initial  
vaccine  
rollout.  
However,  
Dr.  
Kebabonye  
noted  
that

tightening  
supplies  
of  
SARS-  
CoV-2  
vaccines  
and  
healthcare  
worker  
shortages  
contributed  
to  
increased  
distrust  
about  
the  
rollout,  
with  
misinformation  
spread  
on-  
and  
offline.  
She  
urged  
other  
countries  
to  
take  
incremental  
and  
agile  
approaches  
to  
vaccine  
rollouts,  
with  
emphasis  
on  
testing  
and  
learning.  
Chanda  
Chikwanda,  
Lead  
of  
WHO  
Africa's

Vaccines Learning Agenda, urged other countries in the region to plan for multiple scenarios and conduct IARs. Nine (9) other African countries have expressed interest in completing IARs.

#### **VARIANT VACCINE**

The Coalition for Epidemic Preparedness Innovations (CEPI) last week [announced](#) it will provide up to US \$20.6



million  
to  
Gritstone  
bio,  
Inc.  
to  
support  
the  
development  
of  
a  
“next-  
generation”  
SARS-  
CoV-2  
vaccine.  
The  
funding  
—  
part  
of  
CEPI’s  
larger  
portfolio  
supporting  
next-  
generation  
vaccine  
development  
—  
will  
be  
used  
for  
a  
Phase  
1  
clinical  
trial  
of  
a  
self-  
amplifying  
mRNA  
vaccine  
candidate.  
A  
self-

amplifying  
approach  
could  
provide  
a  
single-  
shot,  
low-  
dose  
vaccine  
that  
would  
elicit  
immune  
responses  
to  
specific  
antigens.  
As  
new  
SARS-  
CoV-2  
variants  
emerge,  
novel  
antigens  
could  
be  
rapidly  
switched  
out  
in  
the  
vaccine,  
so  
variant-  
specific  
versions  
could  
be  
ready  
for  
production  
in  
about  
1  
month.  
Gritstone's

vaccine  
candidate  
might  
also  
produce  
T-  
cell  
immune  
responses  
against  
non-  
spike  
protein  
gene  
fragments,  
which  
potentially  
could  
provide  
more  
broad  
protection  
against  
various  
SARS-  
CoV-2  
strains.

## **DNA VACCINE**

India's  
drug  
regulator  
last  
week  
granted  
[emergency](#)  
[use](#)  
[approval](#)  
[for](#)  
[the](#)  
[world's](#)  
[first](#)  
[DNA](#)  
[platform](#)  
[SARS-](#)  
[CoV-2](#)  
[vaccine](#)

for  
people  
ages  
12  
and  
older.  
[Zydus](#)  
[Cadila's](#)  
[3-](#)  
[dose](#)  
[ZyCoV-](#)  
[D](#)  
[vaccine](#)  
uses  
a  
piece  
of  
genetic  
material  
from  
the  
SARS-  
CoV-2  
virus  
to  
help  
the  
body's  
immune  
system  
recognize  
and  
respond  
to  
the  
virus  
if  
exposed.  
The  
company  
claims  
the  
vaccine  
has  
66.6%  
efficacy  
against  
symptomatic

COVID-19,  
but  
no  
safety,  
immunogenicity,  
nor  
efficacy  
data  
supporting  
the  
claims  
are  
available  
publicly,  
either  
published  
or  
preprint.  
This  
is  
the  
second  
time  
the  
Indian  
government  
has  
authorized  
a  
domestically  
produced  
vaccine  
without  
Phase  
3  
trial  
data.  
The  
first  
was  
Bharat  
Biotech's  
Covaxin,  
authorized  
in  
January  
2021.  
Some

experts  
called  
on  
the  
company  
and  
the  
Indian  
government  
to  
provide  
more  
publicly  
available  
data  
to  
improve  
transparency.

**Weekly Updates on SARS-CoV-2 Vaccines**

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**Date : 8/27/2021 1:10:16 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - August 27, 2021**

**Applications  
Now  
Open  
for  
Johns  
Hopkins  
Center  
for  
Health  
Security  
Educational  
Opportunities  
for  
2022-2023  
Academic  
Year**

In  
a  
world  
of  
rapid  
innovation  
in  
the  
biological  
sciences,  
the  
emergence  
of  
new  
diseases,  
and

changing  
environmental  
pressures,  
health  
security  
risks  
to  
the  
global  
community  
are  
a  
rising  
concern.  
The  
field  
of  
health  
security  
has  
a  
growing  
need  
for  
trained  
expertise  
that  
can  
provide  
science-  
based  
solutions  
and  
inform  
global  
policies  
to  
shape  
preparedness  
and  
response  
efforts.  
The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
is  
pleased  
to  
announce  
it  
is



now  
accepting  
applications  
for  
its  
educational  
opportunities  
for  
the  
2022-2023  
academic  
year.

The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
provides  
2  
Masters  
of  
Public  
Health  
scholarships  
and  
funds  
2  
PhD  
candidates  
for  
the  
Health  
Security  
PhD  
track  
at  
the  
Johns  
Hopkins  
Bloomberg  
School  
of  
Public  
Health.

[Click  
here  
for  
more  
information  
and  
application  
details.](#)

These funding opportunities are supported by Open Philanthropy and are targeted toward students with an interest in the field of health security, particularly in pandemics and global catastrophic biological risks.

## **EPI UPDATE**

The [WHO COVID-19 Dashboard](#) reports 214.5 million cumulative cases and 4.47 million deaths worldwide as of August

27.  
If  
global  
mortality  
continues  
on  
this  
trajectory,  
we  
expect  
to  
surpass  
4.5  
million  
cumulative  
deaths  
in  
the  
next  
3-4  
days.

Global  
Vaccination

The  
[WHO](#)  
[reported](#)  
4.95  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
August  
25.  
A  
total  
of  
1.90  
billion  
individuals  
have

received  
at  
least  
1  
dose,  
and  
1.13  
billion  
are  
fully  
vaccinated.

Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
global  
[daily  
doses  
administered](#)

has  
held  
relatively  
steady  
over  
the  
past  
2  
weeks  
at  
approximately  
36  
million  
doses  
per  
day\*.

The  
global  
trend  
continues  
to  
closely  
follow  
the

trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.59  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
33.0%  
of  
the  
global  
population)  
and  
1.96  
billion  
who  
are  
fully  
vaccinated  
(24.9%  
of  
the  
global  
population).  
We  
expect  
to  
surpass  
one-  
third  
of  
the  
global  
population  
with  
1+  
dose

and  
one-  
quarter  
with  
full  
vaccination  
by  
early  
next  
week.

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may*

*not  
correspond  
to  
the  
most  
recent  
data.*

As  
global  
vaccination  
efforts  
continue,  
enormous  
disparities  
remain  
in  
terms  
of  
access  
and  
coverage.  
African  
countries,  
in  
particular,  
are  
still  
struggling  
to  
secure  
sufficient  
vaccine  
supply,  
which  
is  
severely  
hindering  
vaccination  
efforts  
across  
the  
continent.  
In  
fact,  
just  
10  
countries

account  
for  
nearly  
75%  
of  
the  
5  
billion  
cumulative  
doses  
administered  
globally,  
including  
6  
that  
have  
each  
administered  
more  
doses  
than  
the  
entire  
continent  
of  
Africa.  
Africa  
represents  
approximately  
17.5%  
of  
the  
global  
population  
but  
only  
1.9%  
of  
the  
cumulative  
doses  
administered.

Daily  
vaccinations  
are  
increasing  
in



Africa,  
but  
overall  
vaccination  
coverage  
remains  
low,  
with  
many  
African  
countries  
among  
the  
lowest  
globally.  
Notably,  
of  
the  
52  
countries  
reporting  
[partial  
vaccination  
coverage](#)  
(1+  
dose)  
less  
than  
10%,  
40  
are  
in  
Africa\*\*.  
Additionally,  
the  
average  
across  
the  
continent  
is  
only  
4.6%,  
the  
lowest  
[among  
all  
continents](#)  
by

a  
factor  
of  
more  
than  
7.  
Only  
Seychelles  
(75%)  
and  
Mauritius  
(62%)  
are  
reporting  
partial  
coverage  
greater  
than  
50%,  
and  
only  
3  
others  
—

Morocco  
(47%),  
Cabo  
Verde  
(38%),  
and  
Tunisia  
(30%)  
—

are  
reporting  
more  
than  
20%.

*\*\*Data  
are  
unavailable  
for  
Burundi  
and  
Eritrea.*

Similarly,  
among

73  
countries  
reporting  
fewer  
than  
0.2  
daily  
doses  
administered  
per  
100  
population,  
41  
are  
in  
Africa.  
The  
average  
for  
Africa  
as  
a  
whole  
is  
0.11  
doses  
per  
day  
per  
100  
population,  
the  
lowest  
among  
all  
continents  
by  
nearly  
a  
factor  
of  
3.  
In  
terms  
of  
total  
daily  
vaccinations,

Africa  
is  
beginning  
to  
approach  
North  
America

—

1.52  
million  
doses  
per  
day,  
compared  
to  
1.89  
million.  
Africa's  
current  
average  
daily  
vaccinations  
is  
more  
than  
3.5  
times  
its  
average  
on  
July  
1  
and  
more  
than  
double  
its  
average  
on  
August  
1.  
The  
trend  
continues  
to  
increase  
exponentially,  
which

is  
a  
positive  
sign.

A  
number  
of  
African  
countries  
are  
exhibiting  
substantial  
increases  
in  
their  
[daily  
vaccinations](#).

In  
total,  
10  
African  
countries  
reported  
increases  
in  
daily  
vaccinations  
of  
more  
than  
500%  
since  
July  
1,  
including  
5  
that  
increased  
more  
than  
1,000%.  
Gambia's  
average  
increased  
2,539%;  
Rwanda's  
increased

2,637%,  
and  
Malawi's  
increased  
2,882%  
over  
that  
period.  
While  
most  
African  
countries  
reported  
extremely  
low  
daily  
vaccinations  
as  
of  
July  
1  
—  
on  
the  
order  
of  
1,000  
doses  
per  
day  
or  
fewer  
—  
this  
is  
not  
necessarily  
the  
case  
for  
all  
African  
countries.  
For  
example,  
Morocco  
averaged  
more

than  
100,000  
doses  
per  
day  
on  
July  
1,  
and  
its  
average  
increased  
to  
more  
than  
350,000  
doses  
per  
day  
(+243%)  
since  
then.

And  
Egypt's  
average  
increased  
from  
nearly  
28,000  
to  
nearly  
170,000  
(+510%).

The  
increasing  
trends  
in  
daily  
vaccinations  
across  
Africa  
are  
encouraging;  
however,  
supply  
volume  
remains

a  
major  
constraint.  
This  
is  
particularly  
concerning  
in  
light  
of  
recent  
decisions  
by  
a  
number  
of  
higher-  
income  
countries,  
including  
the  
US,  
to  
begin  
administering  
additional  
booster  
doses  
to  
some  
or  
all  
fully  
vaccinated  
individuals.  
Existing  
global  
production  
capacity  
has  
still  
not  
caught  
up  
with  
demand,  
and  
any



doses  
allocated  
as  
extra  
boosters  
inherently  
take  
away  
from  
doses  
that  
could  
be  
allocated  
to  
low-  
and  
middle-  
income  
countries  
(LMICs).

*UNITED  
STATES*

The

[US](#)

[CDC](#)

reported  
38.3  
million  
cumulative  
COVID-19  
cases  
and  
631,440  
deaths.  
Daily  
incidence  
continues  
to  
increase,  
up  
to  
142,006  
new  
cases  
per  
day,

the  
highest  
average  
since  
January  
30.  
Daily  
incidence  
continues  
to  
taper  
off,  
however,  
and  
if  
the  
trend  
continues  
on  
this  
trajectory,  
we  
expect  
the  
surge  
to  
peak  
in  
the  
next  
several  
weeks.  
Daily  
mortality  
continues  
to  
increase  
as  
well,  
up  
to  
864  
deaths  
per  
day,  
the  
highest  
average

since  
March  
16\*.  
*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

US  
Vaccination

The  
US  
has  
administered  
365.8  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines,  
and  
daily  
vaccinations  
continue  
to  
increase  
slowly,  
up  
to  
783,239  
doses  
per  
day\*.  
There  
are  
203.0  
million  
individuals  
who  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
61.1%  
of  
the  
entire  
US  
population.  
Among  
adults,  
73.5%

have  
received  
at  
least  
1  
dose,  
as  
well  
as  
13.1  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
172.2  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
51.9%  
of  
the  
total  
population.  
Approximately  
62.8%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
9.9  
million  
adolescents  
aged  
12-17  
years.

*\*Due to delays in reporting, estimates for the average daily doses administered are less accurate for the most recent 5 days. The most current average provided here corresponds to 5 days ago.*

**J&J-  
JANSSEN  
SECOND  
DOSE**

On August 25, J&J-Janssen [announced](#) it has interim data showing

a  
second  
shot  
of  
its  
SARS-  
CoV-2  
vaccine  
administered  
6  
to  
8  
months  
after  
the  
initial  
dose  
generates  
“a  
rapid  
and  
robust  
increase  
in  
spike-  
binding  
antibodies,”  
up  
to  
9-  
fold  
higher  
after  
28  
days  
than  
a  
single  
shot.  
The  
data  
—  
which  
[have](#)  
[not](#)  
[been](#)  
[published](#)  
in

a  
scientific  
journal  
nor  
peer  
reviewed  
—  
come  
from  
2  
Phase  
1/2a  
studies  
conducted  
in  
the  
US  
and  
Europe.  
The  
company  
plans  
to  
submit  
the  
data  
to  
the  
US  
FDA  
in  
the  
hopes  
of  
receiving  
authorization  
for  
a  
booster  
dose  
and  
indicated  
it  
is  
in  
talks  
with  
the



FDA,  
US  
CDC,  
European  
Medicines  
Agency  
(EMA),  
and  
other  
health  
authorities  
regarding  
the  
need  
for  
second  
doses  
of  
its  
vaccine.  
The  
company  
also  
is  
testing  
a  
2-  
dose  
regimen  
delivered  
2  
months  
apart,  
with  
data  
from  
that  
clinical  
trial  
expected  
in  
the  
next  
few  
weeks.

As  
we

covered previously, US health officials have announced plans to begin providing third doses of the mRNA vaccines made by Moderna and Pfizer-BioNTech as soon as mid-September and have indicated boosters likely will be necessary for recipients of the J&J-Janssen vaccine. Initially, officials said the extra

doses  
would  
be  
available  
for  
people  
who  
finished  
their  
regimen  
8  
months  
prior  
but  
now  
are  
looking  
at  
a  
6-  
month  
gap  
instead,  
perhaps  
in  
part  
because  
of  
the  
J&J-  
Janssen  
data.  
Currently,  
only  
people  
with  
compromised  
immune  
systems  
are  
eligible  
for  
booster  
doses  
in  
the  
US.

Pfizer-  
BioNTech  
[announced](#)

on  
August  
25

that  
it  
plans  
to  
complete  
an  
[application](#)  
[to](#)  
[the](#)  
[FDA](#)

for  
a  
third  
dose  
of  
its  
vaccine  
by  
the  
end  
of  
this  
week.

The  
company  
[received](#)  
[full](#)  
[approval](#)  
of

its  
vaccine,  
called  
Comirnaty,  
earlier  
this  
week.

The  
CDC's  
Advisory  
Committee  
on  
Immunization

Practices  
is  
expected  
to  
meet  
next  
week  
and  
will  
discuss  
a  
framework  
for  
SARS-  
CoV-2  
booster  
doses.  
While  
several  
studies  
show  
a  
higher  
level  
of  
antibody  
production  
in  
extra-  
dose  
recipients,  
it  
remains  
unclear  
whether  
this  
will  
translate  
to  
improved  
protection  
against  
SARS-  
CoV-2  
infection  
or  
severe

COVID-19  
disease.

**MODERNA  
FDA  
APPLICATION**

Moderna  
on  
August  
25  
[completed  
its  
submission  
of  
a  
Biologics  
License  
Application](#)  
to  
the  
US  
FDA  
for  
full  
approval  
of  
its  
SARS-  
CoV-2  
vaccine  
to  
prevent  
COVID-19  
in  
people  
aged  
18  
or  
older.  
The  
company  
requested  
priority  
review  
designation,  
meaning  
the  
FDA

would  
have  
until  
the  
end  
of  
February  
to  
make  
a  
decision  
if  
it  
grants  
the  
designation.

If  
approved,  
the  
vaccine  
[would](#)  
[be](#)  
[the](#)  
[second](#)  
for  
the  
prevention  
of  
COVID-19  
after  
the  
FDA  
granted  
full  
approval  
to  
Pfizer-  
BioNTech  
on  
August  
23.  
The  
agency's  
review  
process  
for  
the  
Pfizer-

BioNTech vaccine took 97 days, 40% of the normal time for such a submission, and it is expected regulators will take at least 3 months to review Moderna's application. Moderna also has filed for emergency use authorization for its vaccine to be used in adolescents aged 12



and  
older.

## **VACCINE EFFECTIVENESS**

Researchers

are  
collecting  
more  
proof  
that  
protection  
provided  
by  
SARS-  
CoV-2  
vaccines  
is  
[waning  
over  
time](#).

In  
a  
[study](#)  
published  
this  
week  
in  
the  
US  
CDC's  
*Morbidity  
and  
Mortality  
Weekly  
Report  
(MMWR)*,  
researchers  
with  
the  
HEROES-  
RECOVER  
initiative  
—  
a  
US  
network  
of

longitudinal cohorts including more than 4,000 healthcare workers, first responders, and other frontline workers — report that vaccine effectiveness (VE) fell from 91% in mid-December 2020, before the SARS-CoV-2 Delta variant was predominant, to 66% by mid-August following Delta's spread. Among participants, 83% were vaccinated,

with  
65%  
having  
received  
the  
Pfizer-  
BioNTech  
vaccine,  
33%  
Moderna,  
and  
2%  
J&J-  
Janssen.  
The  
researchers  
cautioned  
that  
while  
Delta  
might  
be  
more  
capable  
of  
causing  
breakthrough  
infections,  
a  
reduction  
in  
VE  
could  
be  
due  
to  
detecting  
few  
infections  
among  
the  
cohorts,  
increasing  
time  
since  
vaccination,  
an  
easing

of  
other  
preventive  
measures,  
or  
a  
combination  
of  
factors.  
Still,  
a  
“sustained  
two-  
thirds  
reduction  
in  
infection  
risk  
underscores  
the  
continued  
importance  
and  
benefits  
of  
COVID-19  
vaccination,”  
they  
write.

In  
another  
[analysis](#)  
released  
on  
August  
25  
but  
not  
yet  
published,  
researchers  
from  
the  
UK’s  
ZOE  
COVID  
Study

found  
a  
reduction  
in  
VE  
for  
both  
the  
Pfizer-  
BioNTech  
and  
AstraZeneca-  
Oxford  
vaccines.  
The  
data  
include  
more  
than  
1  
million  
self-  
reported  
test  
results  
among  
people  
who  
received  
full  
regimens  
of  
either  
vaccine,  
as  
well  
as  
test  
results  
from  
more  
than  
75,000  
people  
not  
yet  
vaccinated.  
Protection

against  
infection  
1  
month  
after  
the  
second  
dose  
was  
88%  
for  
Pfizer-  
BioNTech  
and  
77%  
for  
AstraZeneca-  
Oxford,  
prior  
to  
the  
Delta  
variant's  
predominance,  
but  
fell  
to  
74%  
and  
67%,  
respectively,  
after  
4-5  
months  
and  
after  
Delta  
spread  
throughout  
the  
UK.  
The  
researchers  
noted  
that  
[more  
data  
on](#)

younger  
people  
are  
needed,  
as  
those  
who  
were  
vaccinated  
in  
the  
winter  
and  
spring  
were  
primarily  
older  
individuals.

In  
yet  
another  
study  
published  
this  
week  
in  
the  
*MMWR*,  
the  
CDC  
presented  
data  
from  
Los  
Angeles  
County,  
California  
(US),  
showing  
unvaccinated  
individuals  
were  
5  
times  
more  
likely  
to

get  
COVID-19  
than  
their  
vaccinated  
counterparts,  
and  
29  
times  
more  
likely  
to  
be  
hospitalized  
with  
the  
disease.  
These  
analyses  
add  
evidence  
that  
VE  
does  
appear  
to  
be  
waning  
over  
time  
and  
in  
the  
face  
of  
the  
highly  
transmissible  
Delta  
variant,  
but  
they  
also  
underscore  
the  
importance  
of  
vaccination



in preventing infection, hospitalization, and serious disease. Still, more effort is needed to collect [data on breakthrough infections](#) among vaccinated people, with several officials familiar with the situation alleging the CDC is using “outdated and unreliable data,” *Politico* reports.

## **HEART INFLAMMATION**

The Pfizer-BioNTech SARS-CoV-2 vaccine

is associated with an increased risk of myocarditis (inflammation of the heart muscle), but infection with the virus is associated with a much greater risk of the condition, according to a real-world case-control study published on August 25 in the *New England Journal of Medicine*. Researchers

analyzed  
the  
health  
records  
of  
more  
than  
2  
million  
people  
who  
are  
members  
of  
the  
Clalit  
Health  
Services  
(CHS),  
the  
largest  
healthcare  
organization  
in  
Israel.  
Vaccination  
was  
associated  
with  
a  
3-  
fold  
increase  
in  
the  
risk  
of  
myocarditis  
(risk  
ratio  
[RR],  
3.24,  
95%  
confidence  
interval  
[CI],  
1.55-12.44),  
as

well  
as  
several  
other  
conditions  
including  
swollen  
lymph  
nodes  
(RR,  
2.43;  
95%  
CI,  
2.05  
to  
2.78),  
appendicitis  
(RR,  
1.40;  
95%  
CI,  
1.02  
to  
2.01),  
and  
herpes  
zoster  
infection  
(RR,  
1.43;  
95%  
CI,  
1.20  
to  
1.73).  
In  
a  
separate  
cohort,  
the  
researchers  
found  
SARS-  
CoV-2  
infection  
is  
associated  
with

an  
18-  
fold  
increased  
risk  
of  
myocarditis  
(RR,  
18.28;  
95%  
CI,  
3.95  
to  
25.12),  
as  
well  
as  
an  
increased  
risk  
of  
several  
other  
serious  
adverse  
events  
such  
as  
pericarditis  
(inflammation  
of  
tissue  
surrounding  
the  
heart),  
irregular  
heartbeat,  
blood  
clots,  
heart  
attack,  
bleeding  
in  
the  
brain,  
and  
kidney  
damage. Pfizer-

BioNTech  
and  
the  
US  
CDC  
are  
conducting  
studies  
to  
examine  
the  
risks  
of  
myocarditis  
and  
pericarditis  
among  
people  
who  
receive  
the  
vaccine.

### **SARS- COV-2 ORIGINS**

The  
US  
Intelligence  
Community  
on  
August  
24  
delivered  
a  
classified  
report  
to  
US  
President  
Joe  
Biden  
that  
made  
no  
conclusions  
about

the  
origins  
of  
the  
novel  
coronavirus,  
including  
whether  
the  
virus  
was  
transmitted  
to  
humans  
naturally  
through  
an  
animal  
vector  
or  
if  
human  
transmission  
was  
the  
result  
of  
a  
laboratory  
mishap.  
The  
report,  
some  
of  
which  
is  
[expected](#)  
[to](#)  
[be](#)  
[declassified](#)  
in  
the  
coming  
days,  
is  
the  
result  
of

an  
order  
from  
President  
Biden  
given  
in  
late  
May  
for  
the  
Intelligence  
Community  
to  
provide  
another,  
more  
thorough  
assessment  
of  
the  
origins  
of  
SARS-  
CoV-2  
within  
90  
days.  
The  
report's  
lack  
of  
conclusions  
prompted  
calls  
from  
global  
health  
experts,  
scientists,  
and  
politicians  
for  
a  
more  
urgent  
international  
effort



to  
find  
the  
source  
of  
the  
pandemic  
in  
order  
to  
inform  
future  
pandemic  
preparedness.

According

to  
*The  
Wall  
Street  
Journal*,  
2

senior  
US  
officials  
said

a  
lack  
of  
cooperation  
from  
China,

where  
the  
virus  
is  
assumed  
to  
have  
originated,  
hampered  
the  
US  
investigation.

A  
lack  
of  
Chinese

cooperation  
also  
challenged  
a  
WHO-  
convened  
joint  
WHO-  
China  
delegation's  
investigation  
in  
early  
2021,  
culminating  
in  
a  
[March  
report](#)  
that  
concluded  
a  
lab  
leak  
was  
"extremely  
unlikely."  
However,  
WHO  
Director-  
General  
Dr.  
Tedros  
Adhanom  
Ghebreyesus  
later  
undercut  
the  
team's  
statement,  
saying  
there  
is  
not  
enough  
evidence  
to  
support

any  
conclusion.  
WHO  
officials  
reiterated  
that  
stance  
this  
week,  
saying  
all  
of  
the  
origin  
hypotheses  
"are  
still  
on  
the  
table."  
Then,  
on  
August  
25,  
the  
independent  
international  
members  
of  
the  
WHO-  
China  
team  
published  
a  
detailed  
piece  
in  
the  
journal  
*Nature*,  
outlining  
their  
review  
process  
and  
calling  
for

an  
expedited  
second  
phase  
of  
investigation,  
noting  
the  
search  
is  
“at  
a  
critical  
juncture.”

On  
the  
same  
day,  
Chinese  
officials  
urged  
any  
future  
investigations  
to  
be  
broadened,  
possibly  
to  
other  
countries;  
refused  
to  
take  
blame  
for  
stalled  
efforts;  
and  
said  
the  
country  
will  
continue  
to  
participate  
in

“science-based origin tracing efforts.” Chinese officials also accused the US of politicizing the investigation and attempted to shift blame, once again suggesting without evidence that the virus possibly escaped an US Army research facility. The Chinese embassy in Washington, DC, and China’s envoy to the United Nations

this  
week  
publicly  
called  
for  
investigations  
into  
US  
labs.  
While  
understanding  
the  
origins  
of  
the  
COVID-19  
pandemic  
is  
a  
global  
priority,  
the  
likelihood  
of  
quickly  
finding  
evidence  
grounded  
in  
science  
is  
slim,  
especially  
without  
full  
and  
transparent  
cooperation  
from  
Chinese  
authorities.

## **GLOBAL VACCINE ACCESS**

The  
WHO  
this

week  
again  
called  
for  
wealthier  
nations  
with  
higher  
SARS-  
CoV-2  
vaccination  
rates  
to  
delay  
the  
deployment  
of  
booster  
doses  
for  
2  
months  
and  
instead  
donate  
those  
doses  
to  
countries  
with  
much  
lower  
coverage.  
WHO  
Director-  
General  
Dr.  
Tedros  
Adhanom  
Ghebreyesus  
expressed  
disappointment  
at  
the  
scope  
of  
vaccine  
donations

worldwide,  
saying  
"vaccine  
injustice  
and  
vaccine  
nationalism"  
raise  
the  
likelihood  
of  
new,  
possibly  
more  
deadly  
SARS-  
CoV-2  
variants  
emerging  
as  
the  
virus  
continues  
to  
circulate.  
Dr.  
Tedros  
noted  
that  
75%  
of  
the  
5  
billion  
vaccine  
doses  
distributed  
globally  
have  
gone  
to  
only  
10  
countries.  
Overall,  
donations  
from  
wealthier



nations  
have  
not  
reached  
the  
level  
required  
to  
provide  
the  
11  
billion  
doses  
needed  
to  
vaccinate  
70%  
of  
the  
world's  
population.

And  
now,  
several  
countries  
—  
including  
the  
US,  
Israel,  
France,  
Hungary,  
and  
others  
—  
have  
or  
are  
planning  
to  
implement  
booster  
dose  
programs.  
For  
its  
part,

UK  
scientists  
are  
looking  
into  
using  
smaller,  
fractional  
doses  
for  
boosters,  
which,  
in  
theory,  
could  
help  
increase  
supplies  
for  
other  
parts  
of  
the  
world  
if  
the  
“extra”  
amounts  
were  
distributed  
internationally.  
But  
countries  
are  
running  
into  
another  
issue:  
a  
surplus  
of  
expiring  
doses.  
The  
6-  
month  
shelf  
life

provided  
to  
most  
SARS-  
CoV-2  
vaccines  
under  
emergency  
authorizations  
is  
rapidly  
approaching  
and  
threatens  
to  
undermine  
donations  
of  
unused  
doses,  
as  
vaccines  
close  
to  
expiration  
raise  
suspicion  
in  
many  
countries,  
potentially  
increasing  
vaccine  
hesitancy.  
Some  
nations  
are  
publicly  
destroying  
expired  
vaccines  
to  
“stay  
accountable,”  
even  
though  
most  
experts

agree  
the  
doses,  
if  
stored  
properly,  
could  
be  
viable  
for  
up  
to  
2  
years.  
While  
some  
countries  
have  
extended  
the  
shelf  
lives  
for  
authorized  
vaccines  
based  
on  
stability  
studies,  
others  
remain  
skeptical.

The  
US  
so  
far  
has  
donated  
more  
than  
120  
million  
doses  
to  
80  
countries  
and

provided  
US  
\$4  
billion  
in  
funding  
and  
other  
resources  
to  
the  
COVAX  
facility,  
he  
noted.  
While  
the  
US  
has  
pledged  
to  
donate  
another  
approximately  
500  
million  
doses,  
as  
well  
as  
made  
efforts  
to  
expand  
manufacturing  
domestically  
and  
overseas,  
global  
health  
advocates  
and  
some  
members  
of  
the  
US  
Congress

are  
calling  
on  
the  
US  
President  
Joe  
Biden  
to  
do  
more.

An  
analysis  
from  
PrEP4All,  
an  
AIDS  
advocacy  
organization,  
criticizes  
the  
Biden  
administration  
for  
spending  
less  
than  
1%  
of  
US  
\$16  
billion  
included  
in  
the  
American  
Rescue  
Plan  
meant  
for  
procuring  
and  
manufacturing  
COVID-19  
treatments,  
vaccines,  
diagnostics,  
and

other  
tools  
for  
distribution  
in  
other  
countries.  
The  
group,  
[along  
with  
others](#),  
called  
on  
the  
US  
government  
to  
immediately  
scale  
up  
vaccine  
production  
to  
improve  
global  
supply.

In  
Africa,  
only  
2.5%  
of  
the  
population  
is  
fully  
vaccinated.

In  
an  
interview  
on  
*CNBC*  
this  
week,  
[African  
Development  
Bank](#)

(ADB)  
President  
Akinwumi  
Adesina  
said  
the  
continent  
had  
been  
“shortchanged”  
in  
regard  
to  
vaccine  
access  
and  
that  
“Africa  
should  
not  
depend  
on  
the  
rest  
of  
the  
world  
for  
supplying  
it  
with  
critical  
vaccines  
and  
also  
therapeutics.”  
In  
an  
effort  
to  
improve  
self-  
sufficiency,  
Adesina  
said  
the  
ADB  
plans



to  
invest  
at  
least  
US  
\$3  
billion  
in  
health  
care  
infrastructure  
and  
the  
pharmaceutical  
sector  
across  
the  
continent.

## **EVICTIION MORATORIUM**

On  
August  
26,  
the  
US  
Supreme  
Court  
[granted](#)  
[a](#)  
[request](#)  
to  
lift  
a  
US  
CDC  
moratorium  
on  
evictions,  
[ending](#)  
[the](#)  
[measure](#)  
meant  
to  
keep  
[millions](#)  
[of](#)  
[people](#)

who  
owe  
back  
rent  
housed  
during  
the  
latest  
surge  
of  
the  
COVID-19  
pandemic.  
In  
an  
unsigned,  
[8-  
page  
majority  
opinion](#),  
the  
court  
said  
the  
CDC  
exceeded  
its  
authority,  
relying  
“on  
a  
decades-  
old  
statute  
that  
authorizes  
it  
to  
implement  
measures  
like  
fumigation  
and  
pest  
extermination.”  
If  
a  
federal

eviction  
moratorium  
is  
to  
continue,  
the  
US  
Congress  
must  
authorize  
it,  
the  
court  
said.  
However,  
Congress  
failed  
to  
do  
so  
when  
the  
last  
moratorium  
expired  
on  
July  
31.  
Justices  
Stephen  
Breyer,  
Sonia  
Sotomayor,  
and  
Elena  
Kagan  
dissented  
from  
the  
majority  
opinion,  
saying  
the  
moratorium  
should  
remain  
in  
place

in  
the  
midst  
of  
a  
public  
health  
crisis  
and  
calling  
on  
the  
court  
to  
hold  
a  
full  
briefing  
and  
arguments.  
In  
a  
[statement](#),  
White  
House  
Spokesperson  
Jen  
Psaki  
said  
US  
President  
Joe  
Biden  
“is  
once  
again  
calling  
on  
all  
entities  
that  
can  
prevent  
evictions  
—  
from  
cities  
and

states  
to  
local  
courts,  
landlords,  
Cabinet  
Agencies  
—  
to  
urgently  
act  
to  
prevent  
evictions.”

**US  
MASK  
MANDATE  
BANS**

States  
across  
the  
country  
have  
begun  
the  
transition  
into  
a  
new,  
in-  
person  
school  
year.  
In  
last  
week’s  
COVID-19  
briefing,  
we  
covered  
a  
number  
of  
states  
that  
were  
requiring

masks  
and  
vaccinations  
for  
eligible  
students  
in  
an  
effort  
to  
minimize  
the  
spread  
and  
impact  
of  
COVID-19.

This  
week,  
[Illinois](#)  
[joined](#)  
[several](#)  
[states](#),  
ordering  
a  
mask  
mandate  
for  
students  
and  
vaccinations  
for  
students  
aged  
16  
and  
older.  
While  
many  
states  
have  
adopted  
this  
approach  
for  
the  
new  
school

year,  
several  
states  
have  
gone  
in  
opposite  
directions,  
banning  
schools'  
abilities  
to  
mandate  
mask  
wearing.

In  
Florida,  
10  
school  
districts  
have  
fought  
back  
against  
a  
mask  
mandate  
ban  
from  
Florida  
Governor  
Ron  
DeSantis,  
facing  
potential  
backlash,  
including  
funding  
freezes,  
for  
violating  
the  
state-  
sanctioned  
ban.

In  
South  
Carolina,

the  
American  
Civil  
Liberties  
Union  
(ACLU)  
[filed](#)  
a  
new  
lawsuit  
challenging  
South  
Carolina's  
ban  
on  
mask  
mandates  
in  
schools.  
The  
lawsuit  
was  
driven  
by  
a  
number  
of  
parents  
who  
have  
school-  
aged  
children  
with  
risk  
factors  
that  
could  
lead  
to  
more  
severe  
COVID-19  
cases.  
The  
case  
for  
masks



in  
schools  
has  
federal  
support,  
as  
many  
policymakers  
worry  
about  
the  
health  
and  
safety  
of  
children  
and  
the  
potential  
for  
school-  
based  
cases  
to  
drive  
up  
disease  
incidence.  
Although  
only  
19  
states  
have  
gone  
back  
to  
school  
these  
past  
few  
weeks,  
90,000  
children  
already  
have  
entered  
quarantine  
or

isolation  
following  
contact  
with  
a  
COVID-19  
case.  
It  
will  
be  
critical  
to  
monitor  
school-  
based  
COVID-19  
outbreaks  
as  
more  
parts  
of  
the  
country  
return  
to  
the  
classroom.

## **INSURANCE SURCHARGE**

Following  
the  
US  
FDA's  
approval  
of  
the  
Pfizer-  
BioNTech  
SARS-  
CoV-2  
vaccine,  
many  
employers  
implemented  
vaccination  
mandates,  
but

one  
large  
US  
company  
is  
taking  
a  
different  
tack.

Beginning  
November  
1,  
Delta  
Air  
Lines  
will

charge  
employees  
an  
additional  
\$200  
per  
month

to  
remain  
enrolled  
in  
the  
company's  
health  
plan  
if  
they  
refuse

to  
be  
fully  
vaccinated  
for  
SARS-  
CoV-2.

Additionally,  
unvaccinated  
employees  
are  
required  
to  
wear

masks  
in  
all  
indoor  
company  
settings,  
will  
[no](#)  
[longer](#)  
[qualify](#)  
[for](#)  
[pay](#)  
[protection](#)  
if  
they  
are  
diagnosed  
with  
COVID-19,  
and  
will  
be  
required  
to  
take  
weekly  
tests  
beginning  
September  
12.  
In  
a  
[memo](#)  
to  
staff,  
Delta  
CEO  
Ed  
Bastian  
noted  
that  
75%  
of  
the  
company's  
employees  
are  
fully

vaccinated  
but  
expressed  
a  
desire  
to  
get  
"as  
close  
to  
100%  
as  
possible."  
Delta  
said  
the  
surcharge  
is  
necessary  
to  
[cover](#)  
[the](#)  
[financial](#)  
[risk](#)  
unvaccinated  
employees  
pose  
to  
the  
company,  
citing  
the  
average  
cost  
of  
a  
COVID-19-  
related  
hospital  
stay  
is  
\$50,000.  
The  
airline  
is  
self-  
insured  
and

sets  
its  
own  
premiums  
for  
its  
health  
plans,  
which  
are  
administered  
by  
UnitedHealthcare.  
Delta  
also  
requires  
new  
employees  
to  
be  
vaccinated.

United  
Airlines  
is  
the  
only  
major  
airline  
so  
far  
to  
require  
all  
of  
its  
employees  
to  
get  
vaccinated  
or  
risk  
termination,  
with  
religious  
or  
medical  
exemptions

reviewed  
on  
a  
case-  
by-  
case  
basis.

## **STURGIS MOTORCYCLE RALLY**

Last  
summer,  
the  
Sturgis  
Motorcycle  
Rally

—  
held  
annually  
in  
Sturgis,  
South  
Dakota  
(US)

—  
was  
subsequently  
[linked](#)  
[to](#)  
[more](#)  
[than](#)  
[300](#)  
[cases](#)  
[of](#)  
[COVID-19](#)  
across  
more  
than  
20  
states,  
including  
an  
[outbreak](#)  
[in](#)  
[Minnesota](#)  
that  
resulted

in  
at  
least  
77  
cases  
linked  
directly  
to  
the  
event.  
Despite  
the  
ongoing  
pandemic,  
the  
rally  
was  
held  
again  
this  
year

—  
August  
6-15  
—

largely  
without  
any  
COVID-19  
restrictions  
or  
protective  
measures.  
Reportedly,  
the  
2021  
rally  
was  
one  
of  
the  
largest  
in  
the  
event's  
history,  
drawing  
[approximately](#)



700,000  
visitors.

Even  
though  
the  
event  
ended  
only  
11  
days  
ago,  
there  
are  
already  
early  
indications  
of  
a  
major  
COVID-19  
surge  
in  
the  
area.

The  
experience  
following  
the  
2020  
event  
and  
the  
ongoing  
nationwide  
surge,  
driven  
largely  
by  
the  
highly  
transmissible  
Delta  
variant,  
should  
have  
been  
sufficient  
to

inspire  
event  
and  
government  
officials  
to  
implement  
effective  
COVID-19  
protections  
this  
year,  
but  
unfortunately,  
that  
did  
not  
happen.

Meade  
County,  
SD—  
where  
Sturgis  
is  
located  
—  
averaged  
fewer  
than  
1  
new  
case  
per  
day  
from  
late  
May  
through  
late  
July,  
before  
beginning  
to  
increase  
slightly.  
At  
the

start  
of  
the  
2021  
rally,  
Meade  
County  
averaged  
3  
new  
cases  
per  
day,  
but  
daily  
incidence  
surged  
to  
38  
as  
of  
August  
24,  
nearly  
a  
13-  
fold  
increase  
and  
a  
new  
record  
for  
the  
county.  
The  
86  
cases  
reported  
in  
Meade  
County  
on  
August  
23-24  
accounted  
for  
10%

of  
the  
state's  
total,  
despite  
the  
county  
only  
representing  
3%  
of  
the  
state's  
population.  
Analysis  
by  
[The  
New  
York  
Times](#)  
indicates  
that  
COVID-19  
hospitalizations  
have  
more  
than  
tripled  
over  
the  
past  
2  
weeks.  
Test  
positivity  
surged  
past  
40%  
(currently  
34%),  
which  
indicates  
that  
[testing  
may  
not  
be  
fully](#)

capturing  
the  
true  
scale  
of  
community  
transmission  
in  
the  
area.  
Considering  
that  
700,000  
visitors  
have  
returned  
to  
their  
homes  
across  
the  
US,  
the  
Sturgis  
Motorcycle  
Rally  
certainly  
has  
the  
potential  
to  
be  
another  
national-  
level  
superspreader  
event.  
While  
we  
are  
observing  
the  
early  
signs  
of  
a  
surge  
in

and  
around  
Sturgis,  
it  
might  
be  
months  
before  
we  
could  
expect  
to  
have  
a  
clear  
idea  
of  
the  
extent  
to  
which  
this  
single  
event  
impacts  
state-  
and  
national-  
level  
epidemics.

### **CRUISE LINES**

Cruise  
lines  
are  
implementing  
more  
strict  
COVID-19  
preventive  
measures,  
requiring  
passengers  
to  
be  
vaccinated,  
wear

masks  
while  
in  
public  
areas  
aboard  
the  
ship,  
and  
show  
[proof](#)  
[of](#)  
[a](#)  
[negative](#)  
[test](#)  
within  
a  
few  
days  
of  
boarding,  
amid  
a  
current  
surge  
in  
cases  
and  
reports  
of  
breakthrough  
infections  
among  
vaccinated  
staff  
and  
passengers.  
Last  
week,  
Carnival  
Cruise  
Lines  
announced  
[27](#)  
[COVID-19](#)  
[cases](#)  
[aboard](#)  
[the](#)

## Carnival Vista

sailing  
out  
of  
Galveston,  
Texas  
(US).  
Most  
of  
the  
cases  
were  
among  
crew,  
but  
the  
one  
passenger  
case—a  
77-  
year-  
old  
woman  
from  
Oklahoma—received  
medical  
care  
on  
the  
ship,  
was  
hospitalized  
in  
Belize,  
evacuated  
to  
her  
home  
state,  
and  
later  
died.  
In  
a  
statement,  
Carnival  
expressed



condolences  
to  
the  
woman's  
family  
and  
added  
that  
she  
"almost  
certainly"  
did  
not  
contract  
the  
virus  
onboard  
the  
ship.

On  
August  
20,  
the  
US  
CDC  
updated  
its  
guidance  
for  
cruise  
ship  
travelers,  
recommending  
people  
who  
are  
at  
a  
higher  
risk  
for  
severe  
COVID-19  
avoid  
cruises  
and  
asking

passengers  
to  
have  
both  
a  
recent  
negative  
SARS-  
CoV-2  
test  
and  
proof  
of  
vaccination.  
Additionally,  
some  
popular  
destinations,  
including  
the  
Bahamas,  
are  
requiring  
all  
cruise  
ship  
passengers  
aged  
12  
and  
older  
be  
vaccinated  
in  
order  
for  
ships  
to  
dock.  
This  
prompted  
Disney  
Cruise  
Line,  
Royal  
Caribbean,  
and  
Carnival

to  
adopt  
vaccination  
requirements  
for  
their  
passengers.  
Norwegian  
Cruise  
Line  
already  
requires  
all  
eligible  
passengers  
to  
be  
vaccinated,  
after  
the  
company  
successfully  
[challenged](#)  
[a](#)  
[Florida](#)  
[law](#)  
banning  
companies  
from  
demanding  
proof  
of  
vaccination.

## **IVERMECTIN POISONINGS**

On  
August  
26,  
the  
US  
CDC  
issued  
a  
[Health](#)  
[Alert](#)  
[Network](#)  
[\(HAN\)](#)

advisory

in  
response  
to  
a  
recent  
surge  
in  
poisonings  
in  
individuals  
who  
attempted  
to  
prevent  
or  
treat  
COVID-19  
using  
ivermectin.

As  
we  
covered  
previously,  
ivermectin  
is  
approved  
by  
the  
US  
FDA  
to  
treat  
parasitic  
infections  
in  
humans,  
but  
it  
is  
primarily  
used  
to  
treat  
animals,  
including  
livestock.  
The

drug  
is  
not  
authorized  
for  
use  
to  
treat  
COVID-19,  
and  
currently  
available  
data  
do  
not  
indicate  
a  
treatment  
benefit  
for  
COVID-19.

A  
study  
of  
prescriptions  
filled  
at  
retail  
pharmacies  
in  
the  
US  
found  
that  
the  
volume  
of  
ivermectin  
prescriptions  
in  
January  
2021  
was  
more  
than  
10  
times  
greater

than  
the  
pre-  
pandemic  
baseline,  
and  
the  
volume  
in  
mid-  
August  
2021  
was  
more  
than  
24  
times  
greater  
than  
before  
the  
pandemic  
and  
still  
increasing.  
The  
CDC  
also  
reported  
that  
the  
volume  
of  
“veterinary  
formulations  
available  
over  
the  
counter  
but  
not  
intended  
for  
human  
use”  
increased  
as  
well.

The American Association of Poison Control Centers confirmed that poison control centers nationwide are fielding an elevated call volume related to the “misuse and overdose” of ivermectin, including veterinary formulations. The volume of poison control center calls related to ivermectin was 3 times higher than the pre-

pandemic  
baseline  
in  
January  
2021  
and  
5  
times  
higher  
in  
July  
2021.  
Available  
data  
also  
indicate  
an  
increase  
in  
associated  
visits  
to  
emergency  
departments  
and  
hospitals.

## **JAPAN**

The  
Japanese  
government  
recently  
[halted](#)  
[a](#)  
[rollout](#)  
of  
1.6  
million  
doses  
of  
the  
Moderna  
SARS-  
CoV-2  
vaccine  
due  
to  
worries



over  
contamination.  
The  
cause  
of  
the  
contamination  
has  
yet  
to  
be  
disclosed,  
but  
there  
were  
reports  
of  
40  
doses  
with  
unspecified  
contaminants  
found  
at  
8  
different  
vaccination  
sites  
across  
the  
country.  
These  
40  
doses  
led  
to  
the  
decision  
to  
pull  
the  
entire  
lot  
in  
addition  
to  
2  
other

lots made at the same location in Spain. The Takeda Pharmaceutical Company, which is leading the sales and distribution of the vaccine in Japan, said the decision was made as safety precaution and has requested Moderna conduct an emergency investigation. Japan had a slow start to its vaccination

campaign,  
but  
now  
44%  
of  
the  
population  
is  
fully  
vaccinated.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 8/31/2021 2:23:35 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - August 31, 2021**

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
216.9  
million  
cumulative  
cases  
and  
4.5  
million  
deaths  
worldwide  
as  
of  
August  
31.  
Global  
weekly  
incidence  
decreased  
for  
the  
first  
time

since  
mid-  
June,  
down  
3.12%  
from  
the  
previous  
week.  
Weekly  
mortality  
also  
decreased,  
for  
the  
first  
time  
since  
late  
June\*,  
falling  
2.41%  
compared  
to  
the  
previous  
week.

*\*With  
the  
exception  
of  
the  
week  
of  
July  
19,  
when  
[Ecuador](#)  
reported  
8,786  
deaths.*

The  
global  
cumulative  
mortality  
surpassed  
4.5

million  
deaths  
in  
today's  
update:  
1  
death  
to  
500k:  
165  
days  
500k  
to  
1  
million:  
86  
days  
1  
to  
1.5  
million:  
70  
days  
1.5  
to  
2  
million:  
44  
days  
2  
to  
2.5  
million:  
37  
days  
2.5  
to  
3  
million:  
52  
days  
3  
to  
3.5  
million:  
38  
days

3.5  
to  
4  
million:  
51  
days  
4  
to  
4.5  
million:  
54  
days

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
5.02  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
August  
30.  
A  
total  
of  
1.93  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
1.16  
billion  
are

fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
[global  
daily  
vaccinations](#)  
increased  
sharply  
over  
the  
past  
several  
days,  
up  
to  
41  
million  
doses  
per  
day,  
which  
would  
be  
the  
third  
highest  
peak  
to  
date\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our



World  
in  
Data  
estimates  
that  
there  
are  
3.11  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
39.45%  
of  
the  
global  
population)  
and  
2.12  
billion  
who  
are  
fully  
vaccinated  
(26.9%  
of  
the  
global  
population)\*\*.

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data  
particularly  
over  
the*

weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.  
\*\*China  
reported  
448  
million  
new  
[vaccinated  
individuals](#)  
(1+  
dose)  
and  
112  
million  
[fully  
vaccinated  
individuals](#)  
on  
August  
26,  
its  
first

*report  
since  
June  
10.*

*UNITED  
STATES  
The  
[US](#)  
[CDC](#)  
reported  
38.9  
million  
cumulative  
COVID-19  
cases  
and  
636,015  
deaths.  
Daily  
incidence  
continues  
to  
increase,  
but  
the  
trend  
is  
tapering  
off  
toward  
a  
peak  
or  
plateau.  
The  
current  
average  
of  
149,334  
new  
cases  
per  
day  
is  
the  
highest  
since*

January  
29.  
Daily  
mortality  
also  
continues  
to  
increase,  
and  
the  
mortality  
trend  
may  
be  
starting  
to  
taper  
off  
as  
well.

The  
current  
average  
of  
970  
deaths  
per  
day  
is  
the  
highest  
since  
March  
13\*.

*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently*

*reported  
data,  
particularly  
over  
the  
weekend.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

[Data  
from  
HHS](#)  
indicate  
that  
more  
than  
[100,000](#)  
[COVID-19](#)  
[patients](#)  
[are](#)  
[currently](#)  
[hospitalized](#)  
nationwide.  
This  
represents  
the  
second  
highest  
peak

to  
date,  
and  
is  
still  
increasing.  
The  
[CDC](#)  
[reports](#)  
more  
than  
84,000  
COVID-19  
patients  
currently  
hospitalized,  
32%  
below  
the  
highest  
peak.

[US](#)  
[Vaccination](#)  
The  
US  
has  
administered  
369.6  
million  
[cumulative](#)  
[doses](#)  
of  
SARS-  
CoV-2  
vaccines,  
and  
[daily](#)  
[vaccinations](#)  
appear  
to  
have  
peaked  
over  
the  
past  
several  
days.

The average briefly exceeded 798,000 doses per day on August 23 before falling to 787,000 on August 25\*. Notably, we have not observed a marked increase in daily vaccinations since the US FDA issued full approval for the Pfizer-BioNTech vaccine. There are 204.5 million individuals who have

received  
at  
least  
1  
dose,  
equivalent  
to  
61.7%  
of  
the  
entire  
US  
population.

Among  
adults,  
74.1%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
13.4  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
173.8  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
52.4%  
of  
the  
total  
population.



Approximately  
63.4%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
10.2  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**US  
CDC  
ACIP  
MEETING**

At  
a  
meeting  
on  
August  
30,  
the  
US  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
(ACIP)  
expressed  
[initial  
support  
for  
third  
doses](#)  
of  
SARS-  
CoV-2  
mRNA  
vaccines  
for  
vulnerable  
populations,  
such  
as  
long-  
term  
care  
facility  
residents,  
and  
healthcare  
workers  
but  
said  
there  
is

not  
enough  
data  
yet  
to  
recommend  
so-  
called  
booster  
shots  
for  
the  
general  
population.  
In  
a  
[presentation](#)  
to  
the  
committee,  
Dr.  
Sara  
Oliver,  
Co-  
Lead  
for  
the  
COVID-19  
Vaccines  
ACIP  
Work  
Group,  
said  
data  
through  
July  
show  
the  
vaccines  
appear  
to  
provide  
strong  
protection  
against  
severe  
disease  
and

hospitalization.

Vaccine

effectiveness

(VE)

against

hospitalization

remains

high,

between

75%

to

95%,

while

VE

against

infection

spans

a

much

broader

range,

between

39%

to

84%,

since

the

predominance

of

the

Delta

variant.

Dr.

Oliver

noted

the

reasons

for

lower

VE

“likely

include

both

waning

over

time

and

the

Delta variant.” Instead of focusing on booster doses, ACIP members emphasized that improving overall vaccination coverage is a “top priority,” as a high percentage of hospitalizations are occurring among unvaccinated individuals. They also said any booster dose recommendation should take into account equitable access to vaccines, both domestically

and globally.  
The committee did not vote on booster doses, noting it intends to do so after the US FDA authorizes their use. The committee expects to meet in a few weeks to discuss data covering August, although a date was not announced. While the administration of US

President  
Joe  
Biden  
has  
endorsed  
booster  
shots,  
saying  
they  
will  
be  
available  
by  
September  
20,  
the  
FDA  
and  
CDC  
must  
first  
make  
recommendations  
based  
on  
scientific  
evidence.

At  
the  
meeting,  
the  
ACIP  
backed  
the  
US  
FDA's  
full  
approval  
of  
the  
Pfizer-  
BioNTech  
SARS-  
CoV-2  
mRNA  
vaccine,  
voting

14-0  
to  
recommend  
the  
vaccine  
for  
individuals  
aged  
16  
and  
older.  
CDC  
Director  
Dr.  
Rochelle  
Walensky  
[endorsed](#)  
the  
recommendation,  
9  
months  
after  
the  
committee  
made  
an  
interim  
recommendation  
supporting  
the  
vaccine's  
use.  
The  
committee  
reiterated  
that  
though  
there  
are  
rare  
reports  
of  
heart  
inflammation  
after  
mRNA  
vaccination,  
especially



among  
males  
under  
age  
30,  
the  
[benefits](#)  
[of](#)  
[the](#)  
[vaccine](#)  
[outweigh](#)  
[the](#)  
[risks](#)  
because  
the  
condition  
can  
occur  
at  
higher  
rates  
in  
COVID-19  
patients  
than  
among  
those  
who  
received  
an  
mRNA  
vaccination.

### **DELTA HOSPITALIZATION RISK**

A  
[study](#)  
published  
August  
27  
in  
*The  
Lancet  
Infectious  
Diseases*  
adds  
evidence

to  
what  
many  
experts  
already  
suspected:  
people  
infected  
with  
the  
highly  
contagious  
SARS-  
CoV-2  
Delta  
variant  
are  
twice  
as  
likely  
to  
be  
hospitalized  
as  
those  
infected  
with  
the  
Alpha  
variant.  
To  
compare  
hospitalization  
rates,  
researchers  
from  
Public  
Health  
England  
(PHE)  
and  
Cambridge  
University  
examined  
data  
on  
43,338  
sequencing-

confirmed  
COVID-19  
cases  
between  
March  
29  
and  
May  
23,  
2021,  
during  
which  
time  
the  
Delta  
variant  
was  
becoming  
the  
predominant  
variant  
in  
the  
UK.  
The  
majority  
of  
the  
cases  
were  
among  
unvaccinated  
individuals  
(74%),  
while  
2%  
were  
fully  
vaccinated  
and  
24%  
had  
received  
one  
dose.  
Of  
34,656  
Alpha

cases,  
764  
(2.2%)  
were  
admitted  
to  
the  
hospital  
within  
14  
days  
of  
a  
positive  
SARS-  
CoV-2  
test,  
while  
196  
of  
8,682  
(2.3%)  
Delta  
cases  
were  
hospitalized.  
Although  
the  
percentages  
of  
hospitalized  
cases  
were  
similar  
between  
both  
variants,  
the  
risk  
of  
being  
hospitalized  
more  
than  
doubled  
(adjusted  
hazard  
ratio

[HR]  
2.26,  
95%  
confidence  
interval  
[CI]  
1.32-3.89)  
for  
Delta  
cases  
compared  
with  
Alpha  
cases  
when  
the  
researchers  
adjusted  
the  
data  
to  
account  
for  
certain  
factors,  
including  
age  
and  
sex.  
Delta  
cases  
also  
were  
more  
likely  
to  
seek  
emergency  
medical  
care  
or  
be  
hospitalized  
within  
14  
days  
versus  
Alpha

cases  
(adjusted  
HR  
1.45,  
95%  
CI  
1.08-1.95).

Although  
the  
researchers  
examined  
differences  
between  
vaccinated  
and  
unvaccinated  
groups  
for  
hospitalizations  
and  
emergency  
care  
or  
hospitalization,  
the  
[results](#)  
[were](#)  
[non-](#)  
[significant](#)  
due  
to  
low  
numbers  
of  
cases  
who  
were  
fully  
vaccinated.  
Therefore,  
the  
results  
only  
apply  
to  
people  
who

are  
unvaccinated.  
In  
a  
[statement](#),  
Dr.  
Anne  
Presanis,  
Senior  
Statistician  
at  
the  
University  
of  
Cambridge  
and  
a  
lead  
author  
of  
the  
study,  
emphasized  
the  
importance  
of  
getting  
fully  
vaccinated  
to  
reduce  
the  
risk  
of  
symptomatic  
infection  
with  
Delta,  
as  
well  
as  
reduce  
the  
risk  
of  
severe  
disease  
and

hospitalization.

The  
researchers  
noted  
that

a  
[previous  
study](#)  
conducted  
in

Scotland  
and  
published  
in

*The  
Lancet*  
in

June  
showed  
a

similar  
increase  
in  
hospitalization  
risk

among  
people  
infected  
with  
the  
Delta  
variant.

While  
the  
UK  
study  
is  
the  
largest

to  
date  
examining  
hospitalization  
risk

for  
the  
Delta  
versus



Alpha  
variants  
based  
on  
whole-  
genome  
sequenced  
cases,  
the  
researchers  
called  
for  
further  
assessments  
into  
how  
hospitalization  
risks  
differ  
for  
vaccinated  
individuals  
after  
infection  
with  
either  
variant.

## **SCHOOL TRANSMISSION**

A  
case  
study  
published  
August  
27  
in  
the  
US  
CDC's  
*Morbidity  
and  
Mortality  
Weekly  
Report  
(MMWR)*  
shows  
how

quickly  
the  
highly  
contagious  
SARS-  
CoV-2  
Delta  
variant  
can  
spread  
within

a  
classroom  
of  
children  
too  
young  
to  
be  
vaccinated.

The  
outbreak  
involved  
an  
unvaccinated  
Marin  
County,  
California  
(US),  
elementary  
school  
teacher  
who  
began  
showing  
COVID-19  
symptoms  
on  
May  
19,  
but  
who  
came  
to  
work  
the  
next  
2

days,  
attributing  
the  
symptoms  
to  
allergies.  
During  
that  
time,  
the  
teacher  
read  
aloud  
to  
the  
class  
without  
wearing  
a  
mask,  
even  
though  
masks  
were  
required  
for  
staff  
and  
students  
while  
indoors.  
The  
teacher  
received  
a  
positive  
SARS-  
CoV-2  
test  
on  
May  
21  
and  
informed  
the  
school  
on  
May

23.  
Several  
students  
became  
symptomatic  
on  
May  
22,  
and  
the  
Marin  
County  
Department  
of  
Public  
Health  
(MCPH)  
initiated  
an  
investigation  
on  
May  
26  
to  
characterize  
the  
outbreak.  
Overall,  
27  
COVID-19  
cases  
were  
identified,  
including  
the  
teacher.  
Among  
the  
teacher's  
24  
students  
—  
all  
of  
whom  
were  
too  
young

to  
be  
eligible  
for  
vaccination

—

12  
of  
22  
who  
were  
tested  
received  
positive  
results  
between  
May  
23-26.

Notably,  
8

out  
of  
10  
students  
who  
sat

in  
the

2  
front  
rows  
closest

to  
the  
teacher  
became  
infected,  
representing

an  
extremely  
high  
attack  
rate  
of  
80%.

In  
another

classroom,  
located  
across  
an  
outdoor  
courtyard  
from  
the  
source  
classroom,  
6  
of  
18  
students  
in  
a  
different  
grade  
—  
also  
too  
young  
for  
vaccine  
eligibility  
—  
tested  
positive  
between  
May  
24  
and  
June  
1.  
Additionally,  
8  
other  
cases  
were  
identified  
among  
parents  
and  
siblings  
of  
the  
students  
in

the  
2  
classes,  
3  
of  
whom  
were  
fully  
vaccinated.  
An  
additional  
infected  
adult  
was  
unvaccinated.  
Of  
the  
18  
cases  
sequenced,  
all  
were  
identified  
as  
the  
Delta  
variant.  
The  
report's  
authors  
underlined  
the  
importance  
of  
vaccination  
and  
other  
preventive  
measures,  
"including  
masking,  
routine  
testing,  
facility  
ventilation,  
and  
staying  
home

when  
symptomatic”  
to  
ensure  
safe  
in-  
person  
learning  
in  
schools.  
Notably,  
all  
of  
the  
children  
were  
seated  
6  
feet  
apart  
and  
the  
classrooms  
had  
portable  
high-  
efficiency  
particulate  
air  
filters  
with  
open  
doors  
and  
windows,  
raising  
a  
question  
about  
whether  
consistent  
masking  
could  
have  
helped  
contain  
transmission  
in



this  
outbreak.

A  
[separate](#)  
[MMWR](#)  
[report](#)  
published  
the  
same  
day  
concluded  
that  
in  
[Los](#)  
[Angeles](#)  
[County,](#)  
[California,](#)  
[schools](#)  
with  
transmission  
mitigation  
and  
containment  
protocols  
in  
place,  
“case  
rates  
in  
children  
and  
adolescents  
were  
3.4  
times  
lower  
during  
the  
winter  
peak  
compared  
with  
rates  
in  
the  
community,”  
showing

multi-pronged prevention strategies are critical in helping to prevent new cases as children return to classrooms. However, the authors cautioned the data were collected prior to the predominance of the Delta variant (September 1, 2020-March 31, 2021).

**SARS-CoV-2  
ORIGIN:  
US  
REPORT**

As expected, the

US  
Office  
of  
the  
Director  
of  
National  
Intelligence  
on  
August  
27  
released  
an  
[unclassified  
summary](#)  
of  
a  
report  
stating  
that  
the  
US  
Intelligence  
Community  
“[remains  
divided](#)  
on  
the  
most  
likely  
origin  
of  
COVID-19.  
All  
agencies  
assess  
that  
two  
hypotheses  
are  
plausible:  
natural  
exposure  
to  
an  
infected  
animal  
and

a  
laboratory-  
associated  
incident."  
Just  
over  
3  
months  
ago,  
US  
President  
Joe  
Biden  
ordered  
the  
Intelligence  
Community  
to  
undertake  
a  
systematic,  
detailed  
review  
of  
any  
evidence  
that  
could  
elucidate  
the  
origins  
of  
the  
COVID-19  
pandemic.  
The  
only  
strong  
conclusion  
expressed  
in  
the  
summary  
is  
that  
SARS-  
CoV-2  
was

not  
developed  
as  
a  
biological  
weapon.

Most  
agencies  
also  
agreed,  
with  
low  
confidence,  
that  
the  
virus  
probably  
was  
not  
genetically  
engineered,  
although  
2  
agencies  
believed  
there  
was  
insufficient  
evidence  
to  
make  
an  
assessment  
either  
way.

In  
a  
statement  
following  
the  
summary's  
release,  
President  
Biden  
said  
the  
US  
will

continue  
to  
search  
for  
answers,  
adding,  
“I  
will  
not  
rest  
until  
we  
get  
them.”  
In  
order  
to  
do  
so,  
however,  
investigators  
will  
need  
[cooperation](#)  
[from](#)  
[China](#),  
which  
continues  
to  
deflect  
blame  
and  
resist  
sharing  
information,  
according  
to  
the  
summary.

## **HURRICANE IDA**

Southern  
Louisiana  
(US)  
hospitals,  
already  
inundated

with  
COVID-19  
patients,  
are  
now  
dealing  
with  
damage  
from  
Hurricane  
Ida.  
The  
Category  
4  
storm  
made  
landfall  
in  
Lafourche  
Parish  
on  
August  
29,  
battering  
the  
area  
for  
16  
hours  
with  
heavy  
rainfall  
and  
strong  
winds  
that  
caused  
widespread  
power  
outages,  
levee  
failures,  
flooding,  
collapsed  
buildings,  
and  
the  
need

for  
rescues.  
At  
least  
2  
hospitals  
in  
Lafourche  
Parish  
reported  
significant  
damage,  
including  
[extensive  
roof  
damage](#)  
and  
partial  
generator  
failure.  
Residents  
of  
the  
parish  
were  
ordered  
to  
evacuate,  
but  
evacuating  
hospital  
patients  
was  
not  
an  
option  
because  
no  
other  
hospitals  
had  
the  
capacity  
to  
take  
additional  
patients  
due



to  
an  
overwhelming  
number  
of  
COVID-19  
patients  
and  
staff  
shortages.

Louisiana  
Governor  
John  
Bel  
Edwards  
said  
that  
with  
[more  
than  
2,400  
COVID-19  
patients  
hospitalized](#)  
in  
the  
state,  
many  
in  
serious  
or  
critical  
condition,  
the  
focus  
is  
on  
ensuring  
there  
is  
enough  
generator  
power  
and  
clean  
water  
at

hospitals  
to  
meet  
patients'  
needs,  
including  
providing  
oxygen  
and  
ventilator  
support,  
both  
of  
which  
require  
electricity.  
Nearly  
1  
million  
people  
within  
the  
New  
Orleans  
power  
grid  
were  
without  
power  
due  
to  
the  
storm's  
"catastrophic  
intensity,"  
with  
the  
Entergy  
Corporation  
working  
to  
get  
lines  
back  
in  
operation.  
Hurricane  
Ida

hit  
on  
the  
16th  
anniversary  
of  
Hurricane  
Katrina  
and,  
with  
sustained  
winds  
of  
150  
mph,  
[tied](#)  
[a](#)  
[record](#)  
for  
the  
most  
intense  
hurricane  
on  
record  
to  
hit  
Louisiana.  
Notably,  
lessons  
learned  
after  
Katrina,  
including  
the  
relocation  
of  
hospital  
generators  
to  
higher  
floors,  
likely  
helped  
save  
lives  
during

this  
storm.

## **COURT- ORDERED VACCINATION**

As  
the  
rate  
of  
SARS-  
CoV-2  
vaccination  
slowly  
creeps  
up  
in  
the  
US,  
a  
significant  
portion  
of  
the  
population  
continues  
to  
resist  
getting  
the  
shots.  
In  
what  
appears  
to  
be  
efforts  
to  
persuade  
the  
reluctant,  
several  
judges  
have  
ordered  
defendants  
to  
be

vaccinated

as  
part  
of  
their  
orders.

In  
New  
York,  
a  
Bronx  
County  
criminal  
court  
judge  
ordered  
a  
man  
pleading  
guilty  
to  
drug  
possession  
and  
shoplifting  
to  
get  
a  
SARS-  
CoV-2  
vaccine  
as  
part  
of  
his  
plea  
deal,  
an  
action  
that  
the  
judge  
said  
would  
be  
viewed  
as  
rehabilitative.

In  
another  
case  
in  
New  
York,  
a  
federal  
judge  
in  
Manhattan  
granted  
bail  
for  
a  
defendant  
charged  
with  
conspiracy  
to  
distribute  
fentanyl  
on  
the  
condition  
that  
she  
be  
vaccinated  
so  
she  
posed  
less  
of  
a  
danger  
to  
the  
community.  
Neither  
defendant  
appeared  
to  
object.

In  
a  
similar

case,  
a  
Cook  
County,  
Illinois,  
judge  
on  
August  
10  
revoked  
a  
woman's  
right  
to  
visit  
her  
11-  
year-  
old  
son  
until  
she  
is  
vaccinated  
for  
SARS-  
CoV-2.  
The  
39-  
year-  
old  
woman  
shares  
custody  
of  
the  
boy  
with  
her  
divorced  
husband,  
who  
did  
not  
seek  
such  
an  
order.

The  
woman's  
lawyer  
said  
she  
believes  
the  
judge  
exceeded  
his  
authority  
and  
hopes  
an  
appellate  
court,  
which  
is  
expected  
to  
hear  
the  
case  
this  
week,  
reverses  
the  
decision.  
While  
some  
legal  
experts  
say  
these  
judges  
might  
have  
overstepped  
their  
authority,  
others  
argue  
that  
the  
orders  
fall  
within  
their



jurisdiction,  
highlighting  
the  
legal  
and  
ethical  
questions  
surrounding  
the  
interpretation  
of  
the  
line  
between  
civil  
responsibility  
and  
civil  
liberty.

## **EU TRAVEL RESTRICTIONS**

The  
[EU](#)  
[on](#)  
[August](#)  
[30](#)  
[recommended](#)  
that  
member  
states  
halt  
all  
non-  
essential  
travel  
from  
the  
US  
due  
to  
the  
rising  
number  
of  
COVID-19  
cases

throughout  
the  
country.  
The  
EU  
also  
recommended  
the  
removal  
of  
[Israel,](#)  
[Kosovo,](#)  
[Lebanon,](#)  
[Montenegro,](#)  
[and](#)  
[North](#)  
[Macedonia](#)  
from  
the  
bloc's  
"white  
list"  
of  
places  
whose  
tourists  
could  
be  
permitted  
entry  
without  
certain  
restrictions.  
In  
order  
to  
be  
included  
on  
the  
white  
list,  
countries  
have  
to  
have  
no  
more

than  
75  
new  
daily  
COVID-19  
cases  
per  
100,000  
residents  
over  
the  
last  
14  
days,  
and  
these  
6  
countries  
no  
longer  
meet  
that  
criterion.  
[The  
decision  
is  
non-  
binding,](#)  
as  
each  
EU  
member  
state  
is  
able  
to  
set  
its  
own  
tourism  
policies  
and  
restrictions.  
Possible  
restrictions  
include  
testing  
requirements,

quarantine  
upon  
arrival,  
a  
ban  
on  
non-  
vaccinated  
travelers,  
and  
a  
ban  
on  
all  
non-  
essential  
travelers  
from  
the  
stated  
countries.  
The  
white  
list  
now  
includes  
18  
countries.

Removal  
of  
the  
US  
from  
the  
white  
list  
follows  
a  
[previous  
decision](#)  
in  
June  
that  
recommended  
lifting  
restrictions  
on

non-essential travelers from the US and 14 other nations. A majority of countries in the EU lifted non-essential travel restrictions after the decision in hopes of retaining income from the summer tourism season. New travel restrictions are anticipated to cost billions in lost tourism income.

## AUSTRALIA

Australian  
Prime  
Minister  
Scott  
Morrison  
announced  
that  
the  
country  
is  
moving  
past  
its  
“COVID  
zero”  
goal,  
arguing  
that  
the  
current  
level  
of  
restrictions  
“is  
not  
a  
sustainable  
way  
to  
live,”  
particularly  
in  
light  
of  
the  
emergence  
of  
the  
Delta  
variant.  
Throughout  
the  
pandemic,  
Australia  
has  
responded  
to

local outbreaks with highly restrictive “lockdown” measures, while facing relatively few restrictions in the periods between outbreaks. This plan aimed to interrupt chains of transmission and prevent localized outbreaks from spreading to a regional- or national-level epidemic in order to reach and maintain essentially zero domestic transmission.

The  
policy  
change  
appears  
to  
be  
tied  
to  
vaccination  
coverage,  
and  
the  
government  
could  
begin  
easing  
restrictions  
once  
national  
coverage  
reaches  
70%  
among  
eligible  
individuals.  
Australia  
is  
currently  
reporting  
full  
vaccination  
coverage  
of  
35%  
for  
individuals  
ages  
16  
and  
older,  
and  
officials  
reportedly  
believe  
Australia  
can  
double  
this



rate  
by  
the  
end  
of  
2021.  
Notably,  
Prime  
Minister  
Morrison  
also  
announced  
[children  
aged  
12-17  
years  
are  
now  
be  
eligible  
for  
vaccination.](#)

## **MEDIGEN VACCINE**

Taiwan  
on  
August  
23  
[launched](#)  
an  
island-  
wide  
rollout  
of  
its  
domestically  
produced  
Medigen  
SARS-  
CoV-2  
vaccine,  
produced  
by  
Taipei-  
based  
Medigen  
Vaccine

Biologics  
Corporation,  
with  
Taiwan  
President  
Tsai  
Ing-  
wen  
publicly  
receiving  
the  
first  
shot.  
But  
the  
rollout  
quickly  
hit  
speed  
bumps,  
with  
experts  
criticizing  
the  
launch  
of  
the  
vaccine  
without  
the  
completion  
of  
Phase  
3  
clinical  
trial  
and  
no  
efficacy  
data.  
Then,  
over  
the  
next  
3  
days,  
4  
people

died  
after  
receiving  
the  
vaccine,  
raising  
questions  
about  
its  
safety  
among  
some  
experts.  
Taiwan's  
Central  
Epidemic  
Command  
Center  
(CECC)  
said  
it  
does  
not  
plan  
to  
halt  
the  
campaign,  
as  
there  
is  
no  
indication  
that  
the  
deaths  
are  
associated  
with  
the  
vaccine.  
The  
CECC  
will  
continue  
to  
investigate  
whether

there  
is  
a  
causal  
relationship,  
indicating  
the  
news  
has  
not  
affected  
vaccine  
uptake  
among  
the  
Taiwanese  
population.  
Throughout  
the  
pandemic,  
Taiwan  
has  
been  
successful  
at  
curbing  
dramatic  
surges  
in  
COVID-19  
cases  
and  
reports  
fewer  
than  
16,000  
total  
confirmed  
cases  
to  
date.

**SPUTNIK  
V**  
Russia's  
Sputnik  
V  
SARS-

CoV-2 vaccine, officially known as Gam-COVID-Vac, appears to [reduce the risk of hospitalization](#) and prevent severe lung damage among COVID-19 patients, according to a [preprint paper](#) posted to *medRxiv*. The analysis, which has not yet been peer-reviewed, includes data from 13,894 patients, 9.3% of whom

were fully vaccinated, having completed their second shot at least 2 weeks prior. Among those fully vaccinated, the adjusted vaccine effectiveness (VE) against hospital referral was 81% (95% confidence interval [CI], 68-88). The VE against hospital referral was slightly better among women (84%, 95% CI, 66-92) compared with

men  
(76%,  
95%  
CI,  
51-88).  
The  
data  
also  
show  
that  
Sputnik  
V  
was  
76%  
effective  
at  
protecting  
against  
severe  
lung  
injury,  
defined  
as  
more  
than  
50%  
lung  
involvement.  
Although  
the  
data  
do  
not  
include  
genetic  
sequencing  
for  
viral  
variants,  
Russian  
health  
officials  
say  
95%  
of  
new  
infections  
in

July  
and  
August,  
when  
the  
study  
was  
conducted,  
were  
attributable  
to  
the  
Delta  
variant.  
The  
Sputnik  
V  
vaccine  
is  
authorized  
for  
use  
in  
69  
countries,  
but  
the  
European  
Medicines  
Agency  
(EMA)  
and  
the  
WHO  
continue  
to  
review  
the  
vaccine  
for  
authorization.

### **C.1.2** **VARIANT**

A  
[preprint  
article](#)  
posted



on  
*medRxiv*  
from  
a  
group  
of  
South  
African  
researchers  
describes  
a  
potential  
SARS-  
CoV-2  
variant  
of  
interest  
assigned  
to  
the  
PANGO  
lineage  
C.1.2.  
According  
to  
the  
paper,  
which  
is  
not  
yet  
peer-  
reviewed,  
the  
variant  
was  
first  
identified  
in  
May  
2021  
and  
likely  
originated  
from  
the  
C.1  
viral

lineage,  
one  
of  
the  
lineages  
that  
dominated  
the  
first  
wave  
of  
SARS-  
CoV-2  
infections  
in  
South  
Africa.  
The  
C.1.2  
variant  
is  
believed  
to  
have  
between  
44-59  
mutations  
in  
regions  
such  
as  
the  
spike  
protein,  
receptor  
binding  
motif,  
and  
furin  
cleavage  
site,  
representing  
more  
mutations  
than  
previous  
variants  
of

interest  
and  
variants  
of  
concern.  
[The  
mutations  
described  
in  
the  
article](#)  
are  
associated  
with  
increased  
neutralizing  
antibody  
evasion,  
increased  
transmissibility,  
and  
potentially  
increased  
viral  
reproduction.

By  
August  
13,  
2021,  
the  
variant  
had  
been  
detected  
in  
a  
majority  
of  
South  
African  
provinces,  
as  
well  
as  
in  
the  
Democratic

Republic  
of  
the  
Congo,  
Mauritius,  
New  
Zealand,  
Portugal,  
and  
Switzerland.

Despite  
the  
wide  
geographic  
spread,  
prevalence  
of

C.1.2

in  
tested  
samples  
remains  
low.

However,  
monthly  
increases  
in  
prevalence

are  
similar  
to  
those  
seen

in  
the  
early  
stages  
of

the  
Beta  
and  
Delta  
variants.

Researchers  
are  
currently  
assessing  
the

effectiveness  
of  
vaccines  
against  
this  
lineage  
and  
more  
information  
is  
expected  
soon.  
Notably,  
though  
the  
researchers  
say  
they  
are  
“concerned”  
about  
C.1.2,  
it  
has  
not  
yet  
been  
named  
a  
variant  
of  
interest  
or  
concern,  
as  
more  
data  
are  
necessary  
to  
make  
that  
determination.

**COMPARING  
mRNA  
VACCINE  
IMMUNE**

## RESPONSE

A

[research  
letter](#)

published

in

the

*Journal*

*of*

*the*

*American*

*Medical*

*Association*

*(JAMA)*

describes

results

from

a

prospective

study

comparing

antibody

responses

to

the

Pfizer-

BioNTech

and

Moderna

SARS-

CoV-2

vaccines

among

a

cohort

of

Belgian

healthcare

workers.

For

the

study,

antibodies

against

the

SARS-

CoV-2

nucleocapsid

protein  
were  
measured  
after  
vaccination.  
Among  
the  
1,647  
healthcare  
workers  
included  
in  
the  
evaluation,  
2  
doses  
of  
Moderna  
produced  
higher  
antibody  
titers  
than  
2  
doses  
of  
Pfizer-  
BioNTech;  
participants  
who  
were  
previously  
infected  
with  
SARS-  
CoV-2  
had  
higher  
antibody  
titers  
than  
participants  
who  
were  
never  
infected;  
and  
higher

antibody  
titers  
were  
correlated  
with  
younger  
age  
groups.  
The  
limitations  
of  
the  
study  
include  
a  
lack  
of  
information  
on  
cellular  
immunity  
and  
neutralizing  
antibody  
titers.  
[Neutralizing  
antibodies](#)  
can  
stop  
a  
virus  
from  
entering  
a  
cell  
and  
initiating  
infection  
while  
binding  
antibodies  
alert  
white  
blood  
cells  
to  
the  
presence



of  
a  
pathogen  
and  
mark  
them  
for  
destruction.  
Neutralizing  
antibodies  
serve  
a  
different  
purpose  
from  
binding  
antibodies  
and  
they  
can  
result  
in  
long-  
term  
immunity  
to  
certain  
infections.

### **BLOOD CLOTTING RISKS**

The  
[risk](#)  
[of](#)  
[blood](#)  
[clotting](#)  
[events](#)  
after  
infection  
with  
SARS-  
CoV-2  
is  
much  
higher  
than  
the

risk  
posed  
by  
vaccination  
with  
either  
the  
Pfizer-  
BioNTech  
or  
AstraZeneca-  
Oxford  
vaccines,  
according  
to  
a  
[large](#)  
[UK](#)  
[study](#)  
published  
August  
27  
in  
the  
*British*  
*Medical*  
*Journal*  
*(BMJ)*.  
A  
team  
led  
by  
researchers  
from  
the  
University  
of  
Oxford  
examined  
the  
health  
records  
of  
[more](#)  
[than](#)  
[29](#)  
[million](#)  
[people](#)

who  
received  
a  
first  
dose  
of  
either  
vaccine  
between  
December  
2020  
and  
April  
2021,  
as  
well  
as  
nearly  
1.8  
million  
who  
were  
infected  
with  
the  
virus,  
looking  
for  
complications  
up  
to  
28  
days  
post-  
vaccination  
or  
infection.

The  
researchers  
found  
that  
people  
who  
received  
the  
Pfizer-  
BioNTech

vaccine  
had  
an  
increased  
risk  
of  
ischemic  
stroke  
and  
blood  
clots  
in  
arteries,  
while  
those  
who  
received  
the  
AstraZeneca-  
Oxford  
vaccine  
had  
an  
increased  
risk  
of  
low  
platelets  
(thrombocytopenia)  
and  
blood  
clots  
in  
veins.  
While  
the  
researchers  
said  
that  
people  
should  
be  
aware  
of  
the  
increased  
risk,  
they

stressed  
that  
the  
risks  
of  
the  
same  
complications  
among  
people  
infected  
with  
SARS-  
CoV-2  
are  
much  
higher.

For  
example,  
the  
risk  
of  
thrombocytopenia  
is  
almost  
9  
times  
higher  
with  
infection  
than  
vaccination  
with  
the  
AstraZeneca-  
Oxford  
vaccine,  
and  
the  
risk  
of  
stroke  
is  
nearly  
12  
times  
higher  
after

COVID-19  
than  
with  
the  
Pfizer-  
BioNTech  
vaccine.  
The  
risk  
of  
blood  
clotting  
events  
also  
remained  
elevated  
for  
a  
longer  
period  
of  
time  
after  
infection  
compared  
with  
vaccination.  
Experts  
continue  
to  
stress  
that  
the  
short-  
and  
long-  
term  
complications  
of  
COVID-19  
are  
much  
more  
severe  
than  
the  
risks  
associated

with  
vaccination,  
and  
they  
urge  
those  
eligible  
to  
get  
vaccinated.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 7/9/2021 2:34:12 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - July 9, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
185  
million  
cumulative  
cases  
and  
4.0



million  
deaths  
worldwide  
as  
of  
4:30am  
EDT  
on  
July  
9.  
On  
July  
8,  
the  
global  
cumulative  
mortality  
surpassed  
4  
million  
deaths:  
1  
death  
to  
1  
million-  
251  
days  
1  
to  
2  
million-  
114  
days  
2  
to  
3  
million-  
89  
days  
3  
to  
4  
million-  
89  
days

Global weekly incidence increased for the second consecutive week, up 3.8% from the previous week.

Global weekly mortality, however, continues to decrease down to its lowest point since late October 2020

—  
a decrease of 6.5% compared to the previous week.

Analysis by [Reuters](#) indicates that 19

countries\*  
are  
currently  
reporting  
a  
daily  
incidence  
that  
is  
90%  
or  
greater  
of  
their  
highest  
peak.  
While  
these  
countries  
represent  
nearly  
all  
of  
the  
WHO  
regions  
—  
with  
the  
exception  
of  
Europe  
—  
they  
tend  
to  
be  
clustered  
in  
smaller  
regional  
areas.  
In  
the  
Americas,  
there  
are  
3

countries  
in  
Central  
America  
and  
the  
Caribbean.

Cuba,  
Honduras,  
and  
Guatemala  
are  
all  
currently  
reporting  
their  
record  
high  
daily  
incidence  
to  
date.

In  
Africa,  
Tunisia  
(at  
its  
peak)  
is  
the  
only  
country  
in  
the  
northern  
region,  
but  
there  
are  
5  
countries  
in  
sub-  
Saharan  
Africa.  
Liberia,  
Mozambique,  
South

Africa,  
and  
Zimbabwe  
are  
all  
reporting  
record  
highs,  
and  
Rwanda  
is  
at  
99%  
of  
its  
record.  
In  
the  
Eastern  
Mediterranean  
region,  
Iraq  
and  
Kuwait  
are  
both  
reporting  
97%  
of  
their  
record  
highs.  
The  
South-  
East  
Asia  
region  
accounts  
for  
a  
third  
of  
the  
countries  
globally  
that  
are  
currently

exceeding  
90%  
of  
their  
highest  
peak,  
stretching  
from  
Bangladesh  
to  
Indonesia.  
Bangladesh,  
Indonesia,  
Myanmar,  
Thailand,  
and  
Vietnam  
are  
all  
at  
their  
highest  
peak.  
Additionally,  
Malaysia  
is  
at  
92%  
of  
its  
record  
high,  
and  
Cambodia  
is  
at  
92%.  
Fiji  
(at  
its  
peak)  
is  
the  
only  
country  
in  
the  
Western

Pacific  
region.

*\*In  
addition  
to  
WHO  
countries,  
Reuters  
lists  
the  
British  
Virgin  
Islands  
at  
91%  
of  
its  
highest  
peak.*

Among  
these  
countries,  
most  
epidemics  
are  
[continuing  
to  
accelerate.](#)

In  
fact,  
all  
19  
countries  
are  
reporting  
positive  
relative  
changes  
over  
the  
[past  
2  
weeks,](#)  
and  
Liberia  
(-34%)  
is

the  
only  
country  
reporting  
a  
negative  
trend  
over  
the  
past  
week.

Notably,  
the  
daily  
incidence  
has  
more  
than  
doubled  
over  
the  
past  
2  
weeks  
in  
nearly  
half  
of  
these  
countries,  
including  
Fiji  
(+201%),  
Zimbabwe  
(+276%),  
Mozambique  
(+375%),  
and  
Myanmar  
(+403%).  
The  
surges  
in  
most  
of  
these  
countries  
began



between  
mid-  
May  
and  
mid-  
June,  
although  
a  
few  
are  
exhibiting  
long-  
term  
increasing  
trends.

It  
appears  
that  
most  
of  
the  
countries  
with  
longer-  
term  
increases

—  
including  
Cambodia,  
Guatemala,  
Honduras,  
Iraq,  
and  
Malaysia

—  
reported  
relative  
peaks  
in  
April  
or  
May  
and  
then  
declined  
slightly  
before  
their

current  
surges.

A  
number  
of  
these  
countries  
were  
reporting  
fewer  
than  
100

new  
cases  
per  
day

as  
recently  
as  
late  
June,  
with  
some  
as  
low  
as  
single-  
digits  
in  
the  
weeks  
and  
months  
prior.

But  
as  
we  
have  
discussed  
previously,  
even  
countries  
with  
low  
daily  
incidence  
can  
be

at  
risk  
for  
rapidly  
accelerating  
epidemics  
if  
transmission  
is  
not  
contained.  
Currently,  
Liberia  
is  
the  
only  
one  
of  
these  
countries  
reporting  
fewer  
than  
100  
new  
cases  
per  
day,  
and  
Cambodia,  
Fiji,  
and  
Rwanda  
are  
the  
only  
other  
countries  
reporting  
fewer  
than  
1,000.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)

3.03  
billion  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
July  
8.  
The  
WHO  
reports  
a  
total  
of  
1.23  
billion  
individuals  
received  
at  
least  
1  
dose  
and  
552  
million  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
shows  
that  
the  
global  
[daily  
doses  
administered](#)  
is  
falling

rapidly  
from  
the  
record  
high  
of  
43.1  
million  
doses  
per  
day  
on  
June  
27,  
now  
down  
to  
31  
million.  
The  
trend  
continues  
to  
be  
largely  
[driven](#)  
[by](#)  
[vaccination](#)  
[efforts](#)  
[in](#)  
[Asia](#),  
which  
is,  
in  
turn,  
driven  
by  
China.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
1.94  
billion

vaccinated  
individuals  
worldwide  
(1+  
dose;  
24.8%  
of  
the  
global  
population).

There  
are  
an  
estimated  
923  
million  
who  
are  
fully  
vaccinated  
(11.8%  
of  
the  
global  
population),  
although  
reporting  
is  
less  
complete  
than  
for  
other  
data.

*UNITED  
STATES*

The  
US  
CDC  
reported  
33.6  
million  
cumulative  
COVID-19  
cases  
and  
603,958

deaths.  
Daily  
incidence  
has  
increased  
over  
the  
past  
several  
weeks,  
up  
from  
a  
low  
of  
11,281  
new  
cases  
per  
day  
on  
June  
20  
to  
14,884  
on  
July  
7,  
an  
increase  
of  
32%  
over  
that  
period  
—  
including  
an  
increase  
of  
16%  
over  
the  
past  
week.  
Daily  
mortality  
continues

to  
decline,  
although  
it  
increased  
slightly  
on  
July  
7.  
It  
is  
likely  
that  
reporting  
delays  
over  
the  
Independence  
Day  
holiday  
weekend  
are  
impacting  
the  
incidence  
and  
mortality  
figures;  
however,  
some  
states  
have  
transitioned  
from  
daily  
to  
weekly  
reporting,  
so  
the  
degree  
of  
impact  
may  
differ  
compared  
to  
earlier



in  
the  
pandemic.

The  
CDC  
published  
updated  
[genomic  
surveillance  
data](#),

including  
Nowcast  
projections  
for  
June  
20-  
July  
3.

In  
the  
most  
current  
official  
data,  
the  
Delta  
variant  
(B.1.617.2)  
reached  
30.4%  
of  
new  
cases  
for  
June  
6-19.

The  
Delta  
variant  
remains  
#2  
behind  
the  
Alpha  
variant  
(B.1.1.7;  
44.2%);

however,  
its  
relative  
proportion  
continues  
to  
increase  
rapidly,  
tripling  
from  
the  
previous  
2-  
week  
period  
(10.1%).  
In  
the  
CDC's  
projection,  
Delta  
is  
not  
only  
the  
dominant  
variant,  
but  
it  
accounts  
for  
more  
than  
half  
of  
all  
new  
cases  
in  
the  
June  
20-  
July  
3  
period  
(51.7%).  
The  
prevalence

of  
the  
Alpha  
variant  
continues  
to  
decrease  
steadily,  
down  
from  
a  
high  
of  
69.9%  
for  
April  
25-  
May  
8  
to  
28.7%  
in  
the  
Nowcast  
projection.  
The  
Gamma  
variant  
(P.1)  
is  
now  
beginning  
to  
decrease  
slowly  
as  
well,  
down  
from  
a  
high  
of  
11.1%  
for  
May  
23-  
June  
5

to  
8.9%  
in  
the  
projection  
period.  
At  
the  
regional  
level,  
Delta  
variant  
prevalence  
is  
projected  
to  
exceed  
50%  
in  
5  
of  
the  
10  
HHS  
regions,  
including  
74.3%  
in  
Region  
8  
(Mountain)  
and  
80.7%  
in  
Region  
7  
(Central).

US  
Vaccination

The  
US  
has  
administered  
332  
million  
cumulative  
doses

of  
SARS-  
CoV-2  
vaccines,  
and  
it  
is  
administering  
approximately  
484,000  
doses  
per  
day.

A  
total  
of  
183  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
55.2%  
of  
the  
entire  
US  
population.

Among  
adults,  
67.3%  
have  
received  
at  
least  
1  
dose  
as  
well  
as

9.4 million adolescents aged 12-17. A total of 158 million individuals are fully vaccinated, which corresponds to 47.7% of the total population. Among adults, 58.5% are fully vaccinated, and 7.2 million adolescents aged 12-17 years are fully vaccinated.

### **MIX & MATCH VACCINES**

This week,  
[Germany](#)  
[became](#)  
[one](#)

of  
the  
first  
countries  
to  
strongly  
recommend  
that  
anyone  
who  
received  
the  
AstraZeneca-  
Oxford  
vaccine  
for  
their  
first  
dose  
should  
receive  
a  
dose  
of  
either  
the  
Pfizer-  
BioNTech  
or  
Moderna  
vaccines  
for  
their  
second  
dose.  
The  
German  
Standing  
Committee  
on  
Vaccination  
(STIKO)  
said  
those  
who  
received  
a  
first

dose  
of  
the  
AstraZeneca-  
Oxford  
vaccine  
"should  
get  
an  
mRNA  
vaccine  
as  
their  
second  
dose,  
regardless  
of  
their  
age."  
Canada's  
[National  
Advisory  
Committee  
on  
Immunization](#)  
made  
a  
less  
strongly  
worded  
recommendation  
last  
month  
when  
it  
said  
"an  
[mRNA  
vaccine](#)  
[is](#)  
[now](#)  
[preferred](#)  
as  
the  
second  
dose  
for  
individuals



who  
have  
received  
a  
first  
dose  
of  
AstraZeneca/COVISHIELD  
vaccine."

Leaders  
of  
both  
countries  
have  
set  
an  
example  
for  
vaccine  
mixing,  
as

[German  
Chancellor  
Angela  
Merkel](#)

and  
[Canada  
Prime  
Minister  
Justin  
Trudeau](#)

received  
the  
AstraZeneca-  
Oxford  
vaccine  
for  
their  
first  
dose,  
followed  
by  
a  
second  
dose  
of  
Moderna.  
The

European  
Medicines  
Agency  
(EMA)  
has  
not  
yet  
made  
a  
definitive  
recommendation  
on  
mixing  
SARS-  
CoV-2  
vaccines.

In  
addition  
to  
a  
study  
recently  
published  
in  
[\*The Lancet\*](#)  
that  
demonstrated  
sufficient  
immune  
response  
following  
mixed  
doses  
of  
the  
AstraZeneca-  
Oxford  
and  
Pfizer-  
BioNTech  
vaccines,  
2  
German  
studies  
(both  
preprint)

reported similar findings. The first study included 340 healthcare workers and found similar immune responses among participants who received 2 doses of the Pfizer-BioNTech vaccine and those who received a prime dose of the AstraZeneca-Oxford vaccine followed by a booster dose of the Pfizer-BioNTech vaccine.

The  
second  
study  
included  
216  
participants  
who  
received  
either  
2  
doses  
of  
the  
AstraZeneca-  
Oxford  
vaccine,  
2  
doses  
of  
the  
Pfizer-  
BioNTech  
or  
Moderna  
vaccines,  
or  
a  
prime  
dose  
of  
AstraZeneca-  
Oxford  
followed  
by  
a  
booster  
dose  
of  
one  
of  
the  
mRNA  
vaccines.  
The  
immune  
responses  
in  
the

heterologous  
group  
were  
similar  
to  
those  
who  
received  
2  
doses  
of  
the  
mRNA  
vaccines  
and  
better  
than  
those  
who  
received  
2  
doses  
of  
the  
AstraZeneca-  
Oxford  
vaccine.  
While  
these  
studies  
are  
small  
and  
evaluate  
immune  
response  
rather  
than  
vaccine  
efficacy  
against  
infection  
or  
disease,  
they  
do  
provide  
further

evidence  
that  
using  
an  
mRNA  
vaccine  
as  
the  
second  
dose  
can  
stimulate  
sufficient  
immune  
response  
and  
potentially  
even  
improve  
on  
2  
doses  
of  
the  
AstraZeneca-  
Oxford  
vaccine.

### **DELTA VARIANT VACCINE EFFICACY**

Researchers  
continue  
to  
[evaluate](#)  
[how](#)  
[well](#)  
[available](#)  
[SARS-](#)  
[CoV-2](#)  
[vaccines](#)  
[protect](#)  
[against](#)  
[the](#)  
[Delta](#)  
[variant](#)  
(B.1.617.2),

which  
is  
driving  
outbreaks  
in  
both  
vaccinated  
and  
unvaccinated  
communities  
in  
several  
countries  
and  
is  
now  
the  
dominant  
variant  
in  
the  
US.

To  
date,  
studies  
show  
the  
most  
widely  
used  
shots  
offer  
strong  
protection  
against  
severe  
disease  
and  
hospitalization,  
although  
protection  
may  
be  
reduced  
for  
infection.  
On  
July

5,  
Israel's  
Ministry  
of  
Health  
released  
results  
of  
a  
study  
examining  
the  
effectiveness  
of  
the  
Pfizer-  
BioNTech  
vaccine  
against  
all  
circulating  
variants,  
including  
Delta,  
for  
the  
past  
month  
beginning  
June  
6.  
The  
ministry  
noted  
a  
"marked  
decline"  
in  
the  
vaccine's  
effectiveness  
in  
preventing  
infection  
(64%)  
and  
symptomatic  
illness



(64%).  
While  
this  
rate  
is  
lower  
than  
the  
vaccine's  
effectiveness  
prior  
to  
circulation  
of  
the  
Delta  
variant  
in  
[Israel](#)  
(95%),  
and  
lower  
than  
other  
studies  
from  
[Britain](#)  
(88%),  
[Scotland](#)  
(79%),  
and  
[Canada](#)  
(87%),  
the  
Israeli  
study  
maintained  
the  
vaccine  
was  
93%  
effective  
in  
preventing  
serious  
illness  
and  
hospitalization.

Israeli officials cautioned that the study data are preliminary, based on highly localized outbreaks, and potentially had other methodological weaknesses.

A Pfizer spokesperson declined to comment specifically on Israel's data but confirmed other research shows its vaccine is effective against all variants, including Delta, although at a

reduced  
rate.

Pfizer-  
BioNTech  
on  
July  
8  
announced  
it  
plans  
to  
seek  
authorization  
in  
the  
US  
and  
Europe  
for  
a  
third  
booster  
dose  
of  
its  
vaccine  
based  
on  
"encouraging  
data."  
However,  
some  
experts  
contend  
there  
is  
no  
indication  
for  
a  
booster  
or  
third  
dose  
of  
an  
mRNA

vaccine,  
and  
the  
US  
FDA  
and  
US  
CDC  
published  
a  
[joint  
statement](#)  
saying  
people  
who  
have  
been  
fully  
vaccinated  
do  
not  
need  
a  
booster  
shot  
at  
this  
time.  
The  
agencies  
said  
they  
will  
continue  
to  
monitor  
ongoing  
studies  
and  
are  
“prepared  
for  
booster  
doses  
if  
and  
when  
the

science demonstrates that they are needed.” Pfizer-BioNTech also announced they plan to begin trials as early as next month of a vaccine targeted specifically at Delta, although it is not clear whether this shot would be intended as a booster or an additional, separate vaccination.

As we previously reported, vaccine efficacy is reduced following 1 dose of mRNA or viral vector vaccine versus the full 2-dose schedule. On July 8, researchers from France [published](#) a peer-reviewed report in *Nature* showing a single shot of a 2-dose vaccine (Pfizer-BioNTech or

AstraZeneca-Oxford)  
“barely”  
offered  
protection  
against  
the  
Delta  
variant.  
Notably,  
J&J-  
Janssen  
recently  
[announced](#)  
[preliminary](#)  
[data](#)  
demonstrating  
its  
single-  
shot  
SARS-  
CoV-2  
vaccine  
generates  
a  
strong  
immune  
response  
against  
all  
highly  
prevalent  
variants  
[for](#)  
[at](#)  
[least](#)  
[8](#)  
[months](#),  
including  
Delta.  
[Little](#)  
[is](#)  
[known](#)  
[about](#)  
[the](#)  
[effectiveness](#)  
[of](#)  
[the](#)

Chinese-  
produced  
vaccines

from

Sinopharm

and

Sinovac

Biotech

Ltd.

against

Delta,

although

the

companies

say

they

are

studying

variants.

Research

and

real-

world

data

consistently

show

that

people

who

are

unvaccinated

or

not

fully

vaccinated

remain

at

an

increased

risk

of

infection

and

more

severe

disease,

underlining

the



importance  
of  
fully  
vaccinating  
as  
many  
people  
as  
possible,  
particularly  
in  
the  
face  
of  
Delta  
and  
other  
emerging  
variants  
of  
interest  
and  
concern.

## **CUBAN VACCINES**

Cuban  
pharmaceutical  
company  
BioCubaFarma  
announced  
preliminary  
efficacy  
estimates  
for  
a  
[second  
candidate  
SARS-  
CoV-2  
vaccine](#).  
The  
company  
issued  
a  
[press  
release](#)  
indicating

a  
regimen  
of  
its  
2-  
dose  
Soberana  
02  
vaccine  
plus  
a  
booster  
of  
Soberana  
Plus  
demonstrated  
91.2%  
efficacy  
against  
symptomatic  
COVID-19  
over  
a  
56-  
day  
period  
in  
a  
Phase  
3  
clinical  
trial.  
According  
to  
the  
press  
release,  
the  
trial  
was  
conducted  
in  
8  
municipalities  
in  
the  
capital  
of

Havana,  
but  
it  
does  
not  
provide  
further  
details,  
including  
the  
number  
of  
participants.

A  
clinical  
trial  
of  
the  
same  
vaccine  
regimen  
is  
already  
underway  
in  
children  
and  
adolescents.

In  
June,  
BioCubaFarma  
announced  
that  
another  
vaccine  
candidate,  
[Abdala](#)  
(also  
a  
3-  
dose  
regimen),  
demonstrated  
92.3%  
efficacy  
in  
a  
Phase

3  
trial.  
To  
our  
knowledge,  
the  
full  
trial  
data  
have  
not  
yet  
been  
released  
publicly  
nor  
subjected  
to  
peer  
review,  
but  
efficacy  
estimates  
greater  
than  
90%  
would  
put  
both  
of  
Cuba's  
vaccines  
in  
the  
same  
category  
as  
others  
in  
wider  
use  
around  
the  
world,  
including  
the  
Pfizer-  
BioNTech,

Moderna,  
and  
Sputnik  
V  
vaccines.  
Cuba  
has  
a  
well-  
established  
vaccine  
development  
sector,  
which  
produces  
approximately  
80%  
of  
its  
vaccines  
as  
well  
as  
some  
for  
export.

## **VACCINE EFFICACY IN IMMUNOSUPPRESSED POPULATIONS**

The  
Coalition  
for  
Epidemic  
Preparedness  
Innovations  
(CEPI)  
announced  
it  
will  
[co-  
fund  
a  
study](#)  
to  
assess

immune  
response  
to  
SARS-  
CoV-2  
vaccines  
in  
patients  
aged  
18  
or  
older  
who  
are  
immunocompromised  
or  
who  
take  
immunosuppressive  
medications  
following  
an  
organ  
transplant.  
CEPI  
will  
provide  
\$3.1  
million  
alongside  
\$3.6  
million  
in  
funding  
from  
several  
Norwegian  
health  
organizations,  
including  
Oslo  
University  
Hospital,  
which  
will  
lead  
the  
trial.

Large trials of vaccine efficacy in immunosuppressed populations have been limited, despite this subpopulation having an [increased risk](#) of developing severe COVID-19.

The study aims to recruit at least 6,000 patients and 10,000 healthy participants who have received 2 doses of vaccines that are included in the Norwegian

National  
Corona  
Immunization  
Program  
(currently  
Pfizer-  
BioNTech  
and  
Moderna).  
The  
primary  
goal  
of  
the  
trial  
is  
to  
assess  
the  
level  
of  
adaptive  
immune  
responses  
in  
these  
populations.  
Participants  
in  
the  
intervention  
arm  
of  
the  
study  
who  
have  
low  
or  
no  
immune  
response  
to  
vaccination  
will  
be  
offered  
a



booster  
dose  
and  
monitored.  
Researchers  
also  
plan  
to  
evaluate  
the  
effect  
of  
immunosuppressive  
medications  
on  
immune  
response  
to  
vaccination  
and  
associated  
demographic  
and  
immunologic  
indicators.

## **VACCINATION & HEART INFLAMMATION**

The  
US  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
(ACIP)  
on  
July  
7  
published  
an  
[update](#)  
[on](#)  
[the](#)  
[use](#)

of  
mRNA  
SARS-  
CoV-2  
vaccines  
following  
its  
review  
of  
reports  
of  
myocarditis  
(inflammation  
of  
the  
heart  
muscle)  
and  
pericarditis  
(inflammation  
of  
the  
thin  
tissue  
surrounding  
the  
heart)  
among  
some  
vaccine  
recipients.  
ACIP  
concluded  
that  
the  
benefits  
of  
vaccination  
(prevention  
of  
COVID-19  
disease  
and  
associated  
hospitalization  
and  
death)  
outweigh

the  
risks  
(expected  
myocarditis  
after  
vaccination)  
in  
all  
populations  
for  
which  
vaccination  
is  
currently  
recommended.  
However,  
the  
committee  
noted  
the  
balance  
of  
benefits  
and  
risks  
vary  
by  
age  
and  
sex  
because  
myocarditis  
cases  
occurred  
predominantly  
among  
males  
less  
than  
30  
years  
old  
and  
the  
risk  
of  
complications  
from

COVID-19  
increase  
with  
age.  
For  
every  
1  
million  
second  
doses  
of  
mRNA  
vaccine  
administered  
to  
males  
ages  
12-29  
years,  
11,000  
COVID-19  
cases,  
560  
hospitalizations,  
138  
ICU  
admissions,  
and  
6  
deaths  
due  
to  
COVID-19  
could  
be  
prevented,  
compared  
with  
39-47  
expected  
myocarditis  
cases  
after  
SARS-  
CoV-2  
vaccination.  
Among  
older

males  
aged  
≥30  
years,  
the  
benefits  
increase,  
with  
15,300  
COVID-19  
cases,  
4,598  
hospitalizations,  
1,242  
ICU  
admissions,  
and  
700  
deaths  
potentially  
prevented,  
compared  
with  
3-4  
expected  
myocarditis  
cases.  
The  
authors  
note  
their  
analysis  
did  
not  
include  
the  
possible  
benefit  
of  
preventing  
longer-  
term  
COVID-19  
symptoms  
nor  
multisystem  
inflammatory  
syndrome

in  
children  
(MIS-  
C).  
ACIP  
emphasized  
the  
importance  
of  
[informing  
providers  
and  
families](#)  
about  
the  
benefits  
and  
risks  
of  
vaccination,  
including  
myocarditis,  
and  
monitoring  
for  
adverse  
events  
following  
vaccination.

Notably,  
the  
American  
Heart  
Association  
(AHA)  
on  
the  
same  
day  
published  
a  
[scientific  
statement](#)  
on  
the  
diagnosis  
and

management  
of  
myocarditis  
in  
children  
in  
the  
journal  
*Circulation*.  
Though  
the  
statement  
was  
developed  
prior  
to  
the  
COVID-19  
pandemic,  
the  
recommendations  
could  
be  
useful  
for  
healthcare  
providers  
in  
identifying  
and  
treating  
myocarditis/pericarditis  
among  
young  
people  
following  
SARS-  
CoV-2  
vaccination  
or  
infection,  
as  
there  
currently  
is  
no  
standard  
treatment

for  
either  
condition.  
With  
no  
alternatives  
to  
mRNA  
vaccines  
for  
adolescents  
available  
for  
the  
foreseeable  
future,  
no  
deaths  
or  
severe  
outcomes  
from  
myocarditis/pericarditis  
reported  
at  
the  
time  
of  
ACIP's  
meeting,  
and  
about  
one-  
third  
of  
US  
COVID-19  
cases  
occurring  
in  
people  
ages  
12-29  
in  
May  
2021  
—  
many



unvaccinated

—

most  
experts  
agree  
with  
the  
committee's  
conclusion  
to  
continue  
recommending  
vaccination  
for  
all  
people  
aged  
12  
and  
older.

[Questions](#)

[remain](#)

about  
whether  
reports  
of  
myocarditis/pericarditis  
among  
younger  
populations  
will  
impact  
vaccination  
rates,  
but  
many  
experts  
point  
out  
that  
potential  
future  
risks,  
posed  
by  
the  
Delta  
variant

(B.1.617.2)

or  
another  
possibly  
more  
virulent  
strain,  
should  
prompt  
parents  
to  
vaccinate  
their  
children  
in  
order  
to  
protect  
them  
and  
those  
around  
them.

### **REDUCING VACCINE DOSE**

As  
vaccination  
efforts  
continue  
to  
scale  
up  
in  
most  
countries,  
production  
capacity  
is  
still  
“woefully  
inadequate”  
to  
meet  
the  
global  
demand.

Some experts are beginning to speculate whether reducing the dose volume could increase the number of available doses without sacrificing protection. This concept, referred to as “fractionation,” has been implemented in the past for other vaccines, such as yellow fever, polio, and meningococcal conjugate vaccines. In these instances,

existing  
research  
provided  
evidence  
that  
smaller  
doses  
still  
provided  
sufficient  
protection;  
however,  
that  
is  
not  
necessarily  
the  
case  
for  
SARS-  
CoV-2  
vaccines.  
Because  
the  
vaccines  
are  
so  
new  
—  
and  
research  
to  
this  
point  
has  
focused  
principally  
on  
establishing  
safety  
and  
efficacy  
profiles  
to  
support  
regulatory  
authorization  
—

the  
necessary  
data  
simply  
are  
not  
available  
to  
demonstrate  
efficacy  
for  
smaller  
doses.  
Small  
studies  
early  
in  
the  
development  
process  
compared  
several  
dose  
options  
against  
each  
other,  
but  
these  
largely  
focused  
on  
safety  
rather  
than  
efficacy.  
There  
have  
not  
yet  
been  
dedicated  
efforts  
to  
determine  
the  
minimum  
dose

required  
to  
provide  
protection.

There  
is  
limited  
evidence  
that  
smaller  
doses  
of  
some  
existing  
vaccines  
could  
stimulate  
sufficient  
immune  
responses,  
but  
not  
enough  
to  
provide  
robust,  
reliable  
efficacy  
estimates.  
Additionally,  
it  
could  
be  
argued  
that  
the  
nature  
of  
the  
pandemic  
demands  
different  
calculus  
in  
terms  
of  
evaluating

benefit.  
Smaller  
doses  
of  
the  
vaccine  
might  
provide  
less  
protection  
at  
the  
individual  
level,  
but  
increasing  
the  
number  
of  
vaccinated  
individuals  
could  
provide  
a  
net  
benefit  
at  
the  
population  
level.  
Beyond  
the  
technical  
questions,  
implementing  
fractionation  
at  
this  
point  
in  
the  
pandemic  
—  
ie,  
after  
many  
higher-  
income

countries  
have  
already  
vaccinated  
substantial  
portions  
of  
their  
respective  
populations

—

could  
pose  
ethical  
and  
political  
challenges,  
considering  
that  
much  
of  
the  
future  
supply  
will  
be  
allocated  
to  
low-  
and  
middle-  
income  
countries.

## **COVID-19 THERAPEUTICS**

The  
WHO  
recently  
updated  
its  
living  
guideline  
for  
the  
use  
of  
COVID-19



therapeutics  
with  
a  
strong  
recommendation  
to  
use  
interleukin-6  
(IL-6)  
receptor  
blockers,  
including  
both  
tocilizumab  
and  
sarilumab,  
in  
patients  
with  
severe  
COVID-19  
disease.  
IL-6  
is  
an  
inflammatory  
cytokine  
that  
is  
activated  
as  
part  
of  
the  
immune  
response,  
but  
can  
be  
over-  
activated  
during  
SARS-  
CoV-2  
infection  
and  
contribute  
to

more  
severe  
disease.  
The  
WHO's  
decision  
followed  
the  
publication  
of  
a  
meta-  
analysis  
on  
IL-6  
blockers  
by  
its  
Rapid  
Evidence  
Appraisal  
for  
COVID-19  
Therapies  
(REACT)  
Working  
Group.  
The  
meta-  
analysis  
included  
[review](#)  
[of](#)  
[27](#)  
[randomized](#)  
[clinical](#)  
[trials](#)  
using  
IL-6  
receptor  
antagonists  
in  
10,930  
patients.  
Overall,  
the  
REACT  
study

found that 28-day all-cause mortality was lower in patients who received IL-6 receptor antagonists than in those who did not. It is important to note, however, that the improvement in all-cause mortality was only seen when co-administered with corticosteroids. Thus, the updated WHO recommendation

specifies  
that  
patients  
meeting  
criteria  
for  
severe  
and  
critical  
COVID-19  
disease  
should  
be  
treated  
with  
both  
IL-6  
receptor  
antagonists  
and  
corticosteroids.

### **BIOMARKERS**

Throughout  
the  
pandemic,  
scientists  
have  
been  
studying  
why  
some  
people  
are  
more  
susceptible  
than  
others  
to  
severe  
COVID-19  
disease  
and  
what  
genetic  
factors  
might  
play

into  
this  
heightened  
susceptibility.  
This  
week,  
a  
group  
of  
researchers  
with  
the  
[COVID-19  
Host  
Genetics  
Initiative](#)  
published  
a  
study  
in  
*Nature*  
that  
identifies  
[13  
genome-  
wide  
significant  
loci](#)  
that  
are  
associated  
with  
increased  
risk  
of  
SARS-  
CoV-2  
infection  
and  
with  
severe  
COVID-19  
disease  
outcomes.  
The  
identified  
loci  
(locations

of  
genes  
along  
chromosomes)  
previously  
have  
been  
correlated  
with  
lung  
function  
and  
inflammatory  
disorders.  
Understanding  
genetic  
predisposition  
to  
poor  
outcomes  
from  
SARS-  
CoV-2  
infection  
is  
especially  
important  
for  
the  
development  
of  
medical  
countermeasures.  
Other  
studies  
have  
identified  
human  
biomarkers  
associated  
with  
severe  
COVID-19  
disease  
whose  
genetic  
expression  
can

be modified using existing drugs in a hospital setting. The [ACE-2 receptor](#) and associated *ACE2* gene were identified early on as one such marker.

Beyond treatment of COVID-19 patients, scientists also are investigating biomarkers of successful responses to SARS-CoV-2 vaccines. Researchers at the University of Oxford

who developed the AstraZeneca-Oxford vaccine are investigating the ability of their vaccine to induce high levels of neutralizing antibodies in recipients. When researchers compared vaccinated individuals who were fully protected to cases of "breakthrough infections" among other vaccinated individuals, high levels of neutralizing antibodies were correlated with



better  
protection.  
Although  
neutralizing  
antibodies  
may  
not  
be  
an  
appropriate  
marker  
of  
vaccine  
success  
in  
other  
platforms,  
future  
vaccines  
with  
similar  
profiles  
to  
the  
AstraZeneca-  
Oxford  
vaccine  
may  
be  
able  
to  
accelerate  
their  
development  
if  
they  
can  
demonstrate  
high  
levels  
of  
this  
biomarker.

**UK  
SUMMER  
COVID-19  
PLAN**

On  
July  
5,  
the  
UK  
announced  
its  
"Summer  
2021"  
COVID-19  
response  
plan,  
which  
will  
move  
the  
country  
to  
Step  
4  
of  
its  
recovery  
and  
eliminate  
many  
existing  
restrictions  
later  
this  
month.  
The  
changes  
are  
scheduled  
to  
take  
effect  
July  
19,  
and  
the  
final  
decision  
will  
be  
made  
on

July  
12,  
based  
on  
updated  
epidemiological  
and  
other  
data.  
The  
decision  
will  
eliminate  
“all  
remaining  
limits  
on  
social  
contact,”  
including  
on  
public  
and  
private  
gatherings  
at  
businesses,  
restaurants,  
pubs,  
and  
other  
venues.  
Additionally,  
all  
mandates  
regarding  
mask  
use  
and  
physical  
distancing  
will  
be  
removed,  
although  
local  
health  
authorities

can  
implement  
targeted  
measures  
in  
response  
to  
COVID-19  
outbreaks.  
Beyond  
the  
social  
distancing-  
related  
protections,  
the  
UK  
also  
will  
eliminate  
requirements  
to  
self-  
quarantine  
after  
known  
exposure  
to  
a  
COVID-19  
case  
for  
fully  
vaccinated  
individuals  
and  
those  
under  
the  
age  
of  
18.  
Schools  
will  
no  
longer  
keep  
students

in  
“bubbles,”  
and  
they  
will  
no  
longer  
be  
required  
to  
conduct  
contact  
tracing  
for  
identified  
cases,  
“which  
will  
help  
to  
minimise  
the  
number  
of  
children  
isolating.”

The  
existing  
national  
testing  
and  
contact  
tracing  
program  
will  
remain  
in  
effect  
through  
the  
winter.

The  
UK  
plan  
notes  
that  
there

is  
“a  
sufficiently  
high  
proportion  
of  
the  
population  
vaccinated”  
and  
that  
“the  
country  
can  
learn  
to  
live  
with  
COVID-19”  
without  
the  
existing  
restrictions.  
The  
UK  
reports  
national  
[vaccination  
coverage  
among  
adults](#)  
as  
87%  
for  
at  
least  
1  
dose  
and  
65%  
for  
full  
vaccination.  
Notably,  
UK  
Secretary  
of  
State

for  
Health  
Sajid  
Javid  
reportedly  
acknowledged  
that  
removing  
the  
restrictions  
could  
result  
in  
the  
daily  
incidence  
exceeding  
100,000  
new  
cases  
per  
day,  
nearly  
4  
times  
the  
current  
average  
and  
more  
than  
50%  
higher  
than  
the  
UK's  
current  
record  
(59,829  
new  
cases  
per  
day  
on  
January  
9,  
2021).  
The

UK  
is  
currently  
facing  
its  
second-  
largest  
surge,  
which  
has  
been  
widely  
attributed  
to  
a  
rapid  
increase  
in  
the  
prevalence  
of  
the  
Delta  
variant  
(B.1.617.2).  
In  
the  
current  
surge,  
the  
UK's  
daily  
incidence  
increased  
by  
a  
factor  
of  
12  
since  
mid-  
May,  
even  
with  
the  
existing  
restrictions



in  
place.

As  
countries  
like  
the  
UK  
ease  
COVID-19  
restrictions,  
the  
WHO  
continues  
to  
emphasize  
that  
the  
pandemic  
is  
far  
from  
over  
and  
urge  
governments  
to  
maintain  
effective  
protections.  
In  
response  
to  
the  
UK's  
plan,  
more  
than  
4,000  
clinicians  
and  
other  
experts  
signed  
an  
open  
letter  
published

in  
[The Lancet](#),  
referring  
to  
the  
plan  
as  
“mass  
infection”  
and  
a  
“dangerous  
and  
unethical  
experiment”  
and  
highlighting  
the  
increased  
risk  
to  
children,  
most  
of  
whom  
are  
still  
not  
eligible  
for  
vaccination.

## **FIJI**

Fiji  
reported  
a  
[record  
daily  
high](#)  
in  
new  
COVID-19  
cases  
on  
July  
7,  
with

636  
cases  
in  
24  
hours.  
Government  
officials  
attributed  
the  
recent  
outbreak  
to  
a  
case  
of  
the  
Delta  
variant  
that  
escaped  
the  
country's  
isolation  
facility.  
Of  
the  
39  
deaths  
that  
have  
been  
reported  
throughout  
the  
pandemic,  
37  
deaths  
have  
occurred  
since  
the  
latest  
outbreak  
began.  
This  
[newest](#)  
[surge](#)  
[is](#)

straining  
Fiji's  
health  
system,  
where  
its  
largest  
hospital  
is  
now  
exclusively  
treating  
COVID-19  
patients  
and  
its  
mortuary  
is  
at  
full  
capacity.  
Over  
1,000  
patients  
have  
been  
sent  
home  
to  
quarantine  
and  
recover,  
as  
medical  
facilities  
have  
no  
space.  
A  
makeshift  
clinic  
is  
reportedly  
being  
established,  
utilizing  
a  
sports

arena  
outside  
the  
capital  
of  
Suva.  
The  
Ministry  
of  
Health  
has  
suspended  
all  
[pregnancy  
services](#)  
in  
and  
around  
Suva  
until  
July  
26,  
and  
the  
ministry  
no  
longer  
will  
test  
residents  
in  
their  
homes.  
While  
no  
nationwide  
lockdown  
is  
in  
place,  
[police  
have  
arrested  
48  
people](#)  
for  
failure  
to

follow  
local  
mask  
ordinances  
or  
limits  
on  
social  
gatherings.  
About  
36%  
of  
Fiji's  
population  
has  
been  
partially  
vaccinated,  
and  
just  
over  
6%  
have  
been  
fully  
vaccinated.

## **OLYMPICS**

Two  
weeks  
from  
today,  
Tokyo  
will  
kick  
off  
its  
scaled-  
back  
2020  
Summer  
Olympic  
Games  
amid  
another  
state  
of  
emergency.

The Japanese government imposed a fourth state of emergency in the Tokyo metropolitan area that will begin on July 12 and extend until August 22, through the entire Olympic Games. Olympic organizers also decided against allowing any spectators into the games, with some exceptions for events taking place

in  
areas  
outside  
of  
Tokyo  
that  
are  
not  
under  
a  
state  
of  
emergency.  
Further  
changes  
to  
the  
Olympics  
programming  
include  
[cancelling  
the  
Olympic  
torch  
relay](#)  
through  
Tokyo.  
Athletes  
and  
other  
team  
members  
also  
must  
abide  
by  
strict  
quarantine  
and  
testing  
measures  
in  
order  
to  
participate.  
These  
heightened  
measures



follow  
weeks  
of  
concern  
over  
rising  
numbers  
of  
COVID-19  
cases,  
public  
opposition  
to  
the  
games,  
and  
consultation  
with  
experts.  
However,  
with  
the  
number  
of  
[new](#)  
[COVID-19](#)  
[cases](#)  
[on](#)  
[the](#)  
[upswing](#)  
and  
vaccination  
rates  
unable  
to  
keep  
pace,  
many  
public  
health  
experts  
fear  
these  
efforts  
may  
not  
be  
enough

to  
prevent  
another  
pandemic  
wave  
in  
Japan.

## **COMMUNIVAX**

The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
is  
hosting  
the  
next  
in  
its  
series  
of  
[CommuniVax](#)  
webinars  
on  
July  
15  
at  
noon  
EDT.  
The  
webinar  
follows  
the  
publication  
of  
CommuniVax's  
second  
report  
—[The  
Public's  
Role  
in  
COVID-19  
Vaccination](#)—  
and

it  
will  
focus  
on  
“a  
new  
strategy  
for  
the  
COVID-19  
vaccination  
campaign,”  
informed  
by  
input  
from  
racial  
and  
ethnic  
minority  
communities.  
The  
CommuniVax  
project  
aims  
to  
address  
racial  
and  
ethnic  
disparities  
in  
vaccination,  
particularly  
in  
the  
context  
of  
the  
COVID-19  
pandemic.  
The  
webinar  
will  
feature  
presentations  
by  
and

discussions  
with  
speakers  
representing  
a  
broad  
spectrum  
of  
US  
academic  
institutions  
and  
non-  
governmental  
organizations,  
moderated  
by  
Dr.  
Emily  
Brunson  
(Texas  
State  
University)  
and  
Dr.  
Monica  
Schoch-  
Spana  
(Johns  
Hopkins  
Center  
for  
Health  
Security).  
Additional  
information  
and  
registration  
is  
[available  
here](#).

**US Travel Industry and Retail Supply Chain Updates**

**Weekly Updates on SARS-CoV-2 Vaccines**

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**Date : 7/13/2021 2:11:42 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - July 13, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
187  
million  
cumulative  
cases  
and  
4.04

million  
deaths  
worldwide  
as  
of  
8:30am  
EDT  
on  
July  
13.  
Global  
weekly  
incidence  
increased  
for  
the  
third  
consecutive  
week,  
up  
nearly  
10%  
from  
the  
previous  
week.  
After  
9  
consecutive  
weeks  
of  
decline,  
global  
weekly  
mortality  
increased  
3.4%  
compared  
to  
the  
previous  
week.  
The  
increase  
in  
weekly  
mortality  
follows

2  
weeks  
behind  
the  
trend  
in  
weekly  
incidence,  
and  
while  
the  
timing  
is  
slightly  
earlier  
than  
the  
3-4  
weeks  
we  
have  
observed  
over  
the  
course  
of  
the  
pandemic,  
it  
is  
still  
relatively  
consistent  
with  
what  
we  
would  
expect.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
3.33  
billion  
doses  
of



SARS-CoV-2 vaccines administered globally as of July 13. The WHO reports a total of 1.28 billion individuals received at least 1 dose and 590 million are fully vaccinated. Analysis from Our World in Data shows that the global [daily doses administered](#) continues to decline rapidly from the

record  
high  
of  
43.1  
million  
doses  
per  
day  
on  
June  
27,  
now  
down  
to  
29.2  
million.  
Vaccinations  
are  
decreasing  
in  
Asia  
and  
North  
America,  
leveling  
off  
in  
Europe  
and  
Africa,  
and  
increasing  
in  
Oceania  
and  
South  
America.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
1.98  
billion  
[vaccinated](#)

individuals  
worldwide  
(1+  
dose;  
25.4%  
of  
the  
global  
population).

There  
are  
an  
estimated  
957  
million  
who  
are  
fully  
vaccinated  
(12.3%  
of  
the  
global  
population),  
although  
reporting  
is  
less  
complete  
than  
for  
other  
data.

*UNITED  
STATES*  
The  
US  
CDC  
reported  
33.7  
million  
cumulative  
COVID-19  
cases  
and  
604,710  
deaths.

The  
US  
reported  
17,753  
new  
cases  
per  
day  
on  
July  
9  
—  
a  
55%  
increase  
from  
the  
low  
of  
11,455  
new  
cases  
per  
day  
on  
June  
20  
—  
before  
decreasing  
to  
15,497  
on  
July  
11.  
Daily  
mortality  
also  
“peaked”  
on  
July  
9  
—  
increasing  
from  
150  
on  
July

6  
to  
167  
(+11%)  
—  
before  
falling  
slightly  
to  
156  
on  
July  
11.  
These  
fluctuations  
could  
still  
be  
a  
result  
of  
delayed  
reporting  
over  
the  
US  
Independence  
Day  
holiday  
weekend.  
Reporting  
should  
return  
to  
normal  
by  
later  
this  
week,  
but  
it  
could  
be  
another  
week  
before  
we  
have

a  
clearer  
picture  
of  
the  
longer-  
term  
trends.

US  
Vaccination

The  
US  
has  
administered  
335  
million  
cumulative  
doses  
of  
[SARS-  
CoV-2  
vaccines](#),  
and  
it  
is  
administering  
approximately  
421,000  
[doses](#)  
[per](#)  
[day](#),  
the  
lowest  
average  
since  
January  
1.  
A  
total  
of  
184  
million  
individuals  
in  
the  
US  
have

received  
at  
least  
1  
dose,  
equivalent  
to  
55.5%  
of  
the  
entire  
US  
population.

Among  
adults,  
67.7%  
have  
received  
at  
least  
1  
dose  
as  
well  
as  
9.6  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
159  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
48.0%  
of  
the  
total  
population.

Approximately  
58.9%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
7.4  
million  
adolescents  
aged  
12-17  
years.

**US  
CDC  
SCHOOL  
&  
CHILD  
CARE  
GUIDANCE**

On  
July  
9  
the  
US  
CDC  
released  
[updated  
guidance  
for  
COVID-19  
prevention  
in  
K-12  
schools,](#)  
prioritizing  
a  
return  
to  
in-  
person  
learning  
for  
students



this  
fall  
and  
highlighting  
the  
importance  
of  
vaccinating  
as  
many  
eligible  
children  
as  
possible.  
So  
far,  
1  
in  
3  
adolescents  
ages  
12  
to  
17  
have  
been  
vaccinated,  
a  
number  
experts  
are  
hoping  
will  
increase  
over  
the  
coming  
months.  
Overall,  
the  
CDC  
recommends  
school  
districts  
tailor  
their  
recommendations  
to

local  
laws  
and  
epidemiological  
situations,  
tightening  
or  
relaxing  
layered  
prevention  
strategies  
such  
as  
mask  
wearing  
and  
physical  
distancing  
based  
on  
local  
transmission  
rates.  
Some  
experts  
criticized  
the  
agency  
for  
leaving  
so  
many  
decisions  
up  
to  
local  
officials,  
saying  
more  
specific  
guidance  
would  
be  
helpful.  
Others,  
including  
officials  
with

the  
country's  
two  
major  
teachers'  
unions,  
praised  
the  
guidance,  
calling  
it  
"grounded  
in  
both  
science  
and  
common  
sense."

With  
nearly  
all  
of  
the  
nation's  
school  
districts  
set  
to  
open  
this  
fall,  
the  
CDC  
updated  
its  
guidance  
based  
on  
progress  
in  
the  
national  
vaccination  
campaign.

In  
alignment  
with

its  
national  
recommendations  
for  
the  
general  
public,  
the  
CDC  
said  
masking  
could  
be  
optional  
for  
vaccinated  
students  
and  
school  
staff  
but  
unvaccinated  
students  
ages  
2  
and  
older  
and  
staff  
should  
use  
masks  
when  
indoors,  
especially  
when  
physical  
distancing  
cannot  
be  
maintained.  
Masks  
are  
not  
needed  
for  
outdoor  
activities

such  
as  
recess  
or  
extracurricular  
activities,  
unless  
people  
are  
in

a  
crowded  
situation,  
such  
as  
in  
the  
stands  
at  
a  
football  
game.

The  
recommendation  
for  
physical  
distancing  
for  
students  
was  
decreased  
from  
6  
feet  
to  
3  
feet.

The  
guidance  
notes  
that  
if  
distancing  
inhibits  
in-  
person  
learning,  
layering

multiple  
other  
prevention  
strategies  
can  
be  
substituted.

All  
school  
staff  
should  
maintain  
a  
6-  
foot  
distance  
from  
students  
when  
possible.

If  
the  
number  
of  
cases  
in  
a  
community  
begins  
to  
rise,  
if  
vaccination  
rates  
are  
low,  
or  
if  
schools  
cannot  
determine  
who  
has  
been  
vaccinated,  
school  
districts  
could

opt  
for  
universal  
masking  
if  
local  
and  
state  
laws  
allow.

The  
CDC  
encouraged  
schools  
to  
promote  
vaccination  
among  
students  
and  
staff,  
including  
offering  
vaccinations  
on-  
site,  
providing  
sick  
leave  
for  
employees  
to  
get  
vaccinated,  
and  
excusing  
student  
absences  
for  
vaccinations.  
In  
addition,  
the  
agency  
said  
schools  
should

support  
those  
who  
want  
to  
wear  
masks  
even  
if  
they  
are  
vaccinated.

Schools  
should  
also  
consider  
layering  
other  
prevention  
strategies,  
including  
regular  
screening  
testing,  
improving  
ventilation,  
promoting  
good  
hand  
hygiene,  
staying  
home  
when  
sick,  
contact  
tracing  
with  
isolation  
or  
quarantine,  
and  
cleaning  
and  
disinfection.  
[Cohorting](#),  
or  
keeping  
students



and  
staff  
in  
small  
groups  
throughout  
the  
day,  
might  
be  
useful  
in  
some  
cases  
to  
limit  
contact,  
but  
the  
practice  
should  
not  
replace  
other  
prevention  
strategies  
nor  
mix  
vaccinated  
and  
unvaccinated  
individuals,  
the  
agency  
said.  
The  
CDC  
also  
released  
[updated  
guidance  
for  
early  
care  
and  
education  
and  
childcare](#)

programs.

With  
the  
more  
transmissible  
Delta  
variant  
now  
dominant  
in  
the  
US,  
it  
remains  
to  
be  
seen  
how  
local  
jurisdictions  
will  
enforce  
the  
CDC's  
guidance  
in  
areas  
of  
low  
vaccination  
coverage,  
where  
cases  
and  
hospitalizations  
are  
already  
rising.

## **VACCINES & GUILLAIN- BARRÉ SYNDROME**

The  
US  
FDA  
announced

that  
it  
is  
including  
a  
warning  
regarding  
the  
risk  
of  
Guillain-  
Barré  
syndrome  
(GBS),  
a  
rare  
but  
potentially  
serious  
autoimmune  
neurological  
condition,  
associated  
with  
the  
J&J-  
Janssen  
SARS-  
CoV-2  
vaccine.  
To  
date,  
there  
have  
been  
approximately  
100  
preliminary  
reports  
of  
GBS  
among  
12.8  
million  
recipients  
of  
the  
J&J-

Janssen vaccine, but additional data are required in order to establish a causal relationship. Most of the cases have been identified within 2 weeks of vaccination, and mostly among men aged 50 years and older. Regulatory officials have not identified a similar trend associated with the Pfizer-BioNTech

or  
Moderna  
vaccines.  
However,  
the  
FDA's  
update  
comes  
only  
days  
after  
the  
[European  
Medicines  
Agency's  
Pharmacovigilance  
Risk  
Assessment  
Committee](#)  
recommended  
[including](#)  
[a](#)  
[warning](#)  
[to](#)  
[raise](#)  
[awareness](#)  
among  
healthcare  
professionals  
and  
people  
taking  
the  
AstraZeneca-  
Oxford  
vaccine  
of  
GBS  
cases  
reported  
following  
vaccination.  
Both  
the  
J&J-  
Janssen  
and  
AstraZeneca-

Oxford  
vaccines  
are  
adenovirus  
vector  
vaccines.

While  
rare  
in  
terms  
of  
the  
frequency  
of  
cases,  
GBS  
is  
a  
known  
risk  
associated  
with  
viral  
infections  
and  
other  
vaccines.

The  
FDA  
includes  
warnings  
regarding  
GBS  
risk  
for  
several  
common  
vaccines,  
including  
both  
the  
[nasal](#)  
[mist](#)  
and  
[injection](#)  
versions  
of

the  
seasonal  
influenza  
vaccine  
and  
the  
DTaP  
(diphtheria,  
tetanus,  
and  
pertussis)  
vaccine.  
Prior  
research  
has  
also  
found  
elevated  
risk  
of  
GBS  
following  
seasonal  
influenza  
infections,  
which  
is  
orders  
of  
magnitude  
higher  
than  
from  
the  
vaccine.

On  
average,  
approximately  
3,000-6,000  
cases  
of  
GBS  
are  
reported  
annually  
in  
the

US.  
One  
[previous](#)  
[COVID-19](#)  
[study](#)  
involving  
more  
than  
70,000  
COVID-19  
patients  
in  
Spain  
estimated  
the  
GBS  
risk  
following  
infection  
to  
be  
0.15%,  
which  
is  
approximately  
1,500  
GBS  
cases  
per  
million  
SARS-  
CoV-2  
infections.  
One  
[previous](#)  
[study](#)  
on  
GBS  
and  
seasonal  
influenza  
found  
the  
GBS  
risk  
to  
be  
approximately



1  
case  
per  
million  
seasonal  
influenza  
vaccinations  
and  
18  
cases  
per  
million  
cases  
of  
seasonal  
influenza.  
Like  
with  
other  
adverse  
events  
identified  
following  
SARS-  
CoV-2  
vaccination,  
experts  
emphasize  
that  
the  
benefits  
far  
outweigh  
the  
risks.

**FULL  
VACCINE  
APPROVAL**

With  
3  
SARS-  
CoV-2  
vaccines  
authorized  
for  
emergency  
use

by  
the  
US  
FDA,  
attention  
is  
shifting  
toward  
the  
process  
for  
these  
vaccines  
to  
receive  
full  
regulatory  
approval.  
The  
FDA  
is  
facing  
pressure,  
including  
from  
some  
high-  
profile  
experts,  
to  
move  
quickly  
with  
the  
full  
approvals  
in  
order  
to  
encourage  
individuals  
to  
get  
vaccinated,  
but  
some  
experts  
are

pushing  
back  
on  
the  
idea  
that  
the  
Emergency  
Use  
Authorization  
is  
discouraging  
Americans  
from  
getting  
vaccinated  
and  
that  
the  
impression  
that  
the  
FDA  
hastily  
issued  
full  
approval  
for  
one  
or  
more  
vaccines  
could  
pose  
the  
risk  
of  
harming  
its  
credibility.  
FDA  
officials  
have  
commented  
that  
the  
agency  
is

moving  
as  
quickly  
as  
practicable,  
and  
the  
sheer  
volume  
of  
vaccinations  
administered  
already  
are  
providing  
a  
wealth  
of  
data  
for  
regulatory  
officials,  
which  
could  
shorten  
the  
timeline  
to  
some  
degree.

### **VACCINE DOSE STRETCHING**

In  
an  
effort  
to  
accelerate  
the  
pace  
of  
global  
immunization,  
scientists  
are  
exploring  
whether

administering

a

quarter

of

the

standard

dose

of

the

Moderna

SARS-

CoV-2

vaccine

could

provide

lasting

immunity

to

more

people.

Similar

dose-

stretching

strategies

have

been

employed

in

the

past,

including

with

yellow

fever

vaccinations

in

Africa

and

South

America,

but

no

similar

approach

has

been

tried

for

COVID-19  
despite  
slow  
vaccination  
rollouts  
in  
low-  
and  
middle-  
income  
countries  
and  
evolving  
variants  
of  
concern.  
To  
evaluate  
whether  
2  
25  
microgram  
doses,  
versus  
the  
authorized  
2  
100  
microgram  
doses,  
could  
elicit  
lasting  
neutralizing  
antibodies,  
researchers  
analyzed  
blood  
samples  
from  
35  
individuals  
involved  
in  
the  
original  
trial  
of

the Moderna vaccine. In a [preprint study](#) published last week in *medRxiv*, the researchers report that nearly all the participants had neutralizing antibodies and various types of T cells 6 months after vaccination. The antibody and T cell levels were similar to people who had recovered from COVID-19.

According to a preprint [modeling study](#) conducted by researchers from Harvard University and colleagues, vaccine dose-stretching could accelerate global vaccination efforts, helping to prevent more COVID-19 cases and related deaths than current strategies. [Another trial](#) testing lower doses of the Pfizer-BioNTech vaccine in people ages 18-55



is  
ongoing  
in  
Belgium.

## **VACCINE BOOSTER**

According  
to  
multiple  
news  
media  
reports,  
[representatives](#)  
[from](#)  
[Pfizer](#)  
[met](#)  
[with](#)  
[scientists](#)  
[and](#)  
[regulatory](#)  
[officials](#)  
from  
the  
US  
government  
this  
week  
to  
present  
information  
regarding  
the  
[need](#)  
[for](#)  
[booster](#)  
[doses](#)  
of  
its  
SARS-  
CoV-2  
vaccine  
(developed  
in  
collaboration  
with  
BioNTech).  
Notably,

the  
meeting  
took  
place  
privately,  
as  
opposed  
to  
other  
recent  
presentations  
of  
key  
vaccine  
safety  
and  
efficacy  
data  
that  
took  
place  
at  
public  
meetings  
of  
the  
US  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
or  
the  
US  
FDA's  
Vaccines  
and  
Related  
Biological  
Products  
Advisory  
Committee.  
Reportedly,  
this  
meeting  
aimed

to  
review  
preliminary  
data  
and  
initiate  
discussions,  
as  
opposed  
to  
present  
formal  
arguments  
or  
make  
any  
decisions  
regarding  
the  
booster  
doses.  
Pfizer  
is  
expected  
to  
submit  
data  
on  
clinical  
trial  
participants'  
immune  
responses  
following  
a  
third  
dose  
of  
its  
vaccine  
to  
the  
FDA  
in  
the  
coming  
weeks;  
however,

decisions  
regarding  
guidance  
on  
booster  
doses  
likely  
will  
depend  
heavily  
on  
CDC  
data  
regarding  
breakthrough  
infection  
risk.

[WHO](#)  
[Director-](#)  
[General](#)  
[Dr.](#)  
[Tedros](#)  
[Adhanom](#)  
[Ghebreyesus](#)

recently  
issued  
a  
statement  
calling  
for  
a  
continued  
focus  
on  
increasing  
vaccination  
coverage  
globally,  
rather  
than  
using  
much-  
needed  
doses  
for  
boosters  
in

countries  
that  
already  
have  
high  
vaccination  
coverage.  
Vaccine  
supply  
has  
not  
yet  
met  
the  
global  
demand,  
and  
many  
countries  
continue  
to  
struggle  
to  
access  
doses  
for  
their  
populations.  
Dr.  
Tedros  
emphasized  
that  
there  
are  
divergent  
COVID-19  
trends,  
with  
low-  
and  
middle-  
income  
countries  
with  
low  
coverage  
facing  
severe

surges  
while  
wealthier,  
vaccinated  
countries  
fare  
better.  
Dr.  
Soumya  
Swaminathan,  
the  
WHO's  
Chief  
Scientist,  
noted  
that  
adding  
a  
third  
dose  
of  
the  
vaccine  
in  
just  
11  
high-  
and  
upper-  
middle-  
income  
countries  
could  
require  
an  
additional  
800  
million  
doses  
—  
enough  
to  
fully  
vaccinate  
400  
million  
people  
—

that  
are  
badly  
needed  
in  
many  
countries.

Despite  
the  
WHO's  
call  
to  
avoid  
extra  
doses,  
Israel  
on  
June  
12  
became  
the  
first  
country  
to  
offer  
a  
third  
dose  
of  
the  
Pfizer-  
BioNTech  
vaccine  
to  
immunocompromised  
individuals.  
Israel  
Health  
Minister  
Nitzan  
Horowitz  
did  
not  
explain  
how  
the  
decision

to  
offer  
the  
booster  
shots  
was  
reached  
before  
authorization  
by  
any  
major  
regulators,  
and  
he  
indicated  
the  
ministry  
is  
evaluating  
whether  
to  
extend  
the  
offer  
to  
the  
entire  
population.

### **SENEGAL VACCINE PRODUCTION**

On  
July  
9,  
the  
[Republic  
of  
Senegal](#)  
announced  
it  
will  
begin  
construction  
of  
a  
vaccine



manufacturing  
facility  
at  
the  
Institut  
Pasteur  
in  
Dakar  
later  
this  
year,  
with  
support  
from  
the  
EU,  
US,  
and  
World  
Bank.  
The  
effort  
aims  
to  
produce  
25  
million  
doses  
of  
SARS-  
CoV-2  
vaccines  
per  
month  
by  
the  
end  
of  
2022,  
as  
well  
as  
manufacture  
vaccines  
for  
other  
diseases  
to

reduce  
Africa's  
reliance  
on  
imported  
doses.  
The  
construction  
is  
supported  
by  
nearly  
€30  
million  
(US  
\$35  
million)  
from  
Germany,  
France,  
and  
the  
EU,  
and  
the  
facility  
is  
expected  
to  
be  
finished  
within  
18  
months  
from  
the  
start  
of  
construction.

Africa  
currently  
relies  
on  
importation  
for  
99%  
of

its  
vaccine  
needs.

The  
COVID-19  
pandemic  
has  
confirmed  
the  
need  
for  
local  
vaccine  
production,  
with  
less  
than  
3%  
of  
the  
continent's  
population  
vaccinated  
(1+  
dose)  
and  
less  
than  
1.5%  
fully  
vaccinated.

During  
the  
pandemic,  
African  
countries  
have  
relied  
on  
the  
COVAX  
facility  
and  
bilateral  
agreements  
in  
order  
to

obtain  
access  
to  
SARS-  
CoV-2  
vaccines.  
[COVAX](#)  
anticipates  
delivering  
a  
total  
of  
520  
million  
doses  
of  
vaccine  
to  
African  
countries  
by  
the  
end  
of  
2021  
and  
850  
million  
by  
March  
2022.  
That  
target  
would  
supply  
enough  
vaccine  
doses  
to  
achieve  
about  
30%  
coverage  
in  
each  
eligible  
African  
country.

## **NETHERLANDS**

Dutch  
Prime  
Minister  
Mark  
Rutte  
[apologized](#)  
on  
July  
12  
for  
what  
he  
said  
was  
“poor  
judgment”  
in  
loosening  
COVID-19  
restrictions,  
as  
the  
country’s  
number  
of  
new  
cases  
rose  
to  
its  
highest  
levels  
of  
the  
year.  
Despite  
warnings  
from  
health  
experts  
that  
a  
nearly  
complete  
[reopening](#)  
[was](#)

premature,  
the  
Dutch  
government  
allowed  
bars,  
nightclubs,  
and  
festivals  
to  
reopen  
beginning  
on  
June  
26  
following  
a  
marked  
decrease  
in  
cases.  
Although  
around  
two-  
thirds  
of  
the  
population  
have  
at  
least  
one  
vaccine  
dose,  
the  
lifting  
of  
restrictions  
in  
combination  
with  
the  
circulation  
of  
the  
Delta  
variant  
clearly

had  
a  
rapid  
impact  
on  
virus  
transmission,  
as  
the  
7-  
day  
average  
of  
COVID-19  
cases  
increased  
by  
572%  
this  
week  
compared  
with  
last  
week.  
Cases  
are  
surging  
particularly  
among  
the  
young  
adult  
population,  
who  
briefly  
were  
able  
to  
take  
advantage  
of  
reopened  
nightlife.  
The  
government  
moved  
7  
regions

into  
the  
highest  
“very  
serious”  
risk  
level

and  
10  
others  
into  
the  
second  
highest  
“serious”  
risk  
level.

Last  
week,  
almost  
all  
of  
the  
regions  
were  
within  
the  
lowest  
two  
risk  
levels  
of  
“vigilant”  
and  
“worrisome.”

The  
renewed  
control  
measures  
went  
into  
effect  
on  
July  
10  
and  
are  
set



to  
last  
through  
August  
14.

## **AIR HANDLING**

A  
new  
[CDC](#)  
[MMWR](#)  
[report](#)  
explores  
safety  
precautions  
that  
can  
be  
taken  
indoors  
to  
reduce  
transmission  
of  
SARS-  
CoV-2.  
In  
particular,  
the  
combination  
of  
portable  
high  
efficiency  
particulate  
air  
(HEPA)  
cleaners  
with  
universal  
masking  
policies  
appears  
to  
be  
very  
effective

in  
preventing  
transmission  
between  
people  
in  
close-  
contact  
indoor  
environments.

[Previous  
studies](#)

have  
shown  
that  
HEPA  
air  
cleaners,  
portable  
or  
built-  
in,  
can  
greatly  
reduce  
aerosol  
transmission  
in  
indoor  
environments.

For  
the  
*MMWR*  
report,  
CDC  
researchers  
simulated  
a  
conference  
room  
presentation  
scenario  
by  
using  
respiratory  
simulators  
to  
mimic

a  
person  
with  
COVID-19  
as  
well  
as  
other,  
uninfected  
persons.  
When  
2  
portable  
HEPA  
air  
handlers  
were  
used  
alone,  
aerosol  
exposure  
was  
reduced  
by  
up  
to  
65%.  
When  
masks  
were  
worn  
by  
all  
simulated  
participants  
without  
air  
cleaning,  
the  
aerosol  
exposure  
was  
reduced  
by  
72%.  
However,  
when  
both

air  
cleaning  
and  
masks  
were  
employed  
as  
mitigation  
measures,  
the  
aerosol  
exposure  
was  
reduced  
by  
up  
to  
90%.

According  
to  
the  
experiment,  
the  
HEPA  
air  
cleaners  
were  
most  
effective  
when  
placed  
close  
to  
the  
simulated  
infected  
participant.

The  
researchers  
conclude  
that  
portable  
HEPA  
air  
cleaners  
and  
masking  
in

combination  
are  
viable  
options  
to  
prevent  
aerosolized  
SARS-  
CoV-2  
transmission,  
especially  
in  
environments  
without  
HVAC  
systems  
or  
other  
built-  
in  
air  
cleaning  
technology.

**US  
IMMIGRATION  
DETENTION  
CENTERS**

Public  
health  
officials  
warn  
of  
infectious  
disease  
transmission  
risk  
at  
high-  
density  
facilities,  
and  
[immigration  
detention  
centers](#)  
are  
no  
exception.

With relatively few detainees vaccinated for SARS-CoV-2 and the total number of detainees increasing to pre-pandemic levels, US Immigration and Customs Enforcement (ICE) is reporting outbreaks and surges in new COVID-19 cases. According to a *New York Times* analysis of ICE data, more than 7,500 COVID-19

cases  
have  
been  
reported  
among  
detainees  
since  
April,  
accounting  
for  
more  
than  
40%  
of  
the  
total  
reported  
cases  
in  
ICE  
facilities  
since  
the  
pandemic  
began.  
Experts  
who  
have  
visited  
detention  
centers  
report  
low  
adherence  
to  
public  
health  
interventions  
like  
mask  
wearing  
and  
physical  
distancing  
among  
detainees  
and  
ICE

staff  
members.  
According  
to  
an  
ICE  
spokesperson,  
all  
new  
detainees  
are  
tested  
and  
quarantined  
for  
14  
days  
upon  
arrival.

As  
of  
May,  
the  
agency's  
data  
show  
only  
20%  
of  
detainees  
received  
at  
least  
1  
dose  
of  
vaccine  
while  
in  
custody.  
Sharon  
Dolovich,  
a  
law  
professor  
and  
director  
of



UCLA's  
COVID  
Behind  
Bars  
Data  
Project,  
said  
COVID-19  
outbreaks  
would  
remain  
high  
among  
detained  
individuals  
until  
ICE  
prioritizes  
vaccinations.

As  
the  
Delta  
variant  
takes  
hold  
in  
regions  
with  
low  
vaccination  
rates,  
public  
health  
officials  
warn  
against  
further  
outbreaks  
among  
vulnerable  
detainees  
and  
the  
potential  
for  
the  
development  
of

other  
variants.

**US Travel Industry and Retail Supply Chain Updates**

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 7/20/2021 1:56:31 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - July 20, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
191  
million  
cumulative  
cases  
and  
4.10

million  
deaths  
worldwide  
as  
of  
6:00am  
EDT  
on  
July  
20.  
Global  
weekly  
incidence  
increased  
for  
the  
fourth  
consecutive  
week,  
up  
11.6%  
from  
the  
previous  
week  
and  
the  
highest  
weekly  
total  
since  
the  
week  
of  
May  
24.  
Weekly  
global  
mortality  
increased  
for  
the  
second  
consecutive  
week,  
but  
the  
weekly

increase  
was  
only  
1.1%  
compared  
to  
the  
previous  
week.

Weekly  
incidence  
decreased  
in  
Africa  
for  
the  
first  
time  
since  
mid-  
May.

Overall,  
the  
Americas  
are  
holding  
relatively  
steady  
over  
the  
past  
several  
weeks;  
however,  
reported  
cases  
in  
[South  
America](#)  
are  
declining,  
while  
reported  
cases  
in  
North  
America

are  
increasing

—

both  
starting  
in  
late  
June.

Case  
counts  
in  
other  
WHO  
regions  
are  
increasing  
as  
of  
late  
June.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
3.44  
billion  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
July  
19.  
The  
WHO  
reports  
a  
total  
of  
1.35  
billion  
individuals

have  
received  
at  
least  
1  
dose,  
and  
637  
million  
are  
fully  
vaccinated.

Analysis  
from

Our  
World  
in

Data  
shows

that  
the

global

daily

doses

administered

leveled

off

over

the

past

week,

now

hovering

at

slightly

more

than

30

million

doses

per

day.

Vaccinations

leveled

off

in

Asia

as

well.  
Europe's  
daily  
vaccinations  
are  
beginning  
to  
decline,  
down  
11%  
over  
the  
past  
2  
weeks,  
and  
North  
America  
continues  
to  
decline  
steadily.  
Vaccination  
trends  
in  
Africa  
are  
increasing  
slightly,  
with  
daily  
vaccinations  
up  
25%  
since  
the  
beginning  
of  
July.  
Trends  
in  
South  
America  
continue  
to  
increase  
steadily,  
and



daily  
vaccinations  
leveled  
off  
in  
Oceania  
(with  
a  
slight  
decline)  
over  
the  
past  
week  
or  
so.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.06  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
26.5%  
of  
the  
global  
population)  
and  
1.02  
billion  
who  
are  
fully  
vaccinated  
(13.1%  
of  
the  
global  
population).

*UNITED  
STATES*

The

[US](#)

[CDC](#)

reported

33.9

million

cumulative

COVID-19

cases

and

606,618

deaths.

The

US

reported

29,578

new

cases

on

July

16

—

more

than

2.5

times

higher

than

the

low

on

June

18

(11,457)

—

before

falling

slightly

on

July

18

(26,011).

Daily

mortality

also

peaked  
on  
July  
16,  
increasing  
from  
a  
low  
of  
159  
deaths  
per  
day  
on  
July  
11  
to  
234  
(+47%)  
before  
falling  
slightly  
to  
218.

We  
have  
observed  
a  
similar  
trend  
over  
the  
past  
several  
weeks,  
with  
data  
reported  
early  
in  
the  
week  
indicating  
a  
slight  
decrease  
in

the  
average  
daily  
incidence  
and  
mortality  
from  
Friday  
to  
Sunday.  
The  
trend  
disappears,  
however,  
after  
several  
days,  
which  
indicates  
that  
it  
is  
likely  
an  
artifact  
of  
reporting,  
potentially  
due  
to  
states  
shifting  
from  
daily  
to  
weekly  
reports  
to  
the  
CDC.  
This  
shift  
in  
reporting  
could  
complicate  
efforts  
to

maintain  
an  
accurate  
understanding  
of  
the  
US  
COVID-19  
epidemic  
in  
real  
time,  
particularly  
at  
a  
time  
when  
the  
country  
is  
facing  
the  
early  
stages  
of  
another  
surge.  
The  
most  
recent  
several  
days'  
worth  
of  
COVID-19  
data  
may  
no  
longer  
be  
a  
reliable  
representation  
of  
the  
current  
state  
of

the  
US  
epidemic.

US  
Vaccination

The  
US  
has  
administered  
338  
million  
cumulative  
doses  
of  
[SARS-CoV-2  
vaccines](#).  
After  
reaching  
a  
low  
of  
approximately  
425,000  
doses  
per  
day  
on  
July  
9  
(the  
lowest  
average  
since  
January  
2),  
[daily  
vaccinations](#)  
increased  
slightly  
over  
the  
next  
several  
days,  
up  
to

447,583\*.

A  
total  
of  
186  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
56.1%  
of  
the  
entire  
US  
population.

Among  
adults,  
68.3%  
have  
received  
at  
least  
1  
dose  
as  
well  
as  
10.0  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
161  
million  
individuals

are  
fully  
vaccinated,  
which  
corresponds  
to  
48.6%  
of  
the  
total  
population.

Approximately  
59.5%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
7.8  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.*



*The  
most  
current  
value  
provided  
here  
corresponds  
to  
5  
days  
ago.*

### **CHILDHOOD IMMUNIZATIONS DISRUPTED**

The  
COVID-19  
pandemic  
has  
disrupted  
routine  
immunizations  
for  
millions  
of  
children  
worldwide.  
According  
to  
[data](#)  
[from](#)  
[WHO](#)  
[and](#)  
[UNICEF](#)  
published  
July  
15,  
23  
million  
children  
missed  
out  
on  
routine  
immunizations  
in  
2020  
due

to  
the  
pandemic,  
with  
up  
to  
17  
million  
children  
not  
receiving  
a  
single  
vaccine  
in  
2020.  
This  
lapse  
in  
routine  
vaccinations,  
the  
greatest  
since  
2009,  
risks  
resulting  
in  
outbreaks  
of  
measles,  
polio,  
meningitis,  
or  
other  
vaccine-  
preventable  
diseases.  
Not  
only  
are  
these  
outbreaks  
dangerous  
to  
children  
and  
their

communities,  
but  
they  
could  
burden  
health  
systems  
and  
reverse  
decades  
of  
progress  
in  
closing  
the  
global  
gap  
in  
vaccinations.

Countries  
with  
the  
greatest  
increase  
in  
the  
number  
of  
children  
not  
receiving  
their  
first  
dose  
of  
diphtheria-  
tetanus-  
pertussis  
combined  
vaccine  
(DTP-1)  
include  
India,  
Pakistan,  
and  
Indonesia,  
all  
of

which  
have  
come  
under  
strain  
during  
the  
pandemic.

A  
recent  
[study](#)  
published  
in  
*The  
Lancet*  
examined  
the  
impact  
of  
the  
pandemic  
on  
childhood  
vaccine  
coverage  
and  
highlighted  
the  
need  
to  
strengthen  
health  
systems,  
surveillance  
systems,  
and  
targeted  
outreach  
programs  
in  
order  
to  
reach  
children  
who  
have  
missed  
routine

immunizations.

As countries begin to loosen COVID-19 restrictions, experts highlight the very real possibility of seeing increased transmission and outbreaks of vaccine-preventable pathogens.

**PRIORITY  
REVIEW  
OF  
PFIZER-  
BIONTECH  
VACCINE**

Pfizer-BioNTech on July 16 announced the US FDA granted priority review status for the Biologics License

Application  
for  
their  
2-  
dose  
SARS-  
CoV-2  
mRNA  
vaccine.

An  
FDA  
official  
reportedly  
said

a  
decision  
on  
whether  
to  
grant  
full  
approval  
for  
the  
vaccine's  
use

in  
people  
ages  
16  
and  
older  
will  
come  
soon,  
possibly  
within  
the  
next  
2  
months.

The  
FDA  
must  
make  
its  
decision  
by

January  
under  
the  
priority  
review.  
Pfizer-  
BioNTech  
completed  
their  
application  
in  
May  
and  
expects  
to  
apply  
for  
full  
approval  
for  
people  
ages  
12  
to  
15  
when  
data  
are  
available.  
Moderna  
has  
[begun](#)  
[its](#)  
[application](#)  
to  
the  
FDA  
for  
full  
approval  
of  
its  
2-  
dose  
SARS-  
CoV-2  
vaccine,  
and

J&J-  
Janssen  
also  
is  
expected  
to  
seek  
full  
approval  
of  
its  
1-  
dose  
vaccine.  
Full  
approval  
of  
a  
vaccine  
could  
impact  
US  
vaccination  
coverage  
by  
prompting  
vaccine  
mandates  
for  
some  
schools,  
businesses,  
or  
the  
US  
military,  
and  
by  
swaying  
some  
who  
are  
reluctant  
because  
of  
safety  
concerns  
to



undergo  
vaccination.

## **VACCINE DISINFORMATION**

On  
July  
15,  
[US](#)  
[Surgeon](#)  
[General](#)  
[Dr.](#)  
[Vivek](#)  
[Murthy](#)  
warned  
of  
the  
[threat](#)  
[of](#)  
[health](#)  
[misinformation.](#)

As  
we  
covered  
previously,  
misinformation  
on  
a  
wide  
variety  
of  
topics  
has  
had  
a  
substantial  
[negative](#)  
[effect](#)  
[on](#)  
[COVID-19](#)  
[response](#)  
[and](#)  
[risk](#)  
[mitigation](#)  
[activities,](#)  
including  
vaccination.  
[Dr.](#)

Murthy emphasized that "health misinformation is an urgent threat to public health" and that it puts "American lives...at risk." Notably, the announcement explicitly highlighted the role of social media platforms in spreading misinformation, and Dr. Murthy called on social media companies to take action in countering this ongoing

threat.  
In  
a  
report  
published  
in  
March,  
the  
[Center  
for  
Countering  
Digital  
Hate](#)  
found  
that  
approximately  
two-  
thirds  
of  
all  
anti-  
vaccine  
misinformation  
found  
on  
social  
media  
platforms  
originates  
with  
one  
of  
12  
individuals.  
While  
some  
accounts  
operated  
by  
these  
individuals  
have  
been  
removed  
from  
social  
media  
platforms,

many  
remain  
active.  
Dr.  
Murthy  
also  
called  
on  
the  
American  
public  
to  
refrain  
from  
sharing  
questionable  
information  
via  
their  
social  
media  
networks.  
Combating  
the  
far-  
reaching  
network  
that  
supports  
the  
spread  
of  
misinformation  
will  
require  
a  
“whole-  
of-  
society  
effort.”  
The  
[health  
advisory](#)  
outlines  
key  
principles  
for  
promoting

accurate  
information,  
including  
identifying  
trusted  
voices  
in  
the  
community  
and  
longer-  
term  
investments  
in  
“media,  
science,  
digital,  
data,  
and  
health  
literacy.”

**UK**  
**“FREEDOM**  
**DAY”**

England  
marked  
“Freedom  
Day”  
on  
July  
19,  
with  
the  
government  
lifting  
all  
but  
a  
few  
COVID-19  
restrictions  
amid  
a  
41%  
surge  
in  
new

cases  
over  
the  
past  
week.  
Prime  
Minister  
Boris  
Johnson  
defended  
his  
decision  
to  
open  
from  
his  
country  
residence,  
where  
he  
is  
[isolating](#)  
after  
coming  
into  
contact  
with  
UK  
Health  
Secretary  
Sajid  
Javid,  
who  
on  
Saturday  
said  
he  
tested  
positive  
for  
COVID-19  
and  
is  
showing  
mild  
symptoms.  
The  
move

into  
phase  
4  
of  
the  
country's  
reopening  
plan  
removes  
limits  
on  
social  
gatherings  
and  
events,  
the  
need  
for  
physical  
distancing,  
and  
mask  
requirements  
except  
on  
public  
transportation.

Many  
experts  
see  
England's  
move  
to  
reopen  
as  
a  
major  
gamble,  
with  
more  
than  
1,200  
scientists  
signing  
a  
letter  
published

in  
*The Lancet*  
calling  
the  
plan  
“dangerous  
and  
premature,”  
highlighting  
the  
likely  
negative  
impacts  
on  
children’s  
health  
and  
education,  
and  
warning  
the  
strategy  
“provides  
fertile  
ground  
for  
the  
emergence  
of  
vaccine-  
resistant  
variants.”  
Others  
say  
the  
reopening  
risks  
a  
massive  
wave  
of  
infections  
and  
will  
test  
the  
resilience



of  
the  
nation's  
health  
care  
system  
and  
the  
effectiveness  
of  
vaccines.

Nearly  
70%  
of  
the  
adult  
population  
is  
fully  
vaccinated,  
with  
87.9%  
having  
received  
at  
least  
one  
dose.

On  
July  
19,  
the  
country's  
Joint  
Committee  
on  
Vaccination  
and  
Immunisation  
advised  
against  
the  
mass  
vaccination  
of  
all  
children

and teenagers, instead opting to offer doses only to children between 12 and 15 who are at increased risk of serious COVID-19 disease—including those with "severe neurodisabilities, Down's syndrome, immunosuppression, and multiple or severe learning disabilities"—and children and young people aged 12 to 17 who live

with  
an  
immunocompromised  
person.

Also  
on  
July  
19,  
the  
US  
CDC  
raised  
its  
UK  
Risk  
Assessment  
Level  
for  
COVID-19  
to  
"Level  
4:  
COVID-19  
Very  
High,"  
prompting  
the  
US  
Department  
of  
State  
to  
raise  
its  
travel  
advisory  
level  
for  
the  
UK  
from  
"Level  
3:  
Reconsider  
Travel"  
to  
"Level

4:  
Do  
Not  
Travel.”  
Notably,  
though  
the  
travel  
advisory  
is  
for  
the  
whole  
of  
the  
UK,  
the  
lifting  
of  
restrictions  
only  
impacts  
England,  
as  
Scotland,  
Wales,  
and  
Northern  
Ireland  
continue  
to  
make  
their  
own  
policies  
on  
COVID-19  
restrictions.

## **FRANCE VACCINATIONS**

In  
an  
effort  
to  
control  
the  
surging

Delta  
variant  
(B.1.617.2),  
French  
President  
Emmanuel  
Macron  
[announced](#)  
that  
proof  
of  
SARS-  
CoV-2  
vaccination  
or  
a  
recent  
negative  
COVID-19  
test  
must  
soon  
be  
provided  
to  
enter  
certain  
public  
venues  
or  
transportation.  
Beginning  
in  
August,  
a  
“green  
pass”  
will  
be  
required  
for  
anyone  
over  
the  
age  
of  
12  
to

enter  
a  
cinema,  
theater,  
museum,  
theme  
park,  
or  
cultural  
center,  
and  
anyone  
entering  
venues  
like  
cafés,  
restaurants,  
shopping  
centers,  
or  
public  
transit  
must  
show  
the  
pass.  
Additionally,  
vaccination  
will  
be  
mandatory  
for  
anyone  
working  
in  
healthcare  
facilities  
and  
retirement  
homes,  
or  
assisting  
with  
elderly  
or  
other  
vulnerable  
people.

Those  
employers  
and  
employees  
who  
do  
not  
comply  
could  
face  
sanctions  
or  
fines.  
The  
digital  
vaccine  
green  
pass  
will  
serve  
as  
a  
certification  
of  
vaccination  
and  
regulate  
entry  
to  
venues  
via  
a  
QR  
code  
specific  
to  
each  
person.

France  
has  
fully  
vaccinated  
40%  
of  
its  
population,  
and

the  
new  
restrictions  
on  
the  
unvaccinated  
are  
spurring  
people  
to  
get  
vaccinated.  
Immediately  
following  
Macron's  
announcement,  
online  
French  
medical  
platform  
Doctolib  
[received](#)  
[a](#)  
[record](#)  
[of](#)  
[more](#)  
[than](#)  
[900,000](#)  
[visits](#)  
as  
people  
rushed  
to  
book  
their  
first  
vaccine  
dose.  
However,  
opponents  
of  
the  
requirement  
have  
taken  
to  
the  
streets



in  
protest,  
citing  
government  
overreach.  
Several  
vaccination  
sites  
were  
vandalized  
over  
the  
weekend.  
Although  
polls  
suggest  
two-  
thirds  
of  
the  
population  
support  
the  
new  
measures,  
some  
claim  
the  
pass  
is  
too  
ambitious,  
may  
not  
clear  
institutional  
hurdles,  
and  
will  
infringe  
on  
personal  
freedoms.  
Health  
officials  
continue  
to  
fine

tune  
the  
details  
of  
the  
health  
pass,  
and  
parliament  
is  
set  
to  
vote  
on  
the  
legislation.

**OLYMPIC  
ATHLETES  
COVID-19  
CASES**

With  
only  
days  
to  
go  
before  
the  
start  
of  
the  
2020  
Summer  
Olympic  
Games  
in  
Tokyo,  
Japan,  
reports  
of  
COVID-19  
cases  
among  
Olympic  
athletes  
and  
other  
residents

of  
the  
Olympic  
Village  
are  
clouding  
the  
already  
delayed  
event.  
Olympic  
organizers  
said  
at  
least  
71  
people  
have  
tested  
positive,  
including  
athletes,  
team  
officials,  
volunteers,  
contractors,  
and  
a  
"games-  
concerned  
personnel."  
Two  
athletes  
and  
a  
video  
analyst  
with  
the  
South  
African  
soccer  
team  
tested  
positive  
in  
the  
Olympic

Village  
despite  
receiving  
2  
negative  
tests  
within  
4  
days  
of  
traveling  
to  
Tokyo.  
Eight  
members  
of  
the  
[UK](#)  
[delegation](#)  
are  
in  
isolation  
after  
exposure  
to  
SARS-  
CoV-2  
from  
an  
infected  
individual  
on  
their  
flight  
to  
Japan.  
At  
least  
2  
members  
of  
the  
[US](#)  
[delegation](#)  
are  
in  
isolation  
after

an  
alternate  
for  
the  
US  
Women's  
Gymnastics  
Team  
tested  
positive.  
Additionally,  
US  
tennis  
star  
[Cori](#)  
["Coco"](#)  
[Gauff](#)  
on  
July  
18  
[announced](#)  
she  
will  
not  
compete  
in  
the  
Olympics  
after  
testing  
positive.  
Despite  
[unprecedented](#)  
[measures](#)  
to  
control  
COVID-19  
during  
the  
Olympics,  
including  
daily  
testing  
and  
required  
masking  
when  
not

training,  
competing,  
eating,  
or  
sleeping,  
the  
growing  
number  
of  
cases  
is  
raising  
questions  
over  
how  
well  
outbreaks  
can  
be  
controlled.  
At  
a  
press  
conference  
today,  
the  
head  
of  
the  
2020  
Tokyo  
Olympics  
organizing  
committee  
did  
not  
rule  
out  
a  
last-  
minute  
cancellation  
of  
the  
event.

**HAIJ**  
Historically,

the  
annual  
Muslim  
pilgrimage  
to  
Mecca  
draws  
millions  
of  
visitors  
from  
around  
the  
world.  
[Last](#)  
[year](#),  
Saudi  
Arabia  
limited  
visitors  
to  
only  
[1,000](#)  
[pilgrims](#),  
but  
for  
the  
[ongoing](#)  
[Hajj](#)  
(July  
17-22),  
the  
government  
is  
permitting  
a  
total  
of  
[60,000](#)  
[visitors](#),  
limited  
to  
Saudi  
residents  
who  
are  
fully  
vaccinated,

aged  
18-65  
years,  
and  
have  
no  
chronic  
health  
conditions.  
While  
this  
is  
considerably  
more  
people  
than  
were  
permitted  
in  
2020,  
it  
is  
still  
far  
fewer  
than  
the  
more  
than  
2  
million  
who  
typically  
attend  
Hajj.

In  
order  
to  
reduce  
risk,  
the  
[Saudi  
Ministry  
of  
Hajj  
and  
Umrah](#)



implemented additional restrictions and protective measures. Upon arrival, pilgrims are assigned to groups of 20, with no mixing between groups. Individuals are assigned specific dates and times to visit the Grand Mosque, where 6,000 individuals are permitted to enter every 3 hours. Facilities at the Grand Mosque undergo

sterilization  
between  
each  
session.  
Despite  
the  
additional  
protective  
measures,  
including  
the  
vaccination  
requirement,  
the  
US  
CDC  
still  
has  
a  
Level  
3  
Travel  
Warning  
in  
place  
(Avoid  
Nonessential  
Travel)  
for  
the  
Hajj,  
due  
in  
part  
to  
the  
risk  
of  
SARS-  
CoV-2  
transmission  
associated  
with  
mass  
gatherings.

**VACCINE  
EQUITY**

The  
global  
inequities  
in  
access  
to  
SARS-  
CoV-2  
vaccines  
are  
worsening,  
with  
wealthy  
nations  
continuing  
to  
stockpile  
instead  
of  
share  
unused  
doses  
and  
lacking  
a  
viable,  
well-  
funded  
global  
plan  
to  
reach  
poorer  
nations.  
For  
some  
nations  
dependent  
upon  
vaccine  
imports,  
the  
shipments  
have  
only  
recently  
begun,  
more

than  
1.5  
years  
into  
the  
pandemic.  
COVAX  
has  
delivered  
only  
135.5  
million  
doses  
to  
136  
countries,  
and  
with  
little  
funding  
to  
purchase  
additional  
doses,  
the  
facility  
is  
left  
to  
depend  
upon  
donations  
from  
countries.  
Last  
week,  
COVAX  
launched  
an  
international  
marketplace  
to  
help  
address  
supply  
chain  
challenges  
hampering

global  
vaccination  
efforts.  
The  
platform  
hopes  
to  
match  
vaccine  
producers  
with  
suppliers  
of  
vital  
components  
—  
such  
as  
bioreactor  
bags,  
biologic  
ingredients,  
or  
vials  
—  
who  
might  
have  
unused  
products  
needing  
to  
be  
reallocated.

Additionally,  
leaders  
of  
countries  
in  
the  
Asia-  
Pacific  
Economic  
Cooperation  
(APEC)  
trade  
group

on  
July  
16  
pledged  
to  
expand  
their  
global  
sharing  
and  
manufacturing  
of  
SARS-  
CoV-2  
vaccines,  
including  
encouraging  
voluntary  
transfer  
of  
technologies.  
However,  
they  
offered  
no  
specific  
details  
about  
how  
this  
expansion  
would  
be  
accomplished.  
Following  
the  
virtual  
meeting,  
New  
Zealand  
Prime  
Minister  
Jacinda  
Ardern,  
whose  
country  
serves  
as

the  
current  
APEC  
host,  
said,  
“Our  
discussions  
moved  
us  
beyond  
vaccine  
nationalism.  
Now  
we  
are  
focusing  
on  
all  
aspects  
of  
contributing  
to  
the  
global  
vaccination  
effort  
—  
making  
vaccines,  
sharing  
vaccines,  
and  
using  
vaccines.”

## **HIV INFECTION**

HIV  
infection  
is  
a  
[significant  
comorbidity](#)  
for  
both  
severe  
or  
critical

COVID-19  
at  
hospital  
admission  
and  
in-  
hospital  
mortality,  
according  
to  
a  
[WHO](#)  
[report](#)  
released  
last  
week.  
The  
report  
described  
clinical  
surveillance  
data  
from  
37  
countries  
in  
Asia,  
Europe,  
Africa,  
and  
South  
America,  
and  
found  
that  
the  
[risk](#)  
[of](#)  
[developing](#)  
[severe](#)  
[or](#)  
[fatal](#)  
[COVID-19](#)  
[was](#)  
[30%](#)  
[greater](#)  
for  
people



living  
with  
HIV  
compared  
with  
people  
without  
HIV,  
and  
23.1%  
of  
all  
people  
living  
with  
HIV  
who  
were  
hospitalized  
with  
COVID-19  
died.  
Other  
underlying  
conditions  
such  
as  
diabetes  
and  
hypertension  
increased  
the  
risk  
further,  
especially  
among  
men  
living  
with  
HIV  
over  
the  
age  
of  
65  
years.

In sub-Saharan Africa, home to two-thirds of people living with HIV, less than 3% of the population had received one dose of vaccine by July 2021, according to the [UNAIDS Global AIDS Update 2021](#), also released last week. [COVID-19 lockdowns](#) and restrictions have disrupted HIV testing,

referrals  
to  
care,  
and  
HIV  
treatment  
initiation  
and  
continuation.  
In  
some  
places,  
these  
disruptions  
bred  
ingenuity,  
with  
the  
emergence  
of  
[new  
models  
of  
differentiated  
service  
delivery](#)  
starting  
in  
communities  
worldwide,  
often  
guided  
by  
patients  
and  
advocates  
themselves.  
Health  
officials  
and  
organizations  
are  
detailing  
these  
efforts  
during  
the  
[International](#)

AIDS  
Society  
Conference  
on  
HIV  
Science,  
which  
began  
July  
18  
in  
Berlin,  
Germany,  
and  
calling  
for  
continued  
flexibility  
to  
meet  
people's  
lifestyles  
beyond  
the  
COVID-19  
pandemic.

**LONG  
COVID/PASC**

Researchers  
continue  
efforts  
to  
understand  
and  
treat  
post-  
acute  
sequelae  
of  
SARS-  
CoV-2  
infection  
(PASC),  
commonly  
referred  
to  
as

"long  
COVID."  
PASC  
is  
a  
constellation  
of  
long-  
lasting  
symptoms  
following  
an  
initial  
infection  
with  
SARS-  
CoV-2  
that  
can  
affect  
individuals  
regardless  
of  
the  
presence  
or  
severity  
of  
the  
acute  
COVID-19  
symptoms.  
The  
UK  
announced  
it  
will  
provide  
£20  
million  
(US  
\$27.17  
million)  
to  
support  
15  
clinical  
trials

examining  
the  
diagnosis,  
treatments,  
and  
care  
of  
the  
condition.  
The  
studies  
will  
test  
existing  
drugs  
as  
therapies,  
look  
at  
the  
use  
of  
MRI  
scans  
for  
diagnosing  
organ  
damage,  
assess  
the  
possible  
role  
of  
overactive  
or  
impaired  
immune  
systems,  
and  
evaluate  
the  
impact  
of  
obesity  
among  
people  
with  
long

COVID-19,  
among  
other  
objectives.  
The  
UK  
government  
previously  
allocated  
£100  
million  
(US  
\$36  
million)  
for  
support  
services  
for  
people  
with  
long  
COVID-19,  
establishing  
80  
such  
services  
so  
far.

At  
least  
4  
[new](#)  
[studies](#)  
[examining](#)  
[long](#)  
[COVID-19](#)  
recently  
were  
published.  
The  
[first](#)  
[study](#),  
published  
in  
*The*  
*Lancet's*  
journal

*EClinicalMedicine*

and  
the  
largest-  
ever  
international  
study  
on  
long  
COVID-19,  
identified  
more  
than  
200  
symptoms  
of  
the  
condition  
and  
prompted  
researchers

—  
all  
of  
whom  
have  
had  
or  
are  
still  
living  
with  
long  
COVID

—  
to  
call  
for  
the  
creation  
of  
a  
national  
screening  
program  
in  
the  
UK



for  
anyone  
who  
suspects  
they  
have  
the  
condition.  
The  
[second  
study](#),  
published  
in  
the  
*Journal  
of  
the  
Royal  
Society  
of  
Medicine*,  
found  
that  
people  
who  
experience  
5  
or  
more  
COVID-19  
symptoms  
in  
the  
first  
week  
of  
infection  
are  
significantly  
more  
likely  
than  
people  
with  
fewer  
symptoms  
to  
develop

long  
COVID-19.

A  
[third](#)  
[study](#),  
published  
in  
*JAMA*,  
found  
a  
low  
prevalence  
of  
long-  
term  
COVID-19  
symptoms  
among  
a  
randomly  
selected  
cohort  
of  
children  
who  
were  
assessed  
at  
least  
6  
months  
after  
being  
tested  
for  
SARS-  
CoV-2.

A  
[fourth](#)  
[study](#),  
published  
in  
*PLOS*  
*ONE*,  
found  
that  
26%  
of

adult  
COVID-19  
patients  
did  
not  
fully  
recover  
within  
6-8  
months  
after  
diagnosis,  
with  
55%  
experiencing  
fatigue,  
25%  
breathlessness,  
and  
26%  
symptoms  
of  
depression.  
The  
researchers  
highlighted  
the  
need  
for  
accessible  
care  
for  
individuals  
experiencing  
long  
COVID-19  
symptoms.

### **SUPER ANTIBODY**

In  
a  
study  
published  
July  
14  
in  
*Nature*,

researchers  
describe  
a  
newly  
discovered  
“super  
antibody”  
capable  
of  
protecting  
against  
SARS-  
CoV-2  
and  
a  
group  
of  
related  
coronaviruses,  
called  
sarbecoviruses.  
The  
antibody,  
named  
S2H97,  
is  
believed  
to  
work  
by  
attaching  
to  
a  
section  
of  
the  
ACE2  
receptor  
binding  
motif  
on  
the  
virus  
spike  
protein  
that  
is  
only

exposed  
when  
a  
sarbecovirus  
is  
attempting  
to  
enter  
a  
cell.  
S2H97  
was  
able  
to  
prevent  
the  
spread  
of  
multiple  
sarbecoviruses  
between  
cells  
in  
a  
lab,  
and  
the  
antibody  
also  
protected  
hamsters  
from  
infection  
with  
SARS-  
CoV-2  
isolated  
from  
the  
initial  
Wuhan,  
China,  
outbreak.  
Researchers  
further  
described  
the  
antibody

as  
a  
pan-  
sarbecovirus  
due  
to  
its  
broad  
efficacy  
across  
the  
sarbecovirus  
subgenus.  
The  
description  
of  
a  
usually  
hidden  
antibody  
binding  
region  
in  
the  
ACE2  
RBM  
is  
important  
because  
it  
could  
be  
used  
as  
a  
target  
for  
future  
vaccines  
and  
therapeutics.  
Additionally,  
a  
pan-  
sarbecovirus  
vaccine  
could  
be

used  
to  
prevent  
outbreaks  
from  
as-  
of-  
yet-  
undiscovered  
members  
of  
the  
*Coronaviridae*  
family  
of  
viruses.

**US Travel Industry and Retail Supply Chain Updates**

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit  
|  
You  
|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 7/23/2021 2:09:15 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - July 23, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
192.3  
million  
cumulative  
cases  
and  
4.14



million  
deaths  
worldwide  
as  
of  
11:11am  
EDT  
on  
July  
23.

Countries  
around  
the  
world  
are  
combating  
new  
COVID-19  
surges,  
generally  
believed  
to  
be  
driven,  
in  
part,  
by  
increasing  
prevalence  
of  
the  
Delta  
variant  
(B.1.617.2).  
Unlike  
in  
previous  
surges,  
there  
do  
not  
appear  
to  
be  
strong  
regional  
trends,

with  
the  
countries  
facing  
the  
largest  
surges  
distributed  
around  
the  
world.

In  
fact,  
looking  
at  
the  
[biweekly  
trends](#),  
there  
are  
approximately  
50  
countries  
where  
daily  
incidence  
has  
more  
than  
doubled,  
and  
they  
are  
spread  
across  
nearly  
every  
continent  
and  
region,  
with  
the  
notable  
exceptions  
of  
Central  
and

South  
America.

In  
terms  
of  
total  
daily  
incidence,  
there  
are  
15  
countries  
reporting  
more  
than  
10,000  
new  
cases  
per  
day,  
including  
6  
reporting  
more  
than  
25,000.  
Among  
these  
countries,  
5  
are  
in  
Asia  
(including  
Iran  
in  
the  
Eastern  
Mediterranean  
region),  
4  
are  
in  
Europe,  
3  
are  
in

South America, and 2 are in North America. South Africa is the only African country, and none are in Oceania. Ten (10) of these countries are reporting increasing daily incidence over the past 2 weeks, including the US (+142%), Spain (+146%), and France (+287%), which more than doubled

over  
that  
period.  
India  
and  
Argentina  
have  
exhibited  
decreasing  
trends  
since  
at  
least  
mid-  
June,  
and  
Brazil,  
Colombia,  
and  
South  
Africa  
passed  
their  
respective  
peaks  
since  
the  
beginning  
of  
July.  
These  
16  
countries  
account  
for  
nearly  
75%  
of  
the  
global  
[daily  
incidence](#).  
Among  
the  
countries  
with  
available  
data

on  
the  
Delta  
variant,  
all\*  
are  
exhibiting  
sharp  
increases  
in  
Delta  
prevalence  
over  
the  
past  
several  
months.  
India,  
where  
the  
variant  
was  
first  
reported,  
was  
first  
in  
March,  
and  
Delta  
prevalence  
began  
increasing  
in  
most  
of  
the  
other  
countries  
by  
late  
May/early  
June.  
Of  
the  
10  
countries  
with

data  
available  
for  
July  
12  
or  
later,  
8  
are  
reporting  
higher  
than  
70%,  
including  
6  
higher  
than  
90%.  
*\*Argentina  
does  
not  
have  
data  
available  
after  
May  
17.*

Similarly,  
the  
top  
countries  
in  
terms  
of  
[per  
capita  
daily  
incidence](#)  
represent  
most  
regions  
around  
the  
world.  
Among  
the  
[top](#)

20  
countries,  
nearly  
half  
(9)  
are  
in  
Europe,  
4  
are  
in  
Africa,  
3  
are  
in  
Latin  
America  
and  
the  
Caribbean,  
and  
3  
are  
in  
Asia.  
Fiji  
is  
the  
only  
country  
in  
Oceania,  
and  
none  
are  
in  
North  
America.  
Argentina,  
Colombia,  
Malaysia,  
Spain,  
and  
the  
UK  
are  
on  
both



lists,  
and  
considering  
their  
large  
populations  
compared  
to  
the  
other  
top  
per  
capita  
countries,  
this  
further  
illustrates  
the  
severity  
of  
their  
respective  
epidemics.

All  
but  
5  
countries  
—  
Argentina,  
Colombia,  
Mongolia,  
Namibia,  
and  
Seychelles  
—

are  
reporting  
increasing  
daily  
incidence  
over  
the  
past  
2  
weeks,  
including  
9  
that

more  
than  
doubled  
over  
that  
period.  
Notably,  
[Malta's](#)  
daily  
incidence  
increased  
nearly  
1,500%  
over  
the  
past  
2  
weeks  
(peaking  
at  
more  
than  
3,000%  
on  
July  
16),  
bringing  
its  
daily  
average  
to  
approximately  
200  
new  
cases  
per  
day  
—  
up  
from  
1  
in  
mid-  
June.  
Only  
a  
small  
handful

of  
these  
countries  
have  
data  
available  
regarding  
the  
prevalence  
of  
the  
Delta  
variant,  
and  
4  
of  
the  
8  
countries  
were  
also  
among  
the  
highest  
total  
daily  
incidence.  
All  
of  
these  
countries\*\*  
reported  
major  
increases  
in  
Delta  
prevalence  
starting  
in  
May,  
and  
5  
of  
the  
6  
countries  
with  
data

available  
for  
July  
12  
or  
later  
are  
reporting  
80%  
or  
higher.  
*\*\*With  
the  
exception  
of  
Argentina,  
which  
has  
no  
data  
available  
after  
May  
17.*

Global  
Vaccination

The  
[WHO](#)  
[reported](#)  
3.57  
billion  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
July  
20.  
The  
WHO  
reports  
a  
total

of  
1.37  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
656  
million  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
shows  
that  
the  
global  
[daily  
doses  
administered](#)  
fell  
sharply  
once  
again,  
now  
down  
to  
29.1  
million  
doses  
per  
day.  
Our  
World  
in  
Data  
estimates  
that  
there

are  
2.09  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
26.9%  
of  
the  
global  
population)  
and  
1.05  
billion  
who  
are  
fully  
vaccinated  
(13.5%  
of  
the  
global  
population).

*UNITED  
STATES*  
The  
US  
CDC  
reported  
34.2  
million  
cumulative  
COVID-19  
cases  
and  
607,684  
deaths.  
With  
more  
than  
40,000  
new  
cases  
per  
day,

the  
US  
surpassed  
both  
the  
peak  
of  
the  
initial  
surge

—

31,327  
on  
April  
12,  
2020

—

and  
the  
low  
reported  
following  
the  
summer  
2020  
surge

—

35,082  
on  
September  
13,  
2020.

The  
current  
average  
is  
more  
than  
3.5  
times  
the  
most  
recent  
low  
on  
June  
19  
(11,467)

and  
is  
still  
increasing  
steadily.  
Daily  
mortality  
also  
continues  
to  
increase,  
up  
to  
223  
deaths  
per  
day,  
which  
is  
more  
than  
40%  
higher  
than  
the  
most  
recent  
low  
on  
July  
11  
(159).  
Notably,  
the  
proportion  
of  
emergency  
department  
patients  
diagnosed  
with  
COVID-19  
has  
tripled  
since  
June  
21,  
up



from  
0.6%  
to  
1.8%,  
which  
is  
an  
indication  
of  
increasing  
burden  
on  
health  
systems\*.

*\*In  
an  
effort  
to  
provide  
a  
more  
accurate  
analysis  
of  
the  
current  
epidemiology,  
we  
are  
largely  
focusing  
on  
longer-  
term  
trends,  
as  
the  
most  
recent  
data  
are  
more  
likely  
to  
be  
affected  
by  
changes*

*in  
the  
frequency  
of  
state-  
level  
reporting,  
particularly  
over  
the  
weekend.*

The  
US  
CDC  
added  
a  
new  
feature  
to  
its  
COVID-19  
Data  
Tracker,  
which  
displays  
a  
combination  
of  
vaccination  
coverage  
and  
per  
capita  
weekly  
incidence  
at  
the  
county  
level.

The  
2-  
dimensional  
coloring  
scheme  
will  
take  
some

time  
to  
interpret,  
but  
it  
is  
fairly  
clear  
that  
the  
major  
US  
COVID-19  
hotspots  
are  
Missouri,  
Arkansas,  
and  
Louisiana,  
where  
counties  
are  
reporting  
lower  
vaccination  
coverage  
and  
higher  
weekly  
incidence.  
Alabama  
and  
Mississippi  
are  
exhibiting  
similar  
trends,  
but  
to  
a  
lesser  
degree.  
Many  
counties  
in  
Florida  
are  
reporting

elevated  
weekly  
incidence,  
even  
with  
higher  
vaccination  
coverage  
than  
in  
neighboring  
states.  
No  
data  
are  
available  
for  
Texas.

US  
Vaccination

The  
US  
has  
administered  
340  
million  
cumulative  
doses  
of  
[SARS-CoV-2  
vaccines](#).  
[Daily  
vaccinations](#)  
are  
increasing  
slowly,  
now  
up  
to  
446,613  
doses  
per  
day\*.  
A  
total  
of

187  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
56.4%  
of  
the  
entire  
US  
population.  
Among  
adults,  
68.6%  
have  
received  
at  
least  
1  
dose  
as  
well  
as  
10.2  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
162  
million  
individuals  
are  
fully  
vaccinated,  
which

corresponds  
to  
48.8%  
of  
the  
total  
population.  
Approximately  
59.7%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
7.9  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
value*

*provided  
here  
corresponds  
to  
5  
days  
ago.*

## **DELTA VARIANT**

The  
US  
CDC  
continues  
to  
sound  
the  
alarm  
about  
the  
rapid  
spread  
of  
the  
SARS-  
CoV-2  
Delta  
variant  
within  
the  
United  
States.  
Earlier  
this  
week,  
CDC  
Director  
Dr.  
Rochelle  
Walensky  
[shared](#)  
that  
the  
Delta  
variant  
now  
makes  
up

83%  
of  
domestically  
sequenced  
SARS-  
CoV-2  
cases.  
This  
is  
a  
dramatic  
rise  
from  
the  
beginning  
of  
the  
month,  
when  
the  
Delta  
variant  
made  
up  
about  
half  
of  
sequenced  
cases  
within  
the  
US.  
There  
has  
been  
a  
corresponding  
rise  
in  
the  
number  
of  
new  
COVID-19  
cases  
and  
related  
deaths



throughout  
the  
month,  
especially  
impacting  
unvaccinated  
parts  
of  
the  
population.  
In  
a  
press  
conference  
earlier  
this  
week,  
Dr.  
Walensky  
warned  
that  
the  
Delta  
variant  
is  
one  
of  
the  
“most  
infectious  
respiratory  
viruses  
we  
know  
of,”  
urging  
individuals  
to  
get  
vaccinated.  
The  
CDC  
has  
made  
it  
clear  
that  
this

will  
be  
another  
pivotal  
moment  
in  
the  
United  
States'  
COVID-19  
response,  
cautioning  
that  
many  
[communities](#)  
[with](#)  
[low](#)  
[vaccination](#)  
[rates](#)  
[may](#)  
[face](#)  
[challenges](#)  
of  
overwhelmed  
health  
care  
systems  
if  
preventative  
actions  
are  
not  
taken.

**US  
CDC  
ACIP  
MEETING**

The  
[US](#)  
[CDC's](#)  
[Advisory](#)  
[Committee](#)  
[on](#)  
[Immunization](#)  
[Practices](#)  
[\(ACIP\)](#)  
on

July  
22  
concluded  
the  
benefits  
of  
the  
J&J-  
Janssen  
SARS-  
CoV-2  
viral  
vector  
vaccine  
outweigh  
the  
risks  
of  
some  
people  
developing  
the  
rare  
neurological  
disorder  
Guillain-  
Barré  
syndrome  
(GBS)  
after  
receiving  
the  
shot.  
Earlier  
this  
month,  
the  
US  
FDA  
updated  
the  
J&J-  
Janssen  
vaccine's  
label  
to  
warn  
of

a possible increased risk of GBS. According to data presented at the meeting, the FDA's Vaccine Adverse Event Reporting System (VAERS) recorded 100 preliminary reports of GBS after J&J-Janssen vaccination as of June 30, out of 12.6 million doses administered at that time. Of those cases, 95

required  
hospitalization,  
1  
person  
died,  
and  
5  
cases  
were  
non-  
serious.  
Dr.  
Hannah  
Rosenblum,  
a  
researcher  
with  
the  
CDC  
National  
Center  
for  
Immunization  
and  
Respiratory  
Diseases'  
Division  
of  
Viral  
Diseases,  
[presented](#)  
[data](#)  
showing  
the  
[risk](#)  
[of](#)  
[vaccine](#)  
[recipients](#)  
[developing](#)  
[GBS](#)  
[remained](#)  
[low](#)  
when  
compared  
to  
the  
number  
of

COVID-19  
cases  
and  
deaths  
prevented  
by  
vaccination.

The  
CDC  
plans  
to  
update  
its  
guidance  
for  
the  
J&J-  
Janssen  
vaccine  
to  
recommend  
that  
patients  
with  
a  
history  
of  
GBS  
first  
consider  
the  
2-  
dose  
mRNA  
vaccines  
from  
Pfizer-  
BioNTech  
and  
Moderna,  
if  
possible.  
However,  
some  
panel  
members  
pointed  
out

there  
are  
risks  
associated  
with  
those  
vaccines  
as  
well,  
including  
myocarditis  
and  
pericarditis,  
and  
that  
information  
on  
all  
of  
the  
risks  
associated  
with  
SARS-  
CoV-2  
vaccines  
should  
be  
made  
available  
so  
people  
can  
make  
the  
best  
choice  
for  
themselves.

The  
ACIP  
also  
considered  
whether  
to  
[recommend  
additional,](#)

or  
"booster,"  
doses  
of  
SARS-  
CoV-2  
vaccines  
for  
people  
who  
are  
immunocompromised,  
who  
represent  
about  
2.7%  
of  
the  
US  
population.  
Dr.  
Sara  
Oliver  
with  
the  
CDC  
National  
Center  
for  
Immunization  
and  
Respiratory  
Diseases  
presented  
data  
based  
on  
several  
small  
studies  
looking  
at  
vaccine  
response  
among  
immunocompromised  
people  
and



additional  
doses  
in  
this  
population.  
Although  
emerging  
data  
suggest  
an  
additional  
SARS-  
CoV-2  
vaccine  
dose  
in  
immunocompromised  
people  
enhances  
antibody  
response  
and  
increases  
the  
proportion  
who  
respond,  
the  
panel  
did  
not  
make  
an  
official  
recommendation  
on  
additional  
shots  
and  
will  
continue  
to  
review  
available  
data.  
Dr.  
Oliver  
also

noted  
that  
serologic  
or  
cellular  
immune  
testing  
outside  
of  
research  
studies  
is  
not  
recommended  
in  
the  
US  
at  
this  
time.  
Some  
panel  
members  
expressed  
concern  
over  
immunocompromised  
patients  
getting  
additional  
vaccine  
doses  
without  
an  
official  
recommendation  
to  
do  
so,  
saying  
“the  
issue  
is  
almost  
running  
away  
from  
us.”

Although another ACIP meeting is not yet scheduled, the panel is expected to meet again in August.

**GAO  
PREPAREDNESS  
&  
RESPONSE  
REPORT**

The US is concurrently responding to and recovering from the COVID-19 pandemic, with an ongoing national vaccination campaign and widespread loosening of public health measures

amid  
a  
recent  
increase  
in  
cases.  
Recognizing  
this  
balance  
as  
“fragile,”  
the  
US  
Government  
Accountability  
Office  
(GAO)  
on  
July  
19  
released  
its  
[7th](#)  
[comprehensive](#)  
[report](#)  
on  
the  
COVID-19  
pandemic,  
providing  
an  
additional  
15  
recommendations  
to  
various  
US  
government  
agencies.  
Previous  
reports  
included  
a  
total  
of  
72  
recommendations  
on

COVID-19,  
with  
agencies  
agreeing  
to  
implement  
57  
of  
them  
and  
having  
fully  
implemented  
16  
to  
date.  
The  
[most  
recent  
report  
makes  
several  
recommendations](#)  
related  
to  
national  
pandemic  
preparedness,  
including  
advice  
to  
the  
CDC  
to  
develop  
a  
plan  
to  
enhance  
surge  
capacity  
for  
laboratory  
testing  
and  
establish  
contracts  
for

the  
manufacturing  
and  
deployment  
of  
diagnostic  
test  
kits  
prior  
to  
public  
health  
emergencies.

The  
GAO  
also  
made  
suggestions  
to  
the  
US  
Department  
of  
Health  
and  
Human  
Services' (HHS)  
Office  
of  
the  
Assistant  
Secretary  
for  
Preparedness  
and  
Response  
(ASPR)  
regarding  
the  
organization  
and  
oversight  
of  
the  
country's  
Strategic  
National  
Stockpile

(SNS),  
which  
provides  
medical  
supplies  
and  
other  
materials  
to  
respond  
to  
a  
broad  
range  
of  
emergencies.  
Several  
other  
recommendations  
relate  
to  
the  
oversight,  
timely  
use,  
and  
integrity  
of  
COVID-19  
relief  
funds  
allocated  
to  
HHS,  
the  
US  
Department  
of  
Education,  
US  
Department  
of  
the  
Treasury,  
US  
Office  
of  
Management

and  
Budget  
(OMB),  
and  
Internal  
Revenue  
Service  
(IRS).  
According  
to  
GAO,  
if  
effectively  
implemented,  
the  
recommendations  
“can  
help  
improve  
the  
government’s  
ongoing  
response  
and  
recovery  
efforts  
as  
well  
as  
help  
it  
to  
prepare  
for  
future  
public  
health  
emergencies.”

## **EXPIRING VACCINES**

With  
demand  
for  
SARS-  
CoV-2  
vaccination  
largely



leveling  
off  
in  
the  
US  
over  
the  
past  
3  
weeks,  
millions  
of  
SARS-  
CoV-2  
vaccine  
doses  
are  
set  
to  
expire  
in  
the  
next  
few  
months.  
Several  
states  
and  
some  
global  
health  
experts  
are  
calling  
for  
the  
excess  
doses  
to  
be  
redistributed  
to  
other  
countries,  
but  
so  
far  
the

US  
government  
has  
rejected  
those  
requests,  
citing  
legal  
and  
logistical  
challenges.  
However,  
states  
are  
now  
able  
to  
request  
a  
specific  
number  
of  
vaccine  
doses  
instead  
of  
having  
doses  
distributed  
to  
them  
based  
on  
their  
population.  
Delayed  
reporting,  
everyday  
wastage,  
and  
waning  
demand,  
including  
those  
who  
did  
not  
go

back  
for  
second  
doses,  
are  
among  
the  
sources  
for  
a  
pile  
up  
of  
inventory.  
The  
FDA  
previously  
extended  
the  
[shelf-](#)  
[life](#)  
[of](#)  
[the](#)  
[Pfizer-](#)  
[BioNTech](#)  
and  
[J&J-](#)  
[Janssen](#)  
[vaccines](#),  
and  
some  
hope  
an  
additional  
extension  
for  
the  
Pfizer-  
BioNTech  
vaccine  
will  
be  
approved.  
Meanwhile,  
the  
federal  
stockpile  
of

vaccine  
doses  
continues  
to  
grow,  
with  
approximately  
390  
million  
of  
the  
1.41  
billion  
doses  
purchased  
by  
the  
US  
having  
been  
delivered,  
and  
another  
562  
million  
doses  
from  
Moderna,  
Pfizer-  
BioNTech,  
and  
J&J-  
Janssen  
expected  
to  
be  
delivered  
by  
the  
end  
of  
2021.  
The  
White  
House  
has  
pledged  
to

donate  
80  
million  
doses  
of  
its  
vaccine  
supply,  
and  
will  
purchase  
an  
additional  
500  
million  
doses  
for  
low-  
and  
lower-  
middle-  
income  
countries.  
But  
some  
experts  
note  
the  
doses  
currently  
sitting  
in  
states  
are  
ready  
to  
be  
administered,  
not  
waiting  
to  
be  
manufactured,  
and  
those  
doses  
could  
have

a  
positive  
impact  
in  
other  
countries  
if  
states  
were  
permitted  
to  
redistribute  
them.

## **VACCINE MANDATES**

As  
SARS-  
CoV-2  
vaccines  
become  
more  
widely  
available,  
some  
organizations,  
schools,  
and  
businesses  
are  
considering  
making  
them  
mandatory.  
This  
week,  
a  
US  
federal  
judge  
ruled  
to  
uphold  
a  
[mandatory  
vaccination  
policy  
implemented](#)

by  
Indiana  
University,  
which  
would  
require  
SARS-  
CoV-2  
vaccination  
for  
students,  
faculty,  
and  
staff  
before  
returning  
to  
campus  
this  
fall.  
The  
ruling  
acknowledges  
that  
the  
university  
has  
the  
authority  
under  
the  
Fourteenth  
Amendment  
to  
the  
US  
Constitution  
to  
pursue  
reasonable  
measures  
to  
protect  
the  
“public  
health  
for  
its

students,  
faculty,  
and  
staff.”

The  
students  
who  
filed  
the  
original  
suit  
are  
reportedly  
[appealing](#)  
[the](#)  
[judge’s](#)  
[ruling.](#)

On  
July  
22,  
the  
[American](#)  
[Hospital](#)  
[Association,](#)  
the  
country’s  
largest  
association  
of  
hospitals  
and  
health  
systems,  
issued  
a  
statement  
in  
support  
of  
[mandatory](#)  
[SARS-](#)  
[CoV-2](#)  
[vaccination](#)  
[for](#)  
[healthcare](#)  
[workers.](#)

The



statement  
argues  
that  
the  
vaccines  
have  
been  
demonstrated  
to  
be  
both  
safe  
and  
effective,  
and  
they  
play  
a  
critical  
role  
in  
protecting  
the  
health  
of  
both  
healthcare  
workers  
and  
their  
patients,  
many  
of  
whom  
are  
at  
elevated  
risk  
of  
severe  
COVID-19  
disease.  
There  
have  
been  
several  
notable  
examples

of  
hospitals  
[firing](#)  
[employees](#)  
[who](#)  
[refused](#)  
[the](#)  
[vaccine](#),  
and  
the  
issue  
will  
certainly  
receive  
ongoing  
attention,  
especially  
until  
the  
vaccines  
receive  
full  
FDA  
approval.

### **VACCINE EFFICACY AGAINST VOCs**

A  
[recent](#)  
[bioRxiv](#)  
[preprint](#)  
[study](#)  
compared  
neutralizing  
antibody  
titers  
elicited  
by  
the  
3  
SARS-  
CoV-2  
vaccines  
authorized  
for  
emergency

use  
by  
the  
US  
FDA  
against  
pseudotyped  
variants  
of  
concern  
(VOCs)  
and  
variants  
of  
interest  
(VOIs).  
The  
small  
study  
compared  
blood  
samples  
from  
17  
people  
who  
had  
the  
2-  
dose  
mRNA  
vaccines  
from  
Pfizer-  
BioNTech  
and  
Moderna  
and  
10  
people  
who  
received  
the  
single-  
dose  
viral  
vector  
vaccine

from  
J&J-  
Janssen.  
Overall,  
the  
study  
showed  
a  
high  
level  
of  
antibody  
cross-  
neutralization  
elicited  
by  
the  
Pfizer-  
BioNTech  
and  
Moderna  
vaccines  
against  
VOCs  
but  
significantly  
decreased  
neutralization  
by  
antibodies  
generated  
by  
the  
J&J-  
Janssen  
vaccine.  
Because  
the  
study  
was  
conducted  
using  
blood  
samples,  
it  
might  
not  
reflect

real-world performance, but the [results](#) [counter](#) [previous](#) [reports](#) of the J&J-Janssen vaccine's efficacy against the Delta variant. The authors of the *bioRxiv* study, which is not yet peer-reviewed, said they hoped the findings did not discourage people from getting the J&J-Janssen vaccine but that

future  
recommendations  
included  
advice  
for  
an  
additional  
second  
dose  
of  
that  
vaccine  
or  
an  
mRNA  
vaccine.

The  
authors  
also  
called  
for  
continued  
surveillance  
of  
breakthrough  
infections  
to  
help  
determine  
the  
real-  
world  
effectiveness  
of  
the  
vaccines.

Another  
[study](#)  
evaluating  
vaccine  
effectiveness  
against  
the  
Delta  
variant  
was  
published

July  
21  
in  
the  
New  
England  
Journal  
of  
Medicine.

This  
study  
compared  
the  
effectiveness  
of  
the  
Pfizer-  
BioNTech  
mRNA  
vaccine  
and  
AstraZeneca-  
Oxford  
viral  
vector  
vaccine  
against  
the  
Alpha  
and  
Delta  
variants.  
Following  
1  
dose  
of  
the  
2-  
dose  
vaccines,  
effectiveness  
was  
notably  
lower  
among  
persons  
with  
the

Delta variant (30.7%) than among those with the Alpha variant (48.7%), with the results similar for both vaccines. Following a second dose, the Pfizer-BioNTech vaccine was 93.7% effective against Alpha and 88% effective against Delta. The AstraZeneca-Oxford vaccine after 2 doses was 74.5% effective against Alpha



and  
67%  
against  
Delta.  
The  
researchers  
note  
the  
differences  
in  
effectiveness  
between  
the  
vaccines  
are  
considered  
modest  
and  
support  
public  
health  
efforts  
to  
maximize  
uptake  
of  
the  
full  
2-  
dose  
regimen  
to  
protect  
against  
VOCs.

## **REAL- WORLD VACCINE EFFECTIVENESS**

A  
[study](#)  
published  
July  
20  
in  
the  
*Annals*

of  
*Internal  
Medicine*  
details  
a  
test-  
negative  
case-  
control  
study  
examining  
the  
short-  
term  
effectiveness  
of  
authorized  
SARS-  
CoV-2  
mRNA  
vaccines  
in  
preventing  
infections.  
The  
research  
team  
used  
data  
collected  
through  
the  
US  
Department  
of  
Veteran  
Affairs' (VA)  
COVID-19  
Shared  
Data  
Resource,  
a  
national  
database  
containing  
extensive  
demographic,  
clinical,

pharmacologic,  
laboratory,  
vital  
sign,  
and  
clinical  
outcome  
information  
derived  
from  
multiple  
validated  
sources.  
The  
researchers  
identified  
all  
individuals  
who  
tested  
positive  
for  
SARS-  
CoV-2  
infection  
between  
December  
15,  
2020  
and  
March  
4,  
2021,  
and  
matched  
them  
with  
control  
participants  
who  
had  
similar  
factors  
such  
as  
sex,  
age,  
race,

BMI,  
and  
geographic  
location,  
but  
who  
had  
tested  
negative  
for  
SARS-  
CoV-2.  
The  
main  
measure  
of  
interest  
was  
vaccine  
effectiveness  
7+  
days  
after  
the  
second  
vaccine  
dose,  
but  
the  
researchers  
also  
examined  
vaccine  
effectiveness  
among  
those  
who  
received  
only  
1  
dose  
of  
either  
the  
Pfizer-  
BioNTech  
or

Moderna  
vaccines.

The  
team  
identified  
54,360  
matched  
pairs  
of  
veterans.

Among  
those  
who  
tested  
positive,  
18%  
had  
been  
vaccinated,  
compared  
with  
32.8%  
of  
those  
who  
tested  
negative.

Overall,  
the  
vaccines  
showed  
97.1%  
effectiveness  
among  
those  
who  
received  
the  
second  
dose  
at  
least  
7  
days  
prior.  
Among  
those

who  
received  
only  
1  
dose,  
effectiveness  
was  
85%  
overall.  
The  
research  
team  
concluded  
the  
SARS-  
CoV-2  
vaccines  
being  
employed  
by  
the  
VA  
provided  
a  
high  
level  
of  
protection  
against  
infection.  
However,  
they  
noted  
several  
limitations  
of  
the  
study,  
including  
a  
predominantly  
male  
study  
population,  
a  
lack  
of  
data

for  
currently  
circulating  
SARS-  
CoV-2  
variants  
of  
concern,  
and  
a  
short  
follow-  
up  
period.

## **HEALTH EFFECTS OF LOCKDOWNS**

Researchers  
continue  
to  
explore  
the  
potential  
unintentional  
health  
impacts  
of  
COVID-19-  
related  
lockdowns.

A  
commentary  
[published](#)  
in  
*BMJ  
Global  
Health*  
explores  
this  
question,  
comparing  
the  
costs  
of  
such  
lockdowns

to  
their  
effectiveness  
in  
preventing  
COVID-19.

The  
research  
team  
examined  
the  
issue  
through  
4  
main  
lenses:  
short-  
term  
mortality,  
disruption  
of  
health  
services,  
impacts  
on  
mental  
health,  
and  
the  
effect  
that  
lockdowns  
had  
on  
global  
health  
programs.

When  
examining  
a  
global  
dataset  
containing  
information  
on  
short-  
term



mortality,  
the  
research  
team  
suggested  
that  
lockdowns  
were  
not  
associated  
with  
an  
increase  
in  
short-  
term  
mortality.

The  
team  
specifically  
used  
Australia  
and  
New  
Zealand  
as  
examples,  
as  
both  
countries  
imposed  
strict  
COVID-19  
lockdowns,  
maintained  
low  
numbers  
of  
COVID-19  
cases,  
and  
had  
no  
excess  
mortality  
in  
2020.  
When

looking  
at  
disruption  
of  
health  
services,  
a  
topic  
that  
has  
garnered  
much  
attention  
throughout  
the  
pandemic,  
the  
authors  
noted  
that  
while  
there  
were  
notable  
disruptions,  
it  
was  
difficult  
to  
disentangle  
whether  
the  
lockdowns  
or  
the  
COVID-19  
pandemic  
itself  
was  
the  
driving  
factor.  
The  
research  
team  
posited  
similar  
points

around  
mental  
health,  
including  
suicide,  
stating  
that  
it  
was  
difficult  
to  
disentangle  
the  
mental  
health  
impacts  
of  
dealing  
with  
the  
COVID-19  
pandemic  
with  
the  
mental  
health  
impacts  
of  
lockdowns,  
both  
of  
which  
increased  
increased  
isolation,  
anxiety,  
and  
stress.  
Lastly,  
the  
research  
team  
acknowledged  
that  
lockdowns  
did  
disrupt  
ongoing

global  
health  
programs  
but,  
again,  
it  
was  
difficult  
to  
ascertain  
if  
the  
damage  
done  
by  
these  
disruptions  
outweighed  
the  
benefits  
associated  
with  
the  
COVID-19  
lockdown  
interventions.  
Overall,  
the  
authors  
acknowledged  
that  
[public  
health  
lockdowns  
have  
a  
real  
cost,](#)  
but  
suggested  
they  
do  
not  
impart  
excess  
harm  
to  
populations

facing  
a  
public  
health  
threat  
like  
COVID-19.

## **INDIA MORTALITY**

Researchers  
at  
the  
[Center  
for  
Global  
Development](#)  
published  
findings  
from  
an  
analysis  
that  
aimed  
to  
estimate  
the  
true  
[COVID-19  
mortality  
in  
India.](#)  
India  
surpassed  
[400,000  
cumulative  
reported  
deaths](#)  
on  
July  
1,  
but  
some  
experts  
are  
concerned  
that  
this

total  
may  
be  
a  
substantial  
underestimate  
of  
the  
true  
COVID-19  
burden,  
due  
to  
deficiencies  
in  
how  
the  
Indian  
government  
records  
mortality  
data  
—  
for  
COVID-19  
and  
otherwise.  
The  
researchers  
took  
several  
approaches  
to  
estimating  
India's  
COVID-19  
mortality,  
including  
estimating  
excess  
mortality  
based  
on  
official  
death  
data,  
utilizing  
age-

adjusted  
case  
fatality  
ratios  
and  
seroprevalence  
data,  
and  
a  
household-  
level  
longitudinal  
survey.

The  
[mortality](#)  
[estimates](#)  
they  
obtained  
based  
on  
these  
3  
methodologies  
ranged  
from  
3.4  
million  
to  
4.9  
million  
deaths,  
and  
while  
there  
are  
major  
differences  
between  
each  
estimate,  
all  
3  
are  
at  
least  
8.5  
times

higher  
than  
the  
official  
data.  
Notably,  
the  
3  
methodologies  
yielded  
much  
different  
results  
for  
the  
first  
and  
second  
waves  
in  
India.  
While  
the  
second  
wave  
is  
generally  
believed  
to  
be  
more  
severe,  
2  
of  
the  
3  
methodologies  
estimate  
more  
deaths  
for  
the  
first  
wave  
than  
the  
second,  
perhaps



a  
function  
of  
its  
longer  
duration.  
While  
these  
findings  
do  
not  
provide  
a  
definitive  
estimate  
of  
India's  
COVID-19  
mortality,  
this  
study  
and  
similar  
efforts  
continue  
to  
highlight  
the  
undercounting  
of  
COVID-19  
deaths  
in  
countries  
around  
the  
world,  
and  
it  
could  
be  
years  
after  
the  
pandemic  
ends  
before  
we

have  
a  
clear  
understanding  
of  
the  
global  
burden.

## **AFRICA**

The  
pace  
of  
new  
COVID-19  
cases  
in  
Africa  
has  
slowed  
following  
an  
8-  
week  
surge  
driven  
by  
the  
Delta  
variant,  
but  
the  
[reprieve](#)  
[could](#)  
[be](#)  
[short-](#)  
[lived](#),  
according  
to  
the  
[WHO](#)  
[Regional](#)  
[Office](#)  
[for](#)  
[Africa](#).  
The  
continent-  
wide

decline  
of  
1.7%  
this  
week  
was  
driven  
by  
a  
steep  
drop  
in  
the  
number  
of  
new  
cases  
reported  
in  
South  
Africa,  
where  
nationwide  
violence  
interrupted  
testing  
and,  
likely,  
reporting.  
The  
WHO  
warned  
that  
removing  
the  
country's  
data  
would  
show  
an  
overall  
18%  
increase  
in  
cases  
on  
the  
continent,

creating  
an  
unbroken  
9-  
week  
wave.  
Hospitals  
are  
overwhelmed,  
with  
few  
if  
any  
available  
intensive  
care  
unit  
beds,  
oxygen  
supplies  
are  
rapidly  
dwindling,  
and  
healthcare  
workers  
are  
stretched  
thin.  
South  
Africa  
stands  
as  
an  
example  
of  
how  
the  
long-  
term  
impacts  
of  
pandemic  
lockdowns  
on  
personal  
income,  
food

security,  
and  
supply  
chains  
can  
exacerbate  
political  
instability,  
with  
the  
eruption  
of  
violent  
riots  
and  
looting  
in  
the  
wake  
of  
former  
President  
Jacob  
Zuma's  
arrest  
earlier  
this  
month.  
The  
violence  
taxed  
an  
already  
overburdened  
healthcare  
system  
and  
disrupted  
COVID-19  
testing  
and  
vaccination  
sites  
that  
were  
finally  
gaining  
momentum.

Government  
officials  
and  
scientists  
warn  
the  
mass  
protests  
and  
disruptions  
to  
healthcare  
access  
could  
lead  
to  
another  
rise  
in  
COVID-19  
cases,  
hospitalizations,  
and  
deaths.

Only  
about  
1.5%  
of  
Africa's  
population  
is  
fully  
vaccinated,  
and  
the  
continent  
has  
received  
less  
than  
2%  
of  
the  
world's  
SARS-  
CoV-2  
vaccine

doses.  
[Data](#)  
from  
the  
new  
[Global](#)  
[Dashboard](#)  
for  
[Vaccine](#)  
[Equity](#)  
estimate  
that  
African  
nations  
could  
add  
\$38  
billion  
to  
their  
gross  
domestic  
product  
(GDP)  
forecast  
for  
2021  
if  
they  
had  
vaccination  
rates  
similar  
to  
those  
in  
high-  
income  
countries.  
The  
inequity  
is  
creating  
a  
[“two-  
track”](#)  
[pandemic](#)  
and

recovery,  
as  
high-  
income  
nations  
with  
higher  
vaccination  
rates  
are  
projected  
to  
recover  
more  
quickly  
while  
low-  
and  
middle-  
income  
countries  
(LMICs)  
that  
have  
not  
been  
able  
to  
access  
vaccines  
might  
not  
witness  
pre-  
pandemic  
growth  
levels  
until  
2024,  
according  
to  
the  
UN  
Development  
Programme  
(UNDP),  
one  
of



the  
dashboard's  
sponsors,  
along  
with  
WHO  
and  
the  
University  
of  
Oxford.

Global  
vaccine  
inequity  
will  
continue

to  
grow  
under  
the  
status

quo,  
a  
new  
analysis  
from  
the  
Kaiser  
Family  
Foundation  
shows.

According  
to  
the  
analysis,  
low-  
income  
countries  
would  
need  
to  
increase  
their  
daily  
vaccination  
rate  
by  
nearly

19  
times  
to  
reach  
40%  
coverage  
with  
at  
least  
one  
dose  
by  
the  
end  
of  
the  
year.  
Ultimately,  
ensuring  
widespread  
vaccination  
will  
improve  
immunity  
among  
the  
global  
population  
and  
help  
bring  
the  
pandemic  
under  
control,  
but  
exactly  
how  
higher-  
income  
nations  
plan  
to  
increase  
vaccine  
supplies  
to  
LMICs

remains  
an  
unresolved  
question.

## **VACCINE MANUFACTURING IN AFRICA**

Pharmaceutical  
company  
partners  
Pfizer  
and  
BioNTech  
on  
July  
21

announced  
they  
signed  
a  
letter  
of  
intent  
with  
the  
Biovac  
Institute  
(Biovac)

—

a  
Cape  
Town,  
South  
Africa-  
based  
biopharmaceutical  
company

—

to  
help  
manufacture  
the  
Pfizer-  
BioNTech  
SARS-  
CoV-2

vaccine  
exclusively  
for  
the  
55  
nations  
of  
the  
African  
Union  
(AU).  
Under  
the  
plan,  
Biovac  
will  
“finish  
and  
fill”  
vaccine  
doses,  
obtaining  
large  
batch  
ingredients  
from  
Europe,  
blending  
the  
product,  
and  
filling  
and  
packaging  
vials  
for  
distribution,  
with  
the  
goal  
of  
producing  
more  
than  
100  
million  
doses  
annually.

Pfizer-BioNTech will immediately begin to provide technology transfers, including on-site development and equipment installation, with the expectation that Biovac will be incorporated into the supply chain by the end of 2021 and begin producing finished doses in 2022. The agreement represents the first time an mRNA

vaccine  
will  
be  
produced  
in  
Africa.  
Another  
South  
African  
firm,  
[Aspen](#)  
[Pharmacare](#),  
already  
is  
producing  
the  
J&J-  
Janssen  
viral  
vector  
SARS-  
CoV-2  
vaccine  
in  
the  
country,  
providing  
the  
same  
“fill  
and  
finish”  
services  
with  
the  
capacity  
to  
make  
more  
than  
200  
million  
doses  
each  
year.

The  
announcement

received  
positive  
responses  
from  
some  
experts,  
while  
others  
called  
for  
more  
to  
be  
done  
to  
kickstart  
vaccine  
manufacturing  
in  
Africa.

[Africa  
CDC  
Director  
John  
Nkengasong](#)

said  
the  
move  
should  
be  
celebrated  
as  
another  
step  
in  
“the  
collective  
action  
to  
address  
technology  
transfer  
and  
intellectual  
property.”

But  
Strive  
Masiyiwa,

AU  
Special  
Envoy  
and  
Coordinator  
of  
the  
Africa  
Vaccine  
Acquisition  
Task  
Team  
(AVATT)  
initiative,  
called  
on  
large  
pharmaceutical  
firms  
to  
license  
production  
of  
SARS-  
CoV-2  
vaccines  
on  
the  
continent  
rather  
than  
create  
piecemeal  
deals.  
WHO  
Regional  
Director  
for  
Africa  
Dr.  
Matshidiso  
Moeti  
also  
called  
for  
more  
local  
production



of  
vaccines  
in  
Africa  
in  
order  
to  
prepare  
for  
future  
disease  
outbreaks.

Late  
last  
month,  
the  
WHO,  
along  
with  
Biovac,  
Afrigen  
Biologics  
and  
Vaccines,  
a  
network  
of  
universities,  
and  
the  
Africa  
CDC,  
[established](#)  
[an](#)  
[mRNA](#)  
[vaccine](#)  
[technology](#)  
[transfer](#)  
[hub](#)  
in  
South  
Africa  
to  
act  
as  
a  
training

facility  
for  
the  
production  
of  
mRNA  
vaccine  
raw  
materials  
in  
Africa.  
However,  
neither  
Pfizer,  
BioNTech,  
nor  
Moderna,  
which  
makes  
another  
mRNA  
SARS-  
CoV-2  
vaccine,  
has  
voiced  
support  
for  
the  
hub.  
Additionally,  
Pfizer  
reiterated  
the  
current  
deal  
with  
Biovac  
is  
only  
among  
the  
3  
companies  
and  
does  
not  
represent

a  
government-  
supported  
technology  
transfer  
or  
compulsory  
licensing  
agreement.  
Pfizer  
CEO  
Albert  
Bourla  
on  
July  
21  
again  
stated  
the  
company's  
opposition  
to  
a  
proposal  
at  
the  
World  
Trade  
Organization  
that  
would  
allow  
for  
patent  
waivers  
on  
SARS-  
CoV-2  
vaccines,  
saying  
it  
would  
discourage  
innovation  
and  
collaboration.  
But  
BioNTech

CEO  
Uğur  
Şahin  
indicated  
his  
company  
continues  
to  
evaluate  
sustainable  
approaches  
to  
supporting  
the  
African  
development  
and  
production  
of  
mRNA  
vaccines,  
which  
could  
be  
used  
to  
develop  
vaccines  
for  
other  
diseases  
in  
the  
future.

### **SARS- COV-2 ORIGINS**

Earlier  
this  
month,  
the  
WHO  
outlined  
a  
proposal  
for  
a

follow-up investigation in China to identify the origins of the SARS-CoV-2 virus. On July 22, Chinese officials rejected the proposal. The WHO plan would have included additional investigations of laboratory facilities and markets in Wuhan, among other activities. Numerous governments—including the US—and experts have

called  
for  
additional  
investigations  
into  
the  
origin  
of  
the  
pandemic,  
including  
access  
to  
additional  
data  
and  
specimens,  
arguing  
that  
limited  
access  
to  
the  
necessary  
data  
hindered  
the  
initial  
investigation.  
Following  
China's  
rejection  
of  
the  
WHO  
proposal,  
the  
[WHO](#)  
[called](#)  
[for](#)  
[international](#)  
[cooperation](#)  
regarding  
investigations  
into  
the  
virus's  
origins

and emphasized that associated investigations are not intended to assign blame but rather to provide further understanding of how the virus emerged.

As we covered previously, the WHO does not have the authority to initiate such an investigation without support from the host country.

## **OLYMPICS**

Tokyo reported

its  
highest  
daily  
incidence  
since  
January,  
just  
as  
the  
2020  
Summer  
Olympics  
Games  
commence.  
The  
Tokyo  
Metropolitan  
Government  
reported  
1,832  
cases  
on  
July  
21,  
only  
two  
days  
before  
the  
Olympics  
opening  
ceremony.  
The  
spike  
represents  
over  
600  
more  
cases  
than  
last  
Wednesday's  
count.  
Several  
athletes  
already  
have  
tested



positive  
for  
SARS-  
CoV-2  
and  
will  
miss  
the  
Games,  
including  
a  
[US](#)  
[beach](#)  
[volleyball](#)  
[player](#),  
an  
[alternate](#)  
for  
the  
[US](#)  
[gymnastics](#)  
team,  
and  
a  
[Czech](#)  
[beach](#)  
[volleyball](#)  
[player](#).  
Vaccination  
is  
not  
required  
for  
Olympic  
athletes,  
but  
the  
[Olympic](#)  
[playbook](#)  
requires  
anyone  
going  
to  
the  
Games  
to  
submit  
two

negative  
tests  
taken  
on  
separate  
days  
within  
96  
hours  
of  
leaving  
for  
Japan  
regardless  
of  
vaccination  
status.

They  
are  
tested  
again  
upon  
arrival.  
Athletes,  
coaches,  
and  
officials  
are  
required  
to  
take  
daily  
antigen  
tests,  
followed  
by  
a  
PCR  
test  
if  
the  
antigen  
test  
returns  
a  
positive  
result.  
The

Tokyo  
public  
database  
reports  
79  
people  
with  
Olympic  
credentials  
have  
tested  
positive.  
Close  
contacts  
of  
those  
who  
test  
positive  
will  
be  
allowed  
to  
train  
and  
compete  
as  
long  
as  
they  
receive  
two  
negative  
tests  
within  
6  
hours  
of  
competition.

**US Travel Industry and Retail Supply Chain Updates**

**Weekly Updates on SARS-CoV-2 Vaccines**

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**Date : 7/27/2021 2:15:18 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - July 27, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
194.1  
million  
cumulative  
cases  
and  
4.16

million  
deaths  
worldwide  
as  
of  
12:28  
EDT  
on  
July  
26.  
Global  
weekly  
incidence  
increased  
for  
the  
fifth  
consecutive  
week,  
a  
7.89%  
increase  
over  
the  
previous  
week.  
Global  
weekly  
mortality  
increased  
for  
the  
third  
consecutive  
week,  
a  
20.77%  
increase  
compared  
to  
the  
previous  
week.

*Global  
Vaccination*

The  
[WHO](#)

reported

3.7

billion

doses

of

SARS-

CoV-2

vaccines

administered

globally

as

of

July

26.

The

WHO

reports

a

total

of

1.44

billion

individuals

have

received

at

least

1

dose,

and

672

million

are

fully

vaccinated.

Analysis

from

Our

World

in

Data

shows

that

the

global

daily

doses

administered

is  
up,  
now  
at  
33  
million  
doses  
per  
day,  
driven  
by  
increases  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.14  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
27.5%  
of  
the  
global  
population)  
and  
1.08  
billion  
who  
are  
fully  
vaccinated  
(13.9%  
of  
the  
global  
population).



*UNITED  
STATES*

The

[US](#)

[CDC](#)

reported

34.4

million

cumulative

COVID-19

cases

and

608,528

deaths.

Daily

incidence

continues

to

increase,

now

up

to

42,226

new

cases

per

day,

which

is

nearly

3.7

times

the

most

recent

low

on

June

19

(11,467)

and

is

still

increasing

steadily.

Daily

mortality

also

continues  
to  
increase,  
up  
to  
239  
deaths  
per  
day,  
which  
is  
more  
than  
45%  
higher  
than  
the  
most  
recent  
low  
on  
July  
10  
(164).

US

Vaccination

The  
US  
has  
administered  
342.2  
million  
cumulative  
doses  
of  
[SARS-CoV-2](#)  
[vaccines](#).  
[Daily](#)  
[vaccinations](#)  
are  
increasing  
slowly,  
now  
up  
to  
471,948

doses  
per  
day\*.  
A  
total  
of  
188.7  
million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
56.8%  
of  
the  
entire  
US  
population.  
Among  
adults,  
69%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
10.5  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
163.2

million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
49.1%  
of  
the  
total  
population.  
Approximately  
60%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
8.1  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent*

5  
days.  
The  
most  
current  
value  
provided  
here  
corresponds  
to  
5  
days  
ago.

## **US HOSPITALIZATIONS**

The  
number  
of  
COVID-19-  
related  
hospitalizations  
is  
beginning  
to  
rise  
in  
most  
US  
states,  
following  
increasing  
numbers  
of  
COVID-19  
cases  
driven  
by  
the  
spread  
of  
the  
more  
transmissible  
Delta  
variant.  
Nationally,  
hospitalization

rates  
remain  
low  
overall,  
nowhere  
near  
the  
previous  
pandemic  
peaks.  
But  
the  
increases  
in  
hospitalizations  
are  
high  
and  
rising  
in  
parts  
of  
the  
country  
that  
have  
low  
vaccination  
rates,  
including  
[Florida](#),  
[Nevada](#),  
[Arkansas](#),  
and  
[Missouri](#).  
Some  
[Florida](#)  
[hospitals](#)  
are  
seeing  
the  
[highest](#)  
[number](#)  
[of](#)  
[COVID-19](#)  
[patients](#)  
since  
the

beginning  
of  
the  
pandemic,  
and  
the  
pace  
of  
this  
surge  
is  
accelerating  
rapidly.

One  
hospital  
in  
Missouri  
said  
its  
increase  
in  
patients  
occurred  
nearly  
5  
times  
as  
fast  
as  
last  
fall's  
surge.

An  
estimated  
97%  
of  
hospitalized  
patients  
are  
unvaccinated.  
Patients  
also  
are  
skewing  
younger,  
with  
69%  
under

the  
age  
of  
65,  
according  
to  
[CDC](#)  
[data](#)  
as  
of  
July  
17.  
Some  
hospitals  
are  
scrambling  
to  
find  
space  
for  
intensive  
care  
patients,  
trying  
to  
address  
personnel  
shortages,  
and  
attempting  
to  
maintain  
adequate  
supplies  
of  
medical  
equipment  
such  
as  
ventilators.

According  
to  
[new](#)  
[projections](#)  
[released](#)  
[last](#)  
[week](#)



by  
the  
COVID-19  
Scenario  
Modeling  
Hub—

a  
consortium  
of  
researchers  
working  
with  
the  
US  
CDC  
to  
track  
the  
pandemic  
—

the  
current  
US  
surge  
will  
continue  
throughout  
the  
summer  
and  
into  
the  
fall.

In  
the  
most  
likely  
of  
4  
scenarios,  
there  
would  
be  
around  
60,000  
new  
cases  
and

about  
850  
deaths  
per  
day,  
with  
70%  
of  
eligible  
Americans  
vaccinated.  
Currently,  
the  
US  
is  
averaging  
around  
42,000  
new  
cases  
per  
day  
and  
about  
250  
deaths  
per  
day.  
Nationwide,  
57.5%  
of  
eligible  
people  
are  
fully  
vaccinated.  
The  
researchers  
encouraged  
state  
and  
local  
leaders  
to  
take  
note  
of  
the

projections,  
urging  
them  
to  
reimplement  
mask  
mandates  
and  
physical  
distancing  
requirements  
that  
could  
help  
lessen  
the  
surge's  
impact.

## **US GOVERNMENT RESPONSE**

As  
the  
number  
of  
new  
COVID-19  
cases  
continues  
to  
rise  
in  
the  
US,  
the  
US  
government  
is  
examining  
further  
tactics  
to  
contain  
the  
pandemic.  
Last  
week,

the  
White  
House  
purchased  
an  
additional  
200  
million  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine.  
The  
purchase  
is  
in  
anticipation  
that  
additional  
doses  
will  
be  
recommended  
for  
certain  
populations  
and  
that  
the  
vaccine  
could  
"soon"  
be  
authorized  
for  
use  
in  
children  
ages  
5-11.  
The  
US  
government  
also  
hinted  
at

reinstated  
mask  
recommendations.

Overall,  
the  
US  
government  
is  
focused  
on  
improving  
national  
vaccination  
rates,  
particularly  
in  
communities  
with  
low  
coverage  
where  
most  
new  
COVID-19  
cases  
are  
in  
unvaccinated  
individuals.  
On  
July  
22,  
the  
government  
announced  
US  
\$100  
million  
for  
rural  
health  
clinics  
to  
develop  
vaccine  
confidence  
and

outreach efforts. Additionally, the US Department of Health and Human Services will invest US \$1.6 billion from the American Rescue Plan to support COVID-19 testing and mitigation activities in vulnerable communities. These funds will address the rise in cases among unvaccinated people by detecting, diagnosing, tracing, and mitigating

the  
spread  
of  
SARS-  
CoV-2  
in  
homeless  
shelters,  
correctional  
facilities,  
and  
other  
hard-  
hit  
and  
high-  
risk  
areas.

In  
recognizing  
the  
31st  
anniversary  
of  
the  
Americans  
with  
Disabilities  
Act,  
the  
government  
announced  
a  
[package  
of  
guidance  
and  
resources  
to  
support  
individuals  
experiencing  
“long  
COVID,”](#)  
also  
known  
as  
post-

acute  
sequelae  
of  
COVID-19.  
According  
to  
the  
guidance,  
long  
COVID  
can  
be  
considered  
a  
disability  
under  
certain  
federal  
civil  
rights  
laws,  
thereby  
allowing  
federal  
protections  
and  
resources  
for  
adults  
and  
children  
impacted  
by  
long-  
lasting  
symptoms  
of  
COVID-19.

As  
the  
US  
government  
focuses  
on  
[challenges](#)  
[to](#)  
[the](#)



nation's  
domestic  
recovery  
from  
the  
pandemic,  
including  
rising  
consumer  
prices  
and  
turbulent  
financial  
markets,  
officials  
from  
the  
US  
Agency  
for  
International  
Development  
who  
are  
responsible  
for  
making  
the  
US  
an  
"arsenal  
of  
vaccines"  
are  
struggling  
to  
help  
other  
countries  
acquire  
resources  
and  
distribute  
SARS-  
CoV-2  
vaccines,  
COVID-19  
therapeutics,

and  
personal  
protective  
equipment.  
At  
issue  
is  
more  
than  
US  
\$1  
billion  
the  
White  
House  
diverted  
from  
the  
agency  
in  
June  
to  
pay  
for  
the  
purchase  
of  
500  
million  
additional  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine,  
meant  
to  
supplement  
the  
80  
million  
vaccine  
doses  
the  
government  
has  
already

allocated  
for  
donations  
abroad,  
according  
to  
unnamed  
officials.  
But  
the  
unexpected  
shift  
in  
funding,  
and  
the  
wait  
time  
for  
those  
doses  
to  
be  
delivered,  
has  
put  
pressure  
on  
the  
US  
government  
to  
maintain  
its  
status  
as  
a  
leading  
donor  
of  
COVID-19  
assistance.  
USAID  
officials  
tasked  
with  
vaccine  
distribution

abroad  
continue  
to  
advocate  
for  
increased  
resources  
from  
the  
White  
House  
and  
US  
Congress  
in  
order  
to  
assist  
countries  
in  
need.

## **VACCINATION MANDATES**

As  
the  
Delta  
SARS-  
CoV-2  
variant  
sweeps  
across  
the  
US,  
more  
jurisdictions  
and  
companies  
are  
considering  
strengthening  
public  
health  
measures  
to  
mitigate  
the  
virus's

impact.  
This  
includes  
vaccination  
mandates  
for  
employees.  
On  
July  
26,  
[California](#),  
the  
country's  
most  
populous  
state,  
became  
the  
first  
in  
the  
nation  
to  
[announce](#)  
that  
all  
state  
employees  
and  
on-  
site  
public  
and  
private  
workers  
in  
health  
care  
and  
high-  
risk  
congregate  
settings  
will  
be  
required  
to  
show

proof  
of  
vaccination  
or  
submit  
to  
mandatory  
once-  
or-  
twice  
weekly  
testing.  
State  
employees  
are  
required  
to  
submit  
vaccination  
documentation  
by  
August  
2,  
and  
health  
care  
and  
congregate-  
setting  
facilities  
must  
be  
in  
full  
compliance  
by  
August  
23.  
Unvaccinated  
workers  
also  
will  
be  
required  
to  
wear  
appropriate  
PPE.

A  
few  
hours  
earlier,  
New  
York  
City,  
the  
nation's  
largest  
city,  
announced

that  
all  
340,000  
municipal  
employees  
of  
the  
city,  
including  
police  
officers  
and  
teachers,  
will  
be  
required  
to  
be  
vaccinated  
or  
start  
weekly  
testing  
by  
September  
13.

As  
of  
August  
2,  
any  
employee  
who  
is  
unvaccinated  
must

wear  
a  
mask  
indoors  
at  
all  
times  
or  
risk  
termination.  
In  
their  
announcements,  
both  
California  
Governor  
Gavin  
Newsom  
and  
New  
York  
City  
Mayor  
Bill  
De  
Blasio  
encouraged  
other  
local  
governments  
and  
private  
sector  
employers  
to  
implement  
vaccination  
mandates.

The  
Department  
of  
Veterans  
Affairs  
on  
July  
26  
became



the  
first  
federal  
agency  
to  
implement  
a  
vaccination  
mandate,  
requiring  
115,000  
of  
its  
frontline  
healthcare  
workers  
to  
show  
proof  
of  
full  
vaccination  
within  
the  
next  
8  
weeks.  
In  
its  
announcement,  
the  
VA  
referenced  
several  
organizations  
that  
support  
vaccine  
mandates.  
Many  
of  
those  
groups  
—  
including  
the  
American  
Medical

Association,  
the  
American  
Nurses  
Association  
and  
55  
other  
groups

representing  
millions  
of  
doctors,  
nurses,  
pharmacists,  
and  
other  
healthcare  
workers

—  
issued  
a  
joint  
statement

early  
on  
July  
26  
calling  
for  
all  
healthcare  
and  
long-  
term  
care  
employers  
to  
require  
their  
employees  
to  
be  
vaccinated  
for  
SARS-  
CoV-2.  
The

statement  
cites  
highly  
contagious  
variants,  
including  
the  
Delta  
variant,  
and  
“significant  
numbers”  
of  
unvaccinated  
people  
as  
drivers  
for  
rising  
numbers  
of  
COVID-19  
cases,  
hospitalizations,  
and  
deaths  
in  
the  
US.  
The  
groups  
also  
called  
on  
other  
employers  
across  
the  
country  
to  
implement  
policies  
to  
encourage  
vaccination.  
As  
we  
have

previously  
reported,  
vaccination  
mandates  
for  
employees  
of  
a  
hospital  
system  
(*Bridges  
et  
al  
v.  
Houston  
Methodist  
Hospital  
et  
al*)  
and  
students  
of  
a  
university  
(*Ryan  
Klaasen  
et  
al  
v.  
The  
Trustees  
of  
Indiana  
University*)  
so  
far  
have  
been  
upheld  
in  
US  
federal  
district  
courts.  
An  
appeal  
from  
one

of  
those  
cases  
is  
expected,  
and  
additional  
legal  
challenges  
likely  
will  
result  
from  
these,  
and  
future,  
vaccination  
mandates.

**MODERNA  
VACCINE  
FOR  
ADOLESCENTS**

The  
European  
Medicines  
Agency's  
Committee  
for  
Medicinal  
Products  
for  
Human  
Use  
on  
July  
23  
[approved](#)  
[the](#)  
[Moderna](#)  
[SARS-](#)  
[CoV-2](#)  
[vaccine](#)  
(known  
as  
Spikevax  
in  
Europe)

for  
use  
in  
children  
aged  
12  
to  
17  
years.

The  
vaccine  
already  
is  
authorized  
for  
adults  
aged  
18  
and  
older,  
but  
it  
is  
the  
first  
time  
this  
vaccine  
has  
been  
authorized  
for  
people  
under  
age  
18.

According  
to  
the  
EMA,  
data  
from  
more  
than  
3,700  
children  
ages  
12

to  
17  
showed  
the  
vaccine  
produced  
an  
antibody  
response  
comparable  
to  
the  
one  
seen  
in  
young  
adults  
aged  
18  
to  
25  
years.  
The  
younger  
group  
also  
experienced  
similar  
mild-  
to-  
moderate  
side  
effects.  
The  
agency  
noted  
that  
the  
trial  
was  
unable  
to  
detect  
new,  
uncommon  
side  
effects  
or

evaluate  
the  
risk  
of  
known  
ones,  
including  
the  
inflammation  
of  
heart  
muscle  
and  
tissue,  
because  
of  
the  
relatively  
small  
number  
of  
study  
participants,  
but  
added  
that  
the  
“benefits  
of  
Spikevax  
in  
children  
aged  
12  
to  
17  
outweigh  
the  
risks.”  
Until  
now,  
the  
Pfizer-  
BioNTech  
was  
the  
only  
option



for  
children  
aged  
12  
and  
older  
in  
Europe.  
The  
US  
FDA  
currently  
is  
considering  
whether  
to  
authorize  
the  
Moderna  
vaccine  
for  
the  
same  
age  
group.

#### **VACCINE TRIALS FOR CHILDREN**

The  
US  
FDA  
reportedly  
has  
urged  
2  
SARS-  
CoV-2  
vaccine  
makers,  
Pfizer-  
BioNTech  
and  
Moderna,  
to  
expand  
the

size  
of  
their  
clinical  
trials  
among  
children  
aged  
5  
to  
11  
years  
in  
order  
to  
assess  
whether  
the  
rare  
side  
effects  
of  
myocarditis  
(inflammation  
of  
the  
heart  
muscle)  
and  
pericarditis  
(inflammation  
of  
the  
lining  
around  
the  
heart)  
that  
have  
been  
seen  
in  
young  
adults  
shortly  
following  
vaccination  
also

appear  
in  
this  
younger  
age  
group.  
Federal  
regulators  
requested  
the  
companies  
include  
at  
least  
3,000  
children  
in  
their  
studies,  
reportedly  
about  
double  
the  
original  
number  
of  
participants.  
[Moderna](#)  
[confirmed](#)  
[its](#)  
[plans](#)  
[to](#)  
[expand](#)  
the  
size  
of  
its  
pediatric  
clinical  
trial  
and  
expects  
to  
have  
data  
on  
its  
vaccine's

use  
among  
children  
ready  
to  
submit  
to  
the  
FDA  
in  
winter  
2021  
or  
early  
2022.  
Pfizer-  
BioNTech  
indicated  
it  
does  
not  
plan  
to  
alter  
its  
original  
timeline  
of  
submitting  
a  
request  
for  
the  
FDA  
to  
expand  
authorization  
to  
5-  
to-11-  
year-  
old  
children  
by  
the  
end  
of  
September,

and  
presenting  
data  
for  
younger  
children,  
aged  
6  
months  
to  
2  
years,  
in  
October  
or  
November.

The  
FDA  
last  
month  
[added](#)  
[warnings](#)  
about  
the  
potential  
for  
myocarditis  
and  
pericarditis  
to  
patient  
and  
provider  
fact  
sheets  
for  
both  
the  
Moderna  
and  
Pfizer-  
BioNTech  
vaccines.

**LONG  
COVID/PASC  
IN  
CHILDREN**

Children's  
National  
Hospital  
(US),  
in  
collaboration  
with  
the  
US  
NIH's  
National  
Institute  
of  
Allergy  
and  
Infectious  
Diseases,  
[announced](#)  
on  
July  
25  
they  
are  
launching  
a  
large,  
multi-  
year  
study  
to  
examine  
the  
[long-  
term  
effects](#)  
of  
[COVID-19](#)  
and  
[multisystem  
inflammatory  
syndrome](#)  
in  
children  
([MIS-  
C](#))  
following  
recovery  
from

acute  
SARS-  
CoV-2  
infection.  
The  
study  
will  
enroll  
up  
to  
1,000  
children  
and  
young  
adults  
under  
age  
21  
who  
have  
recovered  
from  
confirmed  
infection  
with  
SARS-  
CoV-2,  
with  
or  
without  
symptoms,  
or  
MIS-  
C,  
as  
well  
as  
up  
to  
1,000  
household  
contacts  
who  
will  
serve  
as  
a  
control

group,  
and  
1  
parent  
or  
guardian  
per  
participant  
to  
complete  
questionnaires.

Surveys  
will  
gather  
information  
about  
quality  
of  
life,  
social  
impact,  
and  
any  
long-  
term  
physical  
impacts  
of  
the  
virus,  
and  
researchers  
also  
plan  
to  
detail  
the  
role  
of  
genetics;  
duration  
and  
quality  
of  
immune  
responses  
following  
infection;



so-called  
"long  
COVID,"  
also  
called  
post-  
acute  
sequelae  
of  
COVID-19  
(PASC);  
and  
MIS-  
C.

In  
the  
US,  
more  
than  
4.1  
million  
children  
have  
tested  
positive  
for  
SARS-  
CoV-2,  
and  
nearly  
500  
have  
died.

In  
the  
week  
ending  
July  
22,  
children  
accounted  
for  
16.8%  
of  
reported  
weekly

COVID-19  
cases  
nationwide.  
Black,  
Hispanic/Latino,  
and  
Native  
American  
children  
have  
been  
hardest  
hit,  
accounting  
for  
3  
out  
of  
4  
deaths  
among  
patients  
under  
age  
21.  
According  
to  
researchers,  
between  
2%  
and  
10%  
of  
recovered  
children  
have  
long-  
term  
symptoms,  
and  
about  
2  
out  
of  
3  
children  
who  
develop

MIS-  
C  
are  
Black  
or  
Hispanic/Latino.  
The  
US  
\$40  
million  
study  
is  
one  
of  
many  
NIH  
is  
supporting  
to  
understand  
the  
range  
of  
SARS-  
CoV-2  
effects  
on  
children.  
Little  
is  
known  
about  
why  
some  
children  
experience  
long-  
term  
symptoms  
following  
COVID-19  
recovery,  
just  
as  
long  
COVID-19  
is  
not

well  
understood  
in  
adults.  
It  
is  
hoped  
that  
these  
controlled  
clinical  
trials  
will  
provide  
more  
answers  
about  
how  
these  
conditions  
can  
be  
more  
effectively  
treated  
and,  
possibly,  
prevented.

### **GLOBAL VACCINE ACCESS**

The  
World  
Bank  
and  
the  
COVAX  
facility  
on  
July  
26  
[announced](#)  
[a](#)  
[new](#)  
[financing](#)  
[mechanism](#)  
to

help  
improve  
access  
to  
SARS-  
CoV-2  
vaccines  
for  
low-  
and  
middle-  
income  
countries  
(LMICs),  
where  
vaccination  
rates  
are  
lagging.  
Countries  
that  
are  
seeking  
to  
purchase  
vaccines  
through  
the  
[COVAX](#)  
[advance](#)  
[market](#)  
[commitment](#)  
[cost-](#)  
[sharing](#)  
[system](#)  
via  
Gavi,  
the  
Vaccine  
Alliance,  
are  
facing  
hurdles  
in  
guaranteeing  
their  
own  
payments.

Now,  
COVAX  
will  
be  
able  
to  
negotiate  
advance  
purchase  
agreements  
with  
vaccine  
makers  
based  
on  
aggregated  
demand  
across  
several  
of  
the  
92  
LMICs  
that  
participate  
in  
the  
advance  
market  
commitment,  
using  
[financial  
backing  
from  
the  
World  
Bank](#)  
and  
other  
multilateral  
development  
banks.  
The  
mechanism  
should  
enable  
more  
countries

to  
receive  
bulk  
vaccine  
purchases  
at  
a  
lower  
cost,  
instead  
of  
relying  
solely  
on  
donations  
through  
COVAX,  
and  
countries  
would  
be  
able  
to  
[select  
specific  
vaccines](#)  
that  
align  
with  
their  
preferences.  
Additionally,  
it  
will  
allow  
for  
more  
transparency  
regarding  
vaccine  
availability,  
pricing,  
and  
delivery  
schedules,  
World  
Bank  
President

David Malpass noted in a [statement](#). Under the AMC cost-sharing arrangement, COVAX plans to provide up to 430 million additional vaccine doses for delivery between late 2021 and mid-2022. COVAX has already delivered nearly [153 million doses](#) to [137 countries](#), but that number is far below its



2021  
goal  
of  
2  
billion  
doses.  
The  
new  
financing  
mechanism  
comes  
amid  
growing  
concern  
over  
the  
widening  
gap  
in  
global  
vaccine  
access,  
with  
experts  
hoping  
the  
arrangement  
will  
facilitate  
vaccine  
deliveries  
to  
countries  
in  
need.

## **VIETNAM LOCKDOWN**

On  
July  
23,  
Vietnam's  
capital  
city  
of  
[Hanoi](#)  
[began](#)  
[a](#)

15-day lockdown amid a spike in new COVID-19 cases. The country's health ministry reported 7,968 new cases on July 24, a record daily increase and up from the previous day's count of 7,307. With the addition of Hanoi's 8 million people, about one-third of Vietnam's 100

million  
people  
are  
now  
on  
lockdown.  
Residents  
in  
larger  
cities,  
like  
Ho  
Chi  
Minh  
City  
and  
Hanoi,  
are  
no  
longer  
allowed  
to  
congregate  
in  
groups  
of  
more  
than  
2  
people  
and  
are  
only  
allowed  
to  
leave  
their  
homes  
for  
food,  
medication,  
or  
in  
the  
case  
of  
an  
emergency.

According to Our World in Data, Vietnam has fully vaccinated only 0.4% of its population and is taking steps to procure more vaccine doses. On July 25, the country announced it received 3 million doses of the Moderna vaccine from the US through COVAX. Vietnamese officials are in

talks  
with  
US  
officials  
about  
the  
domestic  
production  
of  
mRNA  
vaccines,  
which  
could  
begin  
late  
this  
year  
or  
in  
early  
2022,  
with  
the  
goal  
of  
producing  
100  
to  
200  
million  
doses  
a  
year.  
The  
government  
also  
indicated  
it  
is  
considering  
authorizing  
the  
domestically  
produced  
Nanocovax  
vaccine.  
A  
phase

3  
clinical  
trial  
testing  
the  
vaccine  
is  
ongoing,  
but  
results  
are  
not  
yet  
available.

### **FRANCE HEALTH PASS**

The  
French  
Parliament  
on  
July  
26  
approved  
a  
law  
mandating  
special  
health  
passes  
for  
entry  
to  
all  
restaurants,  
trains,  
planes,  
and  
some  
other  
public  
venues  
and  
requiring  
vaccinations  
for  
all

healthcare  
workers  
and  
other  
essential  
workers  
such  
as  
firefighters  
beginning  
September  
15.

In  
order  
to  
obtain  
a  
health  
pass,  
people  
must  
show  
digital  
or  
paper  
proof  
of  
full  
vaccination,  
results  
of  
a  
recent  
negative  
SARS-  
CoV-2  
test,  
or  
documentation  
of  
recent  
recovery  
from  
acute  
COVID-19.  
More  
than  
160,000

people  
demonstrated  
around  
France  
over  
the  
weekend  
to  
protest  
the  
legislation  
requiring  
health  
passes.  
France  
President  
Emmanuel  
Macron  
welcomed  
peaceful  
demonstrations  
but  
added  
they  
will  
not  
make  
the  
pandemic  
disappear.  
"My  
message  
is  
simple:  
to  
get  
vaccinated,"  
he  
said.  
Nearly  
60%  
of  
the  
French  
population  
has  
received  
at



least  
1  
dose  
of  
vaccine,  
but  
the  
[number](#)  
[of](#)  
[new](#)  
[daily](#)  
[COVID-19](#)  
[cases](#)  
[has](#)  
[risen](#)  
[sharply](#)  
since  
the  
beginning  
of  
the  
month.

The  
Constitutional  
Council  
is  
expected  
to  
review  
the  
law  
next  
week  
to  
determine  
whether  
it  
complies  
with  
the  
country's  
Constitution.

## **NFL COVID-19 RULES**

The  
[US](#)

National  
Football  
League  
(NFL)  
sent  
a  
strong  
message  
to  
its  
32  
teams  
last  
week,  
encouraging  
clubs  
to  
convince  
players  
to  
get  
vaccinated  
for  
SARS-  
CoV-2  
and  
alerting  
them  
that  
games  
having  
to  
be  
cancelled  
due  
to  
a  
COVID-19  
outbreak  
among  
unvaccinated  
players  
would  
be  
forfeited  
and  
counted  
as

a  
loss.  
According  
to  
a  
[memo](#),  
the  
league  
intends  
to  
play  
its  
entire  
272-  
game  
schedule  
over  
18  
weeks  
and  
would  
not  
add  
a  
"19th  
week"  
to  
accommodate  
games  
that  
cannot  
be  
rescheduled  
during  
the  
18-  
week  
regular  
season.  
If  
a  
game  
is  
cancelled  
due  
to  
an  
outbreak

and  
cannot  
be  
rescheduled,  
neither  
team's  
players  
would  
receive  
their  
weekly  
salary  
and  
the  
responsible  
team  
would  
cover  
all  
financial  
losses.  
Additionally,  
vaccinated  
players  
or  
staff  
who  
test  
positive  
but  
are  
asymptomatic  
can  
return  
to  
the  
field  
after  
2  
negative  
tests  
24  
hours  
apart;  
however,  
unvaccinated  
individuals  
who

test  
positive  
would  
be  
required  
to  
complete  
a  
10-  
day  
isolation  
period.  
Unvaccinated  
players  
are  
required  
to  
undergo  
daily  
testing,  
physically  
distance,  
wear  
a  
mask  
indoors,  
and  
be  
prohibited  
from  
gathering  
with  
the  
team  
for  
media  
events  
or  
outside  
of  
official  
team  
activities,  
such  
as  
at  
nightclubs,  
bars,

or  
house  
parties.  
If  
unvaccinated  
players  
violate  
the  
gathering  
rules,  
the  
NFL  
and  
clubs  
are  
permitted  
to  
issue  
fines  
of  
up  
to  
US  
\$50,000  
for  
a  
first  
offense,  
and  
more  
for  
further  
violations.  
For  
violating  
other  
COVID-19  
protocols,  
such  
as  
not  
wearing  
a  
mask  
when  
required,  
[players](#)  
[could](#)

be  
fined  
US  
\$14,650  
every  
time

a  
transgression  
occurs.

According  
to

the  
memo,  
more  
than  
75%

of  
players  
are

in  
the  
process

of  
being  
vaccinated

and  
more  
than

half  
of  
the

teams  
have  
vaccination

rates  
of  
more

than  
80%

of  
players.

With  
the  
NFL  
placing

the  
burden  
on

teams  
and  
players  
to  
get  
vaccinated  
or  
else  
face  
significant  
economic  
consequences,  
it  
will  
be  
interesting  
to  
see  
if  
teams  
can  
reach  
near-100%  
vaccination  
rates.

[US Travel Industry and Retail Supply Chain Updates](#)

[Weekly Updates on SARS-CoV-2 Vaccines](#)

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|



Constant Contact Data Notice

Sent by centerhealthsecurity@mail301.jh.edu powered by

Trusted Email from Constant Contact - Try it FREE today.

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**Date : 7/30/2021 2:38:18 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - July 30, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

**EPI  
UPDATE**

*NOTE:*

*The  
Situation  
Report's  
esteemed  
epidemiologist  
is  
on  
vacation  
this  
week,*

so  
we  
will  
be  
back  
next  
week  
with  
a  
deeper-  
dive  
look  
at  
trends.  
Here  
are  
the  
latest  
numbers:  
The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
196.6  
million  
cumulative  
cases  
and  
4.2  
million  
deaths  
worldwide  
as  
of  
12:30  
EDT  
on  
July  
30.

*Global  
Vaccination*  
The  
[WHO](#)  
[reported](#)  
3.8  
billion

doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
July  
29.  
The  
WHO  
reports  
a  
total  
of  
1.48  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
735  
million  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
shows  
that  
the  
global  
[daily  
doses  
administered](#)  
continues  
to  
rise,

now  
at  
37  
million  
doses  
per  
day,  
driven  
by  
increases  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
2.17  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
27.68%  
of  
the  
global  
population)  
and  
1.12  
billion  
who  
are  
fully  
vaccinated  
(14.4%  
of  
the  
global  
population).

*UNITED  
STATES*

The  
US  
CDC  
reported  
34.7  
million  
cumulative  
COVID-19  
cases  
and  
609,853  
deaths.  
Daily  
incidence  
continues  
to  
increase,  
now  
up  
to  
66,606  
new  
cases  
per  
day,  
which  
is  
nearly  
6  
times  
the  
most  
recent  
low  
on  
June  
19  
(11,469)  
and  
is  
still  
increasing  
steadily.  
Daily  
mortality  
also  
continues  
to

increase,  
up  
to  
296  
deaths  
per  
day,  
which  
is  
78%  
higher  
than  
the  
most  
recent  
low  
on  
July  
10  
(166)\*.

*\*In  
an  
effort  
to  
provide  
a  
more  
accurate  
analysis  
of  
the  
current  
epidemiology,  
we  
are  
largely  
focusing  
on  
longer-  
term  
trends,  
as  
the  
most  
recent  
data  
are  
more*

*likely  
to  
be  
affected  
by  
changes  
in  
the  
frequency  
of  
state-  
level  
reporting,  
particularly  
over  
the  
weekend.*

US  
Vaccination  
The  
US  
has  
administered  
344  
million  
cumulative  
doses  
of  
[SARS-  
CoV-2  
vaccines.](#)  
[Daily  
vaccinations](#)  
are  
increasing  
slowly,  
now  
up  
to  
513,685  
doses  
per  
day\*.  
A  
total  
of  
189.9



million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
57.2%  
of  
the  
entire  
US  
population.  
Among  
adults,  
69.4%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
10.5  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
163.9  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds

to  
49.4%  
of  
the  
total  
population.  
Approximately  
60.3%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
8.1  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
value  
provided*

*here  
corresponds  
to  
5  
days  
ago.*

**US  
CDC  
MASK  
GUIDANCE**

Amid  
a  
national  
surge  
in  
COVID-19  
cases,  
hospitalizations,  
and  
deaths  
attributed  
to  
the  
highly  
transmissible  
Delta  
variant,  
the  
US  
CDC  
this  
week  
[issued  
updated  
guidance  
recommending  
indoor  
mask  
use  
in  
areas  
with  
high  
or  
substantial  
transmission  
rates,](#)

regardless  
of  
individual  
vaccination  
status.

The  
agency  
also  
called  
for  
[universal  
mask  
use  
by  
teachers,  
staff,  
and  
students](#)  
returning

to  
K-12  
schools  
this  
fall,  
regardless  
of  
their  
vaccination  
status.

According  
to  
CDC  
Director  
Dr.  
Rochelle  
Walensky,  
the  
agency  
reinstated  
its  
indoor  
mask  
use  
recommendations  
based

on  
[new  
research](#)

showing  
that  
vaccinated  
people  
infected  
with  
the  
Delta  
variant  
carry  
viral  
loads  
similar  
to  
those  
of  
people  
who  
are  
unvaccinated.

The  
data  
comes  
from  
a  
[new  
CDC  
report  
released  
today.](#)

Dr.  
Walensky  
reiterated  
that  
the  
vaccines  
remain  
highly  
effective  
at  
preventing  
severe  
disease,  
that  
breakthrough  
infections  
among  
vaccinated

individuals  
remain  
uncommon,  
and  
that  
most  
of  
the  
new  
COVID-19  
cases  
are  
among  
unvaccinated  
people.  
US  
health  
officials  
continue  
to  
urge  
those  
who  
are  
not  
yet  
vaccinated  
or  
partially  
vaccinated  
to  
[undergo  
the  
shots](#)  
to  
help  
slow  
the  
spread.

## **US FEDERAL WORKER VACCINE RULES**

US  
President  
Joe

Biden  
on  
July  
29  
announced  
sweeping  
new  
COVID-19-  
related  
requirements  
for  
more  
than  
4  
million  
federal  
employees  
and  
hundreds  
of  
thousands  
of  
contractors  
who  
work  
at  
federal  
facilities  
worldwide,  
with  
the  
goal  
of  
increasing  
vaccination  
rates  
among  
the  
nation's  
workforce  
and  
influencing  
other  
employers.  
Though  
not  
considered  
a

vaccine  
mandate,  
all  
federal  
workers  
will  
be  
required  
to  
sign  
forms  
attesting  
they  
are  
fully  
vaccinated  
for  
SARS-  
CoV-2  
or  
face  
inconveniences  
in  
their  
daily  
work  
lives.

Unvaccinated  
workers

“will  
be  
required  
to  
wear  
a  
mask  
on  
the  
job  
no  
matter  
their  
geographic  
location,  
physically  
distance  
from  
all



other employees and visitors, comply with a weekly or twice weekly screening testing requirement, and be subject to restrictions on official travel," according to information released by the White House. In his speech, President Biden also [called on states and local governments](#) to use federal funding they have

received,  
including  
from  
the  
American  
Rescue  
Plan,  
to  
give  
US  
\$100  
to  
anyone  
who  
gets  
fully  
vaccinated,  
and  
he  
said  
the  
federal  
government  
would  
reimburse  
small-  
and  
medium-  
sized  
businesses  
for  
providing  
paid  
leave  
so  
their  
employees  
and  
their  
families  
could  
get  
vaccinated.  
He  
also  
urged  
the  
US

Department  
of  
Defense  
to  
quickly  
implement  
a  
mask  
mandate  
for  
members  
of  
the  
military,  
many  
of  
whom  
are  
reluctant  
to  
undergo  
vaccination.  
The  
plan  
received  
[mixed  
reactions](#)  
from  
labor  
unions  
and  
other  
groups,  
some  
of  
which  
said  
giving  
employees  
options  
was  
a  
tactic  
aimed  
at  
preventing  
harsh  
resistance

from  
some  
people.  
Questions  
about  
the  
plan  
remain,  
and  
it  
will  
be  
interesting  
to  
see  
how  
quickly  
federal  
agencies  
implement  
the  
requirements.

### **ADDITIONAL DOSES/"BOOSTERS"**

Executives  
from  
Pfizer-  
BioNTech,  
Moderna,  
and  
J&J-  
Janssen,  
which  
manufacture  
the  
3  
SARS-  
CoV-2  
vaccines  
authorized  
for  
use  
in  
the  
US,  
have  
all

said  
fully  
vaccinated  
individuals  
can  
expect  
to  
eventually  
need  
additional  
doses  
of  
the  
vaccines,  
or  
“boosters.”  
However,  
there  
is  
not  
enough  
evidence-  
based  
data  
yet  
to  
provide  
a  
recommendation,  
according  
to  
a  
[WHO](#)  
[official](#)  
and  
the  
[CDC’s](#)  
[Advisory](#)  
[Council](#)  
[on](#)  
[Immunization](#)  
[Practices](#)  
[\(ACIP\)](#),  
which  
met  
last  
week  
to

discuss  
the  
possibility  
of  
additional  
doses  
among  
immunocompromised  
individuals.

Several  
US  
government  
health  
officials,  
including  
National  
Institute  
of  
Allergy  
and  
Infectious  
Diseases  
(NIAID)  
Director  
Dr.  
Anthony  
Fauci,  
have  
signaled  
that  
some  
Americans  
who  
are  
older  
or  
have  
weakened  
immune  
systems  
might  
need  
an  
additional  
vaccine  
dose.

Pharmaceutical  
companies,  
officials,  
and  
healthcare  
workers  
cannot  
technically  
recommended  
additional  
doses  
for  
any  
of  
the  
vaccines  
in  
the  
US,  
which  
are  
being  
administered  
under  
US  
FDA  
emergency  
use  
authorizations  
(EUAs)  
that  
set  
specific  
standards  
for  
each  
regimen:  
2  
doses  
given  
3  
or  
4  
weeks  
apart  
for  
the  
Pfizer-

BioNTech  
and  
Moderna  
vaccines,  
respectively,  
and  
1  
dose  
for  
the  
J&J-  
Janssen  
vaccine.  
In  
order  
to  
provide  
additional  
doses,  
the  
[FDA](#)  
[would](#)  
[need](#)  
[to](#)  
[change](#)  
[a](#)  
[vaccine's](#)  
[EUA](#)  
[or](#)  
[fully](#)  
[license](#)  
[the](#)  
[vaccine,](#)  
which  
would  
provide  
greater  
leeway  
for  
providers  
to  
recommend  
additional  
doses.  
But  
last  
week,  
Dr.



Amanda Cohn, Chief Medical Officer for the CDC's National Center for Immunization and Respiratory Diseases (NCIRD), indicated the US government is actively looking into ways to provide access to additional doses prior to regulatory decisions, such as a compassionate use program. Some people are taking it upon themselves

to  
seek  
out  
third  
doses,  
sometimes  
traveling  
to  
other  
states  
or  
even  
other  
countries  
to  
obtain  
shots.

According  
to  
media  
reports,  
Israel's  
Ministry  
of  
Health  
on  
July  
29  
became  
the  
first  
country  
to  
approve  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine  
for  
people  
ages  
60  
and  
older

who  
are  
at  
least  
5  
months  
post-  
second  
dose.  
The  
country  
already  
offers  
third  
doses  
to  
immunocompromised  
individuals.  
In  
a  
decision  
made  
late  
on  
July  
28,  
a  
health  
ministry  
panel  
concluded  
offering  
a  
third  
dose  
to  
elderly  
residents  
might  
help  
stem  
the  
country's  
6-  
week  
surge  
in  
COVID-19

cases,  
driven  
by  
the  
Delta  
variant.  
In  
a  
televised  
address,  
[Israel  
Prime  
Minister  
Naftali  
Bennett](#),  
noting  
the  
Pfizer-  
BioNTech  
vaccine  
is  
safe  
and  
effective,  
encouraged  
those  
eligible  
to  
begin  
registering  
for  
third  
doses  
as  
of  
August  
1.  
Since  
the  
emergence  
of  
the  
Delta  
variant,  
the  
Israel  
Ministry  
of

Health  
has  
twice  
announced  
a  
drop  
in  
effectiveness  
of  
the  
Pfizer-  
BioNTech  
vaccine  
in  
preventing  
symptomatic  
infection,  
although  
some  
experts  
say  
the  
data  
could  
be  
skewed  
because  
most  
testing  
occurred  
in  
transmission  
hotspots  
and  
among  
elderly  
populations.

**PFIZER-  
BIONTECH  
EFFICACY/THIRD  
DOSE**

On  
July  
28,  
*medRxiv*  
published  
preprint

data  
from  
Pfizer-  
BioNTech  
showing  
the  
efficacy  
of  
its  
vaccine  
to  
prevent  
COVID-19  
declined  
about  
6%  
every  
2  
months  
over  
a  
period  
of  
6  
months.  
The  
data  
were  
collected  
from  
more  
than  
40,000  
clinical  
trial  
participants  
in  
Europe  
and  
the  
Americas.  
From  
7  
days  
to  
<2  
months  
post-

dose  
2,  
vaccine  
efficacy  
was  
96.2%  
(95%  
confidence  
interval  
[CI]  
93.3-98.1);  
from  
2  
months  
to  
<4  
months,  
efficacy  
was  
90.1%  
(95%  
CI  
86.6-92.9);  
and  
from  
4  
months  
to  
6  
months,  
efficacy  
was  
83.7%  
(95%  
CI  
74.7-89.9).  
Overall,  
vaccine  
efficacy  
was  
91.1%  
(95%  
CI  
88.8-93.0)  
for  
preventing  
symptomatic  
COVID-19,

and  
96.7%  
(95%  
CI  
80.3-99.9)  
against  
severe  
disease.  
The  
companies  
said  
the  
data  
show  
the  
vaccine  
to  
be  
safe  
and  
highly  
efficacious  
in  
preventing  
COVID-19  
through  
6  
months  
post-  
second  
dose  
in  
diverse  
populations  
but  
further  
data  
are  
needed  
to  
know  
whether  
efficacy  
continues  
to  
wane  
or  
whether



“booster”  
doses  
will  
be  
necessary,  
and,  
if  
so,  
the  
timing  
of  
such  
doses.

Many  
experts  
said  
the  
not-  
yet-  
peer-  
reviewed  
data  
are  
reassuring,  
showing  
that  
people  
who  
are  
fully  
vaccinated  
likely  
are  
adequately  
protected.  
However,  
if  
the  
observed  
decline  
in  
efficacy  
steadily  
continues  
over  
time,  
it

would  
fall  
below  
the  
internationally  
accepted  
threshold

of  
50%  
within  
18  
months  
of  
vaccination.

This  
would  
bolster  
Pfizer-  
BioNTech's  
claim  
that  
an  
additional  
shot  
of  
its  
vaccine  
will  
be  
needed  
to  
maintain  
long-  
term  
protection.

The  
data  
also  
do  
not  
address  
the  
vaccine's  
efficacy  
against  
the  
now  
widespread

Delta  
variant.  
On  
July  
28,  
Pfizer  
officials  
[presented](#)  
[unpublished](#)  
[data](#)  
[in](#)  
[a](#)  
[quarterly](#)  
[earnings](#)  
[report](#)  
to  
investors  
showing  
a  
third  
dose  
of  
the  
Pfizer-  
BioNTech  
vaccine  
could  
boost  
neutralizing  
antibody  
titers  
against  
the  
Delta  
variant  
in  
a  
small  
sample  
of  
individuals.  
The  
[data](#)  
[show](#)  
a  
more  
than  
5-

fold  
increase  
in  
post-  
second  
dose  
titers  
among  
vaccinees  
aged  
18

to  
55  
and  
a  
more  
than  
11-  
fold  
increase  
among  
those  
ages  
65  
to  
85.

The  
officials  
said  
they  
[plan](#)  
[to](#)  
[seek](#)  
[authorization](#)  
with  
the  
US  
FDA  
for  
a  
third  
dose  
by  
mid-  
August  
and  
indicated  
clinical

studies  
of  
an  
experimental  
Delta  
variant  
vaccine  
are  
awaiting  
regulatory  
approval  
but  
also  
are  
expected  
to  
begin  
in  
August.

## **BREAKTHROUGH CASES**

A  
[study](#)  
published  
in  
the  
*New  
England  
Journal  
of  
Medicine*  
on  
July  
28  
examines  
breakthrough  
COVID-19  
cases  
among  
healthcare  
workers  
who  
received  
2  
doses  
of  
the

Pfizer-  
BioNTech  
vaccine.  
From  
January  
20  
to  
April  
28,  
2021,  
researchers  
identified  
breakthrough  
cases  
at  
Sheba  
Medical  
Center  
in  
Israel  
by  
monitoring  
healthcare  
workers  
for  
COVID-19  
symptoms  
and  
testing  
those  
with  
known  
COVID-19  
exposures.  
Following  
the  
identification  
of  
a  
breakthrough  
case,  
the  
research  
team  
matched  
the  
individual  
with

4

or

5

uninfected

controls

using

generalized

estimating

equations.

Of

39

breakthrough

cases

among

1,497

fully

vaccinated

healthcare

workers,

the

researchers

found

the

infected

individuals

had

lower

levels

of

neutralizing

antibody

titers

than

their

uninfected

controls.

Additionally,

most

of

the

breakthrough

cases

were

asymptomatic

or

mildly

symptomatic,

although

19%  
of  
the  
individuals  
reported  
symptoms  
that  
lasted  
longer  
than  
6  
weeks.  
The  
majority  
of  
the  
breakthrough  
cases  
(85%)  
were  
caused  
by  
the  
Alpha  
variant  
(B.1.1.7),  
and  
the  
research  
team  
observed  
no  
secondary  
cases  
stemming  
from  
breakthrough  
cases.

**IMF  
GLOBAL  
FORECAST**

In  
an  
updated  
“[World  
Economic  
Outlook](#),”



the  
International  
Monetary  
Fund  
(IMF)  
on  
July  
27  
warned  
that  
the  
gap  
in  
economic  
recovery  
is  
widening  
between  
higher-  
and  
lower-  
income  
nations  
due  
to  
the  
COVID-19  
pandemic  
and  
uneven  
access  
to  
SARS-  
CoV-2  
vaccines.  
Overall,  
the  
global  
economy  
is  
expected  
to  
grow  
6%  
in  
2021  
and  
4.9%

in  
2022.  
The  
IMF  
upgraded  
its  
2022  
estimate,  
with  
a  
0.5  
percentage  
point  
increase  
over  
its  
projection  
made  
earlier  
this  
year,  
driven  
by  
growth  
in  
the  
US  
and  
UK  
markets.  
However,  
for  
emerging  
and  
developing  
markets,  
the  
IMF  
downgraded  
projections  
for  
2021  
by  
0.4  
percentage  
points  
from  
its

previous projection, to 6.3%, noting the biggest risks include low vaccination rates and growing numbers of COVID-19 cases. The IMF called on wealthier nations to take urgent action to share vaccine doses with low- and middle-income countries (LMICs), warning that a worsening pandemic could severely hit those

markets  
as  
well  
as  
impact  
growth  
projections  
for  
richer  
nations.

The  
IMF  
also  
cautioned  
that  
if  
inequality  
worsens,  
nations  
risk  
experiencing  
political  
instability  
and  
discontent,  
which  
is  
happening  
already  
in  
some  
countries.  
The  
pandemic  
is  
sowing  
a  
“summer  
of  
anger,”  
with  
political  
protests  
documented  
in  
Tunisia,  
Iraq,

South  
Africa,  
Thailand,  
Colombia,  
Brazil,  
and  
Haiti,  
to  
name  
a  
few.  
Even  
some  
wealthier  
nations  
—  
including  
France  
and  
Australia  
—  
recently  
have  
witnessed  
large  
protests  
against  
vaccination  
mandates  
and  
lockdown  
tactics  
centered  
on  
slowing  
the  
number  
of  
new  
COVID-19  
cases.  
Experts  
from  
the  
Council  
on  
Foreign  
Relations

(CFR)  
and  
Columbia  
University  
write  
that  
"COVID-19  
has  
acted  
like  
lighter  
fluid  
for  
countries  
where  
embers  
of  
discontent  
were  
already  
smoldering."  
In  
a  
closed  
briefing  
this  
week,  
Ramesh  
Rajasingham,  
UN  
Acting  
Assistant  
Secretary-  
General  
for  
Humanitarian  
Affairs  
and  
Deputy  
Emergency  
Relief  
Coordinator,  
warned  
UN  
Security  
Council  
members  
that

three-quarters of the countries needing humanitarian aid have already recorded more COVID-19 cases and related deaths than in all of 2020. Calling the response so far “inadequate,” Rajasingham urged the international community to not only increase vaccine shipments to fragile and conflict-affected countries but also bolster

delivery systems by providing logistical and security support. The need for effective and efficient vaccine delivery to LMICs is an issue that cannot be ignored by the developed nations and the private sector.

## **US POVERTY REDUCTION**

The number of poor Americans is expected to decline nearly 45%



this  
year  
from  
2018  
levels

—

a  
record  
drop  
in  
record  
time

—

but  
pieces  
of  
the  
enormous  
temporary  
safety  
net  
created  
amid  
the  
COVID-19  
pandemic  
that  
helped  
to  
achieve  
this  
reduction  
have  
ended  
or  
are  
scheduled  
to  
soon  
revert  
to  
their  
pre-  
pandemic  
size.

In  
a  
[report](#)

released  
on  
July  
28,  
the  
Urban  
Institute  
estimated  
the  
American  
Rescue  
Plan  
Act,  
enacted  
in  
March  
2021,  
will  
reduce  
the  
2021  
annual  
poverty  
rate  
to  
7.7%,  
well  
below  
the  
13.9%  
rate  
estimated  
for  
2018.  
The  
projected  
poverty  
rate  
is  
expected  
to  
be  
lowest  
among  
children  
(5.6%),  
but  
rise

for adults ages 18 to 64 (8.1%) and again for older Americans (9.2%). The rates are higher for Hispanic people (11.8%), Asian American and Pacific Islanders (AAPI; 10.8%), and Black people (9.2%) than for white people (5.8%). The federal stimulus checks have had a larger impact on poverty

reduction  
than  
any  
other  
program,  
according  
to  
the  
report.

One  
of  
these  
programs,  
the  
US  
[CDC's  
extended  
federal  
eviction  
moratorium](#),  
which  
has  
prevented  
eviction  
for  
an  
estimated  
10  
million  
people  
over  
the  
past  
year,  
is  
set  
to  
expire  
on  
July  
31.  
Some  
advocates,  
researchers,  
and  
US  
lawmakers

are  
calling  
for  
another  
extension  
of  
the  
program,  
citing  
an  
[analysis](#)  
showing  
many  
of  
these  
evictions  
would  
occur  
in  
communities  
with  
low  
vaccination  
rates  
and  
increasing  
numbers  
of  
COVID-19  
cases  
attributed  
to  
the  
Delta  
variant.  
A  
study  
published  
this  
week  
in  
the  
*American  
Journal  
of  
Epidemiology*  
[supports](#)  
[calls](#)

for  
extending  
the  
moratorium,  
showing  
that  
between  
March  
and  
September  
2020,  
eviction  
moratorium  
expirations  
were  
associated  
with  
increased  
COVID-19  
incidence  
and  
deaths  
and  
backing  
up  
the  
notion  
that  
eviction  
prevention  
constitutes  
an  
important  
public  
health  
measure  
to  
mitigate  
the  
pandemic's  
impacts.

**"MEDICAL  
FREEDOM"  
LAW**  
New  
Hampshire  
(US)

Governor  
Chris  
Sununu  
last  
week  
signed  
into  
law  
a  
so-  
called  
"medical  
freedom"  
bill  
that  
prohibits  
"any  
public  
facility,  
any  
public  
benefit,  
or  
any  
public  
service"  
from  
requiring  
state  
residents  
be  
vaccinated  
against  
SARS-  
CoV-2  
to  
receive  
or  
access  
such  
services  
or  
facilities.  
The  
law  
states  
that  
"every

person  
has  
the  
natural,  
essential,  
and  
inherent  
right  
to  
bodily  
integrity,  
free  
from  
any  
threat  
or  
compulsion  
by  
government  
to  
accept  
an  
immunization.”  
Notably,  
the  
law  
sets  
out  
[several  
exceptions](#),  
including  
vaccination  
requirements  
for  
schools,  
childcare,  
county  
nursing  
homes,  
and  
the  
state’s  
mental  
health  
system.  
Additionally,  
the  
New



Hampshire  
Department  
of  
Corrections  
may  
mandate  
certain  
medical  
treatments  
or  
immunizations  
“when  
a  
direct  
threat  
exists.”

The  
law  
does  
not  
address  
private  
businesses.

Governor  
Sununu  
continues  
to

[voice  
support  
for  
SARS-  
CoV-2  
vaccines.](#)

According  
to

[state  
data,](#)

nearly  
54%

of  
the  
state’s  
residents

are  
fully  
vaccinated,  
above  
the

national  
average.

## **TENNESSEE VACCINE OUTREACH**

The  
Tennessee  
(US)  
state  
government  
last  
week  
[resumed](#)  
[its](#)  
[adolescent](#)  
[vaccine](#)  
[education](#)  
[and](#)  
[outreach](#)  
[activities](#)  
after  
earlier  
this  
month  
halting  
most  
advocacy  
in  
the  
face  
of  
pressure  
from  
conservative  
state  
lawmakers  
who  
[accused](#)  
[the](#)  
[department](#)  
[of](#)  
[pressuring](#)  
[teenagers](#)  
[to](#)  
[receive](#)  
[a](#)  
[SARS-](#)

CoV-2  
vaccine.

Tennessee  
Health  
Commissioner

Dr.

Lisa

Piercey

on

July

23

said

the

state's

health

department

will

restart

outreach

efforts

recommending

vaccines

for

children,

except

for

social

media

posts

specifically

targeting

teenagers.

The

department

once

again

will

include

its

logo

on

public-

facing

vaccine

material

and

hold

vaccination

events  
on  
school  
property,  
including  
for  
COVID-19.

Dr.  
Piercey  
stressed  
the  
department  
never  
ceased  
vaccinations  
among  
children  
but  
only  
paused  
its  
communications  
and  
marketing  
efforts  
surrounding  
vaccines.

Now  
that  
those  
efforts  
are  
restarting,  
messaging  
will  
be  
targeted  
toward  
parents,  
she  
noted.

Dr.  
Piercey  
declared  
the  
state  
will  
provide

vaccines  
to  
minors  
without  
parental  
permission  
in  
“fringed  
and  
nuanced”  
circumstances.

Tennessee  
is  
in  
the  
bottom  
10  
states  
in  
terms  
of  
vaccination  
coverage,  
with  
39%  
of  
its  
population  
fully  
vaccinated.

## **TANZANIA**

Tanzania  
President  
Samia  
Suluhu  
Hassan  
on  
July  
28  
kicked  
off  
the  
country’s  
SARS-  
CoV-2  
vaccination  
campaign,

publicly  
receiving  
the  
J&J-  
Janssen  
vaccine  
in  
an  
effort  
to  
bolster  
confidence  
in  
the  
shots  
and  
quell  
fear  
stemming  
from  
disinformation  
spread  
under  
her  
predecessor's  
administration.  
Former  
President  
John  
Magufuli,  
who  
died  
in  
March  
of  
heart  
complications,  
[downplayed](#)  
[the](#)  
[COVID-19](#)  
[pandemic](#),  
endorsed  
home  
remedies  
and  
prayer  
as  
treatments,

and  
called  
vaccinations  
“dangerous.”  
After  
Magufuli’s  
death,  
President  
Hassan  
established  
a  
COVID-19  
expert  
committee  
to  
evaluate  
the  
safety  
and  
effectiveness  
of  
vaccines,  
as  
well  
as  
make  
public  
health  
recommendations  
including  
physical  
distancing  
and  
mask  
wearing.  
Tanzania  
joined  
COVAX  
in  
June,  
despite  
having  
been  
eligible  
since  
the  
facility’s  
establishment.

The country received more than 1 million doses of the J&J-Janssen vaccine over the weekend from a US donation delivered through COVAX, and President Hassan on July 27 placed an order with the African Union's African Vaccine Acquisition Task Team (AVATT) for an undisclosed number of additional



vaccines.  
The  
Tanzania  
government  
faces  
challenges  
to  
reversing  
skepticism  
about  
vaccines,  
but  
President  
Hassan  
assured  
residents  
the  
country  
will  
obtain  
enough  
supplies  
to  
reach  
its  
goal  
of  
vaccinating  
60%  
of  
the  
population.  
Only  
2  
other  
African  
nations  
—[Burundi](#)  
[and](#)  
[Eritrea](#)—  
have  
yet  
to  
begin  
national  
vaccination  
campaigns.

## **TOKYO OLYMPICS**

The Olympics have entered the start of their second week as the COVID-19 situation in Tokyo and Japan continues to worsen. Both the city and the nation on July 29 reported record numbers of new COVID-19 cases, with the nation averaging 6,518 daily new cases. Tokyo,

which  
remains  
under  
a  
state  
of  
emergency,  
recorded  
3,865  
new  
cases  
on  
July  
29,  
after  
only  
the  
day  
before  
passing  
3,000  
new  
cases  
for  
the  
first  
time.  
The  
city's  
health  
officials  
have  
asked  
for  
[hospitals](#)  
[to](#)  
[prepare](#)  
[extra](#)  
[beds](#)  
as  
the  
spread  
of  
the  
SARS-  
CoV-2  
Delta  
variant

continues,  
with  
more  
than  
75%  
of  
new  
cases  
caused  
by  
the  
variant.  
So  
far,  
COVID-19  
precautions  
appear  
to  
have  
minimized  
the  
spread  
of  
SARS-  
CoV-2  
outside  
of  
the  
Olympic  
"bubble,"  
although  
the  
number  
of  
new  
daily  
cases  
reported  
among  
Olympic  
accreditation  
holders  
appears  
to  
have  
risen  
on  
July

29  
and  
July  
30.

## **COGNITIVE IMPACTS**

Scientists  
have  
long  
known  
that  
areas  
of  
the  
brain  
involved  
with  
smell  
and  
taste  
also  
are  
involved  
in  
memory,  
thinking,  
planning,  
and  
mood,  
and  
public  
health  
officials  
are  
increasingly  
concerned  
about  
the  
long-  
term  
impacts  
of  
COVID-19  
on  
brain  
function,  
memory,

and  
cognition,  
a  
phenomenon  
known  
as  
“brain  
fog.”  
Scientific  
evidence  
is  
emerging  
that  
the  
virus’s  
neurological  
impacts  
are  
multi-  
pronged  
and  
not  
necessarily  
related  
to  
“long  
COVID,”  
or  
post-  
acute  
sequelae  
of  
COVID-19  
(PASC).  
In  
a  
study  
published  
in  
*The  
Lancet*  
journal  
*EClinicalMedicine*,  
researchers  
from  
Imperial  
College  
London

and  
colleagues  
examined  
data  
from  
81,337  
people  
who  
took  
exams  
as  
part  
of  
the  
Great  
British  
Intelligence  
Test  
and  
completed  
questionnaires  
regarding  
self-  
reports  
of  
suspected  
or  
confirmed  
COVID-19.  
The  
team  
found  
that  
the  
12,689  
individuals  
who  
had  
recovered  
from  
COVID-19  
exhibited  
significantly  
more  
cognitive  
deficits  
than  
their

matched counterparts, even among people who said they were no longer experiencing symptoms. Cognitive deficits were found to be especially substantial among those who were hospitalized, those who were hospitalized and on a ventilator, and those who had more severe symptoms but recovered at home.

Researchers with



the  
University  
of  
Texas  
Health  
Science  
Center  
at  
San  
Antonio,  
who  
recently  
presented  
data  
at  
the  
[Alzheimer's  
Association  
International  
Conference,](#)  
found  
that  
[neurological  
changes  
seen  
after  
COVID-19  
mirror  
those  
found  
in  
people  
with  
Alzheimer's  
disease.](#)  
Genetic  
studies  
are  
showing  
that  
the  
genes  
responsible  
for  
increasing  
the  
risk  
of

more  
severe  
COVID-19  
also  
increase  
the  
risk  
of  
Alzheimer's.  
Additionally,  
anecdotal  
reports  
suggest  
Alzheimer's  
diagnoses  
appear  
to  
be  
more  
common  
among  
people  
in  
their  
60s  
and  
70s  
who  
have  
had  
severe  
COVID-19.  
Further  
research  
is  
ongoing  
to  
determine  
COVID-19's  
longer-  
term  
impacts  
on  
neurological  
function,  
including  
cognition,  
intelligence,

and  
risk  
of  
Alzheimer's  
disease.

## **MUCORMYCOSIS**

Following  
India's  
most  
severe  
COVID-19  
surge  
in  
the  
spring,  
the  
country  
has  
seen  
an  
[increase](#)  
[in](#)  
[cases](#)  
[of](#)  
[mucormycosis](#),  
also  
called  
"black  
fungus,"  
and  
related  
deaths.  
Since  
late  
March,  
the  
nation  
has  
recorded  
more  
than  
45,000  
cases  
of  
the  
disease,  
a

serious  
but  
rare  
fungal  
infection  
caused  
by  
the  
mucormycetes  
group  
of  
molds,  
and  
more  
than  
4,300  
people  
have  
died,  
with  
most  
having  
contracted  
COVID-19  
prior  
to  
their  
fungal  
infection.  
Clinicians  
have  
noted  
that  
symptoms  
usually  
manifest  
12-18  
days  
after  
COVID-19  
recovery.  
In  
a  
[letter](#)  
published  
July  
29  
in

*Drug Development Research,*  
researchers warn that because uncontrolled diabetes and other immunosuppressive diseases, as well as corticosteroid treatment, are seen as risk factors for the fungal infection, they suggest avoiding steroids to treat COVID-19, as they might be a contributing factor to the disease. As the number of

mucormycosis  
cases  
continue  
to  
rise,  
there  
are  
questions  
about  
[unreliable  
supplies  
of  
the  
drug  
used  
to  
treat  
the  
infection,](#)  
adding  
an  
additional  
challenge  
to  
India's  
already  
complicated  
COVID-19  
recovery.

[US Travel Industry and Retail Supply Chain Updates](#)

[Weekly Updates on SARS-CoV-2 Vaccines](#)

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Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 7/2/2021 1:55:36 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - June 29, 2021**

The  
Center  
also  
produces  
US  
Travel  
Industry  
and  
Retail  
Supply  
Chain  
Updates.  
You  
can  
access  
them [here](#).

*The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
will  
be  
closed  
on  
July  
5  
in  
observance*



*of  
the  
US  
Independence  
Day  
holiday.  
We  
will  
not  
be  
publishing  
a  
COVID-19  
Situation  
Report  
on  
Tuesday,  
July  
6.  
We  
will  
resume  
publication  
on  
Friday,  
July  
9.*

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
182  
million  
cumulative  
cases  
and  
3.95  
million  
deaths  
worldwide  
as  
of  
5:00am  
EDT  
on

July  
2.

Global  
Vaccination

The  
[WHO](#)  
[reported](#)  
2.95  
billion  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
July  
1,  
and  
1.17  
billion  
individuals  
have  
received  
at  
least  
1  
dose.  
Analysis  
from  
Our  
World  
in  
Data  
shows  
that  
the  
global  
[daily](#)  
[doses](#)  
[administered](#)  
has  
decreased  
steadily  
from

the  
record  
high  
of  
43.1  
million  
doses  
per  
day  
on  
June  
27,  
now  
down  
to  
40.1  
million.  
The  
trend  
continues  
to  
be  
largely  
[driven](#)  
[by](#)  
[vaccination](#)  
[efforts](#)  
[in](#)  
[Asia](#),  
which  
is,  
in  
turn,  
driven  
by  
China.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
1.84  
billion  
[vaccinated](#)  
[individuals](#)

(1+  
dose)  
worldwide  
(23.7%  
of  
the  
global  
population).  
There  
are  
an  
estimated  
860  
million  
who  
are  
fully  
vaccinated  
(11.0%  
of  
the  
global  
population),  
although  
reporting  
is  
less  
complete  
than  
for  
other  
data.

#### *UNITED STATES*

The  
US  
CDC  
reported  
33.5  
million  
cumulative  
COVID-19  
cases  
and  
602,401  
deaths.  
Daily

incidence  
has  
increased  
over  
the  
past  
week  
or  
so,  
up  
from  
a  
low  
of  
11,281  
new  
cases  
per  
day  
on  
June  
20  
to  
12,514  
on  
June  
30,  
an  
increase  
of  
11%  
over  
that  
period.  
Daily  
mortality  
continues  
to  
decline,  
down  
to  
206  
deaths  
per  
day,  
the  
lowest  
average

since  
March  
26,  
2020.

With  
vaccination  
progress  
slowing  
and  
increasing  
prevalence  
of  
multiple  
variants  
of  
concern  
(VOCs),  
including  
Delta,  
there  
is  
growing  
concern  
that  
the  
US  
could  
face  
localized  
COVID-19  
surges  
in  
the  
coming  
months.  
While  
the  
national  
daily  
incidence  
is  
increasing  
only  
slightly,  
some  
parts  
of

the  
country  
are  
exhibiting  
steeper  
trends.

Daily  
incidence  
is  
increasing  
noticeably  
in

5

of

the

10

[HHS](#)

[regions:](#)

Region

8

(Mountain)

has

increased

6%

since

June

21,

Region

4

(Southeast)

has

increased

17%

since

June

19,

Region

6

(South

Central)

has

increased

26%

since

June

17\*,

Region

9  
(West  
Coast)  
has  
increased  
29%  
since  
June  
13,  
and  
Region  
7  
(Central)  
has  
increased  
82%  
since  
June  
2.  
Regions  
7,  
8,  
and  
9  
have  
the  
highest  
[estimated  
prevalence](#)  
of  
the  
Delta  
variant  
(B.1.617.2)  
in  
the  
country  
—  
57.5%,  
52.0%,  
and  
38.2%,  
respectively  
—  
in  
the  
CDC's  
projection



for  
June  
6-19.  
Additionally,  
these  
5  
regions  
account  
for  
most  
of  
the  
lowest-  
ranked  
states  
in  
terms  
of  
[vaccination  
coverage](#).  
These  
5  
regions  
represent  
20  
of  
the  
bottom  
25  
states  
in  
terms  
of  
both  
1+  
dose  
coverage  
and  
full  
coverage.  
The  
combination  
of  
increasing  
Delta  
variant  
prevalence  
and

low  
vaccination  
coverage  
is  
likely  
a  
contributing  
factor  
to  
the  
increases  
in  
daily  
incidence  
across  
these  
states.

*\*The  
lowest  
recent  
daily  
incidence  
in  
Region  
6  
was  
1,393  
new  
cases  
on  
June  
16,  
but  
that  
appears  
to  
be  
a  
result  
of  
a  
reporting  
anomaly  
in  
Texas.  
We  
used  
June*

17  
as  
our  
baseline.

Numerous  
states  
in  
these  
regions  
are  
exhibiting  
substantial  
increases  
in  
daily  
incidence  
from  
lows  
reported  
within  
the  
past  
month\*\*.

While  
there  
are  
other  
states  
with  
increasing  
trends

—  
eg,  
Connecticut  
(+87%),  
Virginia  
(+48%)

—  
most  
are  
limited  
to  
these  
5  
regions:

Region  
4

(4  
of  
8  
states):  
Alabama  
(+150%),  
Florida  
(+26%),  
Mississippi  
(+83%),  
and  
South  
Carolina  
(+33%)  
Region

6  
(4  
of  
5  
states):  
Arkansas  
(+202%),  
Louisiana  
(+51%),  
Oklahoma  
(+160%),  
and  
Texas  
(+23%)  
Region

7  
(3  
of  
4  
states):  
Kansas  
(+61%),  
Missouri  
(+126%),  
and  
Nebraska  
(+60%)  
Region

8  
(2  
of  
6  
states): Wyoming

(+38%)

and

Utah

(+85%)

Region

9

(2

of

3

states):

Arizona

(+44%),

and

Nevada

(+170%)

*\*\*Dates*

*of*

*individual*

*lows*

*vary.*

US

Vaccination

The

US

has

administered

328

million

cumulative

doses

of

SARS-

CoV-2

vaccines,

and

it

is

administering

approximately

575,000

doses

per

day.

A

total

of

181

million  
individuals  
in  
the  
US  
have  
received  
at  
least  
1  
dose  
of  
[SARS-CoV-2 vaccine](#),  
equivalent  
to  
54.6%  
of  
the  
entire  
US  
population.  
Among  
adults,  
66.7%  
have  
received  
at  
least  
1  
dose  
as  
well  
as  
9.0  
million  
adolescents  
aged  
12-17.  
A  
total  
of  
156  
million  
individuals  
are  
fully

vaccinated,  
which  
corresponds  
to  
47.0%  
of  
the  
total  
population.  
Among  
adults,  
57.7%  
are  
fully  
vaccinated,  
and  
6.8  
million  
adolescents  
aged  
12-17  
years  
are  
fully  
vaccinated.

### **VARIANTS OF CONCERN**

Although  
vaccinations  
in  
the  
US  
continue  
to  
rise  
and  
appear  
to  
be  
largely  
protective  
against  
variants  
of  
concern  
(VOCs),

unvaccinated  
populations  
in  
the  
US  
and  
abroad  
remain  
at  
high,  
even  
elevated,  
risk  
of  
severe  
COVID-19  
disease  
due  
to  
VOC  
infection.  
In  
particular,  
the  
Delta  
variant's  
increased  
transmissibility  
has  
contributed  
to  
significantly  
increased  
spread  
in  
unvaccinated  
communities,  
causing  
26%  
of  
SARS-  
CoV-2  
infections  
in  
the  
US.  
In  
the



United Kingdom, COVID-19 cases increased sixfold and hospitalizations doubled in the wake of Delta's introduction into the population. The WHO recently reiterated its position that all people, regardless of vaccination status, should continue to wear masks indoors and in crowded areas. The US CDC, however, has not reversed

its  
recommendation  
that  
fully  
vaccinated  
people  
may  
be  
unmasked  
in  
all  
situations.

Last  
week,  
the  
US  
Assistant  
Secretary  
for  
Preparedness  
and  
Response  
(ASPR)  
and  
the  
US  
FDA  
announced  
they  
will  
[halt](#)  
[distribution](#)  
[of](#)  
[bamlanivimab/etesevimab](#),  
two  
monoclonal  
antibody  
treatments  
for  
COVID-19,  
given  
their  
lowered  
efficacy  
profiles  
against  
the

Gamma  
and  
Beta  
variants  
of  
concern.  
Both  
agencies  
have  
pledged  
to  
continue  
closely  
monitoring  
the  
efficacy  
of  
other  
authorized  
monoclonal  
antibody  
treatments  
in  
conjunction  
with  
the  
CDC  
and  
NIH.

## **UK VACCINE BOOSTERS**

The  
UK's  
Joint  
Committee  
on  
Vaccination  
and  
Immunisation  
(JCVI)  
published  
[interim  
advice  
on  
a](#)

potential  
SARS-  
CoV-2  
vaccine  
booster  
program

for  
winter  
of  
2021-22.

JCVI  
advises  
that  
any  
potential  
booster  
program  
begin  
in  
September  
2021

to  
maximize  
protection  
of  
those  
populations  
most  
vulnerable  
to  
COVID-19  
and  
reduce  
the  
occurrence  
of  
severe  
disease.

Additionally,  
JCVI  
recommends  
annual  
influenza  
vaccines  
also  
be  
administered  
in

the  
fall,  
ideally  
utilizing  
a  
synergistic  
approach  
that  
would  
support  
delivery  
and  
maximize  
uptake  
of  
both  
vaccines.  
The  
potential  
booster  
program  
should  
be  
offered  
in  
two  
stages:  
Stage  
1  
will  
offer  
a  
third  
dose  
of  
SARS-  
CoV-2  
vaccine  
and  
the  
annual  
influenza  
vaccine  
in  
September  
to  
immunosuppressed  
persons

aged  
16  
and  
older,  
adults  
aged  
16  
and  
older  
who  
are  
considered  
clinically  
extremely  
vulnerable,  
those  
living  
in  
residential  
care  
facilities  
for  
older  
adults,  
frontline  
health  
and  
social  
care  
workers,  
and  
all  
adults  
aged  
70  
and  
older.  
Stage  
2  
will  
be  
implemented  
as  
soon  
as  
practicable  
after  
Stage

1  
to  
offer  
a  
third  
SARS-  
CoV-2  
vaccine  
dose  
and  
annual  
influenza  
vaccine  
to  
all  
adults  
over  
50  
years  
old,  
adults  
16-49  
years  
old  
who  
are  
in  
an  
influenza  
or  
COVID-19  
at-  
risk  
group  
as  
noted  
in  
the  
[Green  
Book](#),  
and  
adult  
household  
contacts  
of  
immunosuppressed  
persons.  
Additional

scientific  
data  
will  
be  
considered  
as  
it  
becomes  
available  
prior  
to  
JCVI  
sharing  
final  
advice.

**mRNA  
VACCINE  
EFFECTIVENESS**

Researchers  
from  
the  
US  
CDC  
COVID-19  
Response  
Team,  
in  
collaboration  
with  
several  
US  
academic  
institutions,  
published  
final  
analysis  
from  
a  
prospective  
cohort  
study  
evaluating  
the  
real-  
world  
effectiveness  
of



the  
Pfizer-  
BioNTech  
and  
Moderna  
SARS-  
CoV-2  
vaccines.  
The  
study,  
[published  
in  
\*NEJM\*](#),  
included  
nearly  
4,000  
participants  
from  
the  
[HEROES-  
RECOVER  
network](#)—  
which  
includes  
a  
variety  
of  
healthcare  
workers,  
first  
responders,  
and  
other  
essential  
frontline  
personnel  
—  
across  
6  
states,  
who  
provided  
weekly  
nasal  
swabs,  
regardless  
of  
the

presence  
of  
COVID-19  
symptoms,  
as  
well  
as  
additional  
swabs  
if  
they  
became  
symptomatic.  
Among  
the  
participants,  
80%  
were  
vaccinated  
(1+  
dose  
of  
mRNA  
vaccine)  
—  
with  
84%  
of  
those  
participants  
receiving  
both  
doses  
—  
and  
20%  
were  
unvaccinated.

SARS-  
CoV-2  
infection  
was  
confirmed  
by  
RT-  
PCR  
diagnostic

tests  
in  
204  
participants  
(5%).  
Among  
these  
infections,  
5  
were  
in  
fully  
vaccinated  
participants,  
11  
were  
in  
partially  
vaccinated  
participants,  
and  
156  
were  
in  
unvaccinated  
participants\*.  
The  
researchers  
estimated  
the  
vaccines'  
combined  
adjusted  
vaccine  
effectiveness  
against  
SARS-  
CoV-2  
infection  
to  
be  
91%  
for  
full  
vaccination  
and  
81%  
for

partial  
vaccination.  
Notably,  
among  
infected  
participants,  
the  
mean  
viral  
RNA  
load  
was  
40%  
lower  
in  
participants  
with  
at  
least  
partial  
vaccination  
compared  
to  
unvaccinated  
participants.  
Additionally,  
the  
risk  
of  
febrile  
symptoms  
was  
58%  
lower  
among  
participants  
with  
at  
least  
1  
dose  
of  
the  
vaccine,  
and  
the  
duration  
of

illness  
was  
6.4  
days  
shorter.  
*\*An  
additional  
32  
infections  
were  
in  
participants  
with  
uncertain  
vaccination  
status.*

Genomic  
sequencing  
was  
performed  
on  
specimens  
from  
93  
of  
the  
identified  
infections.  
Among  
these,  
12  
were  
in  
participants  
with  
unknown  
vaccination  
status  
and  
omitted  
from  
the  
analysis.  
Of  
the  
remaining  
81

specimens,  
10  
were  
variants  
of  
concern  
(VOCs)

—  
9  
were  
the  
Epsilon  
variant  
(B.1.427/429)  
and  
1  
was  
the  
Alpha  
variant  
(B.1.1.7).  
Three  
(3)  
infections  
with  
the  
Epsilon  
variant  
were  
among  
vaccinated  
participants,  
and  
the  
rest  
of  
the  
VOCs  
were  
among  
unvaccinated  
participants.

**NOVAVAX  
VACCINE  
PHASE  
3  
TRIAL**

## RESULTS

Researchers from the 2019cCov-302 Study Group published final data and analysis in [NEJM](#) from a Phase 3 clinical trial of the Novavax SARS-CoV-2 vaccine candidate, NVX-CoV2373. Preliminary data from the trial, conducted at 33 sites across the UK and including 15,187 participants ages 18 to

84,  
was  
[first](#)  
[published](#)  
in  
May  
to  
the  
preprint  
server  
*medRxiv*.  
Participants  
were  
randomized  
in  
a  
1:1  
ratio  
to  
receive  
2  
doses  
of  
the  
vaccine  
or  
a  
placebo  
administered  
21  
days  
apart.  
NVX-  
CoV2373  
utilizes  
a  
different  
technology  
than  
existing  
vaccines  
—[synthetic](#)  
[SARS-](#)  
[CoV-2](#)  
[spike](#)  
[protein](#)  
[nanoparticles](#)  
plus



an  
adjuvant  
—  
to  
stimulate  
an  
immune  
response.

Analysis  
shows  
the  
vaccine  
demonstrated  
89.7%  
overall  
efficacy  
against  
symptomatic  
COVID-19  
disease,  
with  
10  
cases  
in  
the  
vaccine  
group  
and  
96  
in  
the  
placebo  
group.  
Five  
(5)  
severe  
cases  
were  
identified  
among  
the  
placebo  
group,  
but  
none  
in  
the

vaccine group, and no deaths were reported among participants who received both doses of the vaccine or placebo. The vaccine demonstrated similar efficacy among participants aged 18-64 years (89.8%) and those aged 65 years and older (88.9%). Efficacy was notably higher among White participants (90.7%) than non-White

participants (75.7%), but the study population was nearly 95% White, making it difficult to draw any conclusions regarding race or ethnicity. Post-hoc analysis estimates the efficacy to be 86.3% against the Alpha variant (B.1.1.7) and 96.4% against non-Alpha variants (Gamma [P.1] and Beta [B.1.351]). Notably, the

trial  
was  
conducted  
prior  
to  
the  
spread  
of  
the  
Delta  
variant.

In  
mid-  
June,  
Novavax  
announced  
preliminary  
results  
for  
another  
[Phase  
3  
clinical  
trial  
conducted  
in  
Mexico  
and  
the  
US,](#)  
which  
demonstrated  
overall  
efficacy  
of  
90.4%  
and  
100%  
against  
moderate  
and  
severe  
COVID-19.

**US  
EVICTION  
MORATORIUM**  
In

September 2020, the US CDC issued a [“Temporary Halt in Residential Evictions”](#) in response to the severe financial impacts of the COVID-19 pandemic. After a series of extensions, the order was scheduled to end on June 30, 2021; however, the [CDC issued one final extension](#), which is scheduled

to  
expire  
on  
July  
31.

The  
moratorium  
aimed  
to  
keep  
individuals  
and  
families

—  
millions  
of  
whom  
lost  
their  
jobs  
during  
the  
pandemic

—  
in  
their  
homes,  
in  
part,  
due  
to  
the  
increased  
risk  
of  
SARS-  
CoV-2  
transmission  
in  
congregate  
settings  
such  
as  
homeless  
shelters.

The  
CDC's  
eviction

moratorium  
has  
been  
criticized  
by  
some  
as  
overreach,  
exceeding  
the  
CDC's  
authority.  
In  
fact,  
in  
May,  
a  
federal  
judge  
ruled  
that  
the  
CDC  
did  
not  
have  
the  
authority  
to  
issue  
the  
moratorium  
under  
the  
Public  
Health  
Service  
Act,  
but  
an  
appeals  
court  
issued  
a  
stay  
that  
kept  
the

moratorium  
in  
place.  
This  
week,  
the  
US  
Supreme  
Court  
ruled  
to  
uphold  
that  
stay  
and  
keep  
the  
moratorium  
in  
place  
through  
the  
end  
of  
July.  
The  
Supreme  
Court  
conceded  
that  
the  
CDC  
exceeded  
its  
authority,  
but  
with  
the  
moratorium  
scheduled  
to  
end  
next  
month,  
the  
remaining  
few  
weeks



would  
allow  
for  
a  
smoother  
transition  
and  
a  
“more  
orderly  
distribution  
of  
the  
congressionally  
appropriated  
rental  
assistance  
funds.”

Even  
with  
the  
moratorium  
in  
place  
and  
[financial  
assistance](#)  
through  
state  
and  
federal  
economic  
relief  
packages,  
many  
individuals  
and  
landlords  
struggled  
to  
navigate  
the  
assistance  
systems  
or  
come  
to

agreements  
regarding  
past  
and  
future  
rent  
payments.  
In  
some  
cases,  
individuals  
who  
were  
able  
to  
catch  
up  
on  
their  
missed  
rent  
payments  
may  
still  
face  
eviction  
once  
the  
moratorium  
ends  
because  
late  
payments  
could  
violate  
the  
terms  
of  
their  
lease,  
regardless  
of  
the  
moratorium.  
In  
addition  
to  
the

moratorium,  
many  
courts  
were  
closed  
during  
the  
pandemic  
and  
are  
now  
attempting  
to  
process  
a  
long  
backlog  
of  
cases,  
including  
many  
for  
eviction.  
With  
an  
estimated  
10  
million  
individuals  
still  
behind  
on  
rent  
payments,  
the  
US  
could  
face  
a  
parallel  
epidemic  
of  
evictions  
starting  
in  
only  
a  
few

short  
weeks.

## **NORTH KOREA**

At  
a  
Politburo  
meeting  
last  
month,  
North  
Korea  
Supreme  
Leader  
Kim  
Jong-  
un  
[chastised](#)  
[Workers'](#)  
[Party](#)  
[of](#)  
[Korea](#)  
[executives](#)  
for  
failing  
to  
implement  
long-  
term  
"organizational,  
institutional,  
material,  
scientific,  
and  
technological  
measures"  
to  
prevent  
the  
COVID-19  
pandemic  
from  
reaching  
the  
country,  
possibly  
suggesting

the  
virus  
has  
breached  
the  
nation's  
borders.  
The  
historically  
reclusive  
North  
Korea  
has  
been  
even  
more  
closed  
off  
since  
the  
start  
of  
the  
pandemic,  
taking  
drastic  
containment  
measures,  
including  
shuttering  
its  
border  
with  
China,  
its  
largest  
trading  
partner.  
The  
country's  
lockdown  
has  
further  
strained  
its  
economy  
and  
likely

deepened  
existing  
food  
shortages.  
North  
Korea  
claims  
it  
has  
no  
COVID-19  
cases,  
a  
position  
questioned  
by  
experts.  
According  
to  
the  
North's  
official  
*Korean  
Central  
News  
Agency  
(KCNA)*,  
the  
senior  
officials'  
diversions  
from  
policy  
"thus  
caused  
a  
crucial  
case  
of  
creating  
a  
great  
crisis  
in  
ensuring  
the  
security  
of

the  
state  
and  
safety  
of  
the  
people  
and  
entailed  
grave  
consequences.”

The  
news  
agency  
did  
not  
elaborate  
on  
those  
consequences.

Some  
experts  
speculate  
that  
the  
whole-  
of-  
government  
approach  
and  
continued  
large-  
scale,  
in-  
person  
meetings  
suggest  
any  
major  
outbreak  
may  
have  
been  
avoided.

Other  
experts  
wonder

whether  
Kim's  
public  
airing  
of  
the  
enforcement  
problems  
was  
meant  
to  
send  
a  
signal  
to  
China  
for  
additional  
aid  
or  
to  
the  
US  
to  
loosen  
sanctions  
to  
allow  
more  
assistance  
to  
enter  
the  
country  
through  
international  
partners,  
such  
as  
the  
United  
Nations  
World  
Food  
Programme.  
Kim's  
own  
dramatic



and  
unexplained  
weight  
loss  
raised  
questions  
about  
a  
potential  
undisclosed  
health  
problem  
or  
a  
self-  
imposed  
belt-  
tightening  
to  
show  
fellowship  
with  
North  
Korean  
citizens  
facing  
food  
insecurity.  
On  
June  
30,  
China  
offered  
to  
help  
North  
Korea  
if  
asked,  
and  
a  
South  
Korean  
official  
said  
the  
nation  
has

continuously  
proposed  
to  
help  
its  
northern  
neighbor.  
North  
Korea  
was  
set  
to  
receive  
up  
to  
1.9  
million  
doses  
of  
AstraZeneca-  
Oxford  
vaccine  
by  
the  
end  
of  
May  
through  
COVAX,  
but  
the  
shipments  
have  
been  
delayed.  
North  
Korea  
likely  
has  
no  
vaccine  
doses;  
however,  
China  
has  
not  
revealed  
whether

it  
has  
sent  
vaccines.

## **AFRICA**

The  
African  
continent  
is  
in  
the  
midst  
of  
an  
“extremely  
aggressive”  
third  
wave  
of  
infections,  
driven  
by  
the  
Delta  
variant  
of  
concern  
(B.1.617.2;  
VOC)  
and  
low  
vaccination  
rates.  
During  
an  
Africa  
CDC  
briefing  
on  
July  
1,  
Africa  
CDC  
Director  
Dr.  
John  
Nkengasong

noted  
the  
continent  
had  
5.5  
million  
confirmed  
COVID-19  
cases  
and  
experienced  
a  
23%  
increase  
in  
COVID-19-  
related  
deaths  
over  
the  
past  
week.

According  
to  
estimates,  
the  
continent  
has  
received  
only  
65  
million  
vaccine  
doses  
for  
its  
1.2  
billion  
population.  
Many  
African  
nations  
put  
faith  
in  
COVAX  
to  
deliver

700  
million  
vaccine  
doses  
to  
the  
continent  
by  
year-  
end,  
but  
so  
far  
COVAX  
has  
delivered  
fewer  
than  
50  
million  
doses.  
With  
the  
lowest  
vaccination  
rate  
in  
the  
world  
—  
around  
1%  
fully  
vaccinated  
—  
African  
officials  
and  
WHO  
leadership  
are  
[voicing](#)  
[frustration](#)  
over  
the  
drastic  
global  
divide

in  
vaccine  
access.  
At  
the  
briefing,  
Strive  
Masiyiwa,  
a  
Zimbabwean-  
born  
businessman  
who  
serves  
as  
African  
Union  
(AU)  
Special  
Envoy  
and  
coordinator  
of  
the  
Africa  
Vaccine  
Acquisition  
Task  
Team  
(AVATT)  
initiative,  
condemned  
European  
countries  
for  
failing  
so  
far  
to  
ship  
any  
vaccine  
doses  
to  
Africa  
and  
accused  
COVAX

of  
withholding  
information  
about  
donor  
pledge  
shortfalls.

Dr.  
Nkengasong  
said  
Africa  
does  
not  
want  
to  
be  
seen  
as  
“the  
continent  
of  
COVID,”  
expressing  
resentment  
over  
stadiums  
full  
of  
sports  
fans  
in  
Europe.  
Previously,  
Dr.  
Mike  
Ryan,  
Executive  
Director  
of  
the  
WHO  
Health  
Emergencies  
Programme,  
accused  
Western  
nations  
of

racism,  
paternalism,  
and  
neo-  
colonialism  
for  
delaying  
vaccine  
deliveries  
to  
Africa.  
Dr.  
Tedros  
Ghebreyesus,  
an  
Ethiopian  
who  
is  
WHO  
Director  
General,  
said,  
"Just  
give  
us  
the  
vaccines."

Also  
at  
the  
July  
1  
briefing,  
Masiyiwa  
announced  
the  
US  
next  
week  
will  
begin  
shipping  
donated  
vaccine  
doses,  
mostly  
from



Pfizer-BioNTech and a few from J&J-Janssen. The shipments are expected to be distributed to about 50 AU member states. *NPR* reports on [new solar refrigeration technology](#) that could help overcome the Pfizer-BioNTech vaccine's [cold-storage requirements](#). Additionally, the [US International Development Finance Corporation \(DFC\)](#) will

lend  
about  
US  
\$118  
million  
to  
support  
South  
African  
pharmaceutical  
company  
Aspen  
Pharmacare  
in  
manufacturing  
the  
J&J-  
Janssen  
single-  
shot  
SARS-  
CoV-2  
vaccine.  
The  
loan  
—part  
of  
a  
larger  
US  
\$710  
million  
long-  
term  
financing  
package—  
will  
help  
Aspen  
make  
up  
to  
500  
million  
doses  
of  
the  
vaccine

through  
the  
end  
of  
2022,  
with  
the  
goal  
of  
vaccinating  
much  
of  
the  
African  
population.  
US  
officials  
say  
this  
US-  
supported  
effort  
offers  
an  
alternative  
to  
China's  
vaccine  
diplomacy  
on  
the  
continent.  
Meanwhile,  
South  
Africa  
this  
week  
[reinstated](#)  
[strict](#)  
[lockdowns](#)  
amid  
a  
strong  
surge  
in  
COVID-19  
cases.  
South

Africa  
President  
Cyril  
Ramaphosa,  
who  
is  
heavily  
involved  
in  
talks  
to  
bring  
more  
vaccine  
doses  
to  
the  
continent,  
said  
the  
surge  
in  
his  
country  
appears  
to  
be  
driven  
by  
the  
Delta  
variant.

## **BANGLADESH**

After  
bringing  
its  
largest  
COVID-19  
wave  
under  
control  
in  
May,  
COVID-19  
cases  
in  
[Bangladesh](#)

are  
surging  
again  
and  
expected  
to  
surpass  
the  
previous  
peak.

Bangladesh's  
daily  
incidence  
has  
increased  
by  
a  
factor  
of  
8  
since  
mid-  
May,  
now  
up  
to  
nearly  
7,000  
new  
cases  
per  
day.

In  
an  
effort  
to  
bring  
transmission  
under  
control,  
the  
country  
is  
implementing  
a  
7-  
day,  
highly

restrictive  
national  
lockdown  
enforced  
by  
the  
military,  
prohibiting  
nearly  
all  
non-  
essential  
public  
activity.  
Unlike  
some  
other  
countries,  
Bangladesh  
did  
not  
have  
a  
reprieve  
following  
its  
previous  
surge,  
and  
the  
public  
and  
health  
system  
did  
not  
have  
time  
to  
recover  
before  
the  
current  
surge.  
Medical  
oxygen  
remains  
in

short supply, which could exacerbate the already dire situation in overburdened hospitals. Bangladesh has relatively limited genomic sequencing data available; however, it appears that the Delta variant of concern (B.1.617.2; VOC) may be rapidly becoming the dominant variant, overtaking the Beta variant (B.1.351) that dominated its previous surge.

Like many countries, Bangladesh is making slow progress in terms of vaccination, although that progress essentially halted in late April, as India, Bangladesh's principal vaccine supplier, suspended vaccine exports during its largest surge. Earlier this week, the US announced that it is shipping 2.5 million doses of



the  
Moderna  
vaccine  
to  
Bangladesh  
to  
support  
vaccination  
efforts.  
Without  
sufficient  
vaccination  
coverage,  
though,  
surges  
like  
this  
inevitably  
will  
continue,  
and  
large-  
scale  
community  
transmission  
can  
provide  
opportunities  
for  
the  
virus  
to  
mutate  
into  
new  
and  
more  
dangerous  
VOCs.

## **IN- PERSON SCHOOLING**

A  
new  
report  
by  
the

ABC  
Science  
Collaborative  
demonstrates  
that  
in-  
person  
schooling  
with  
proper  
masking  
protocols  
can  
safely  
be  
pursued  
at  
all  
educational  
levels  
in  
the  
US.  
The  
report  
analyzed  
864,515  
students  
and  
160,549  
staff  
members  
across  
[100](#)  
[school](#)  
[districts](#)  
[and](#)  
[14](#)  
[charter](#)  
[schools](#)  
[in](#)  
[North](#)  
[Carolina.](#)  
Under  
the  
state's  
"Plan  
A"

protocol,  
masks  
were  
required  
for  
all  
students  
and  
staff  
in  
all  
educational  
areas,  
including  
bus  
rides  
to  
and  
from  
school.  
Over  
the  
4-  
month  
study  
period,  
1  
in  
127  
students  
and  
1  
in  
138  
staff  
were  
diagnosed  
with  
COVID-19,  
although  
researchers  
stated  
that  
around  
95%  
of  
those  
infections

occurred within the community and not in school. The report ultimately recommended that full capacity, in-person learning can be safely achieved at all grade levels with strong adherence to mask mandates. With adherence to masking protocols, students could be less physically distanced and even reach full capacity

on  
school  
busses.  
The  
report  
provides  
strong  
data-  
driven  
evidence  
for  
in-  
person  
learning,  
as  
school  
district  
administrators  
nationwide  
create  
their  
plans  
for  
the  
upcoming  
school  
year.  
Still,  
vaccinations  
among  
eligible  
students  
and  
staff  
will  
be  
key  
to  
relaxing  
masking  
measures  
in  
the  
future.

**SUMMER  
CAMP  
OUTBREAK**

The  
Illinois  
Department  
of  
Public  
Health  
(IDPH)  
reported  
an  
outbreak  
at  
a  
summer  
youth  
camp  
in  
mid-  
June.  
The  
outbreak  
resulted  
in  
at  
least  
85  
cases  
among  
teenagers  
and  
adults,  
including  
1  
unvaccinated  
camper  
who  
was  
hospitalized.  
According  
to  
the  
IDPH,  
the  
camp  
did  
not  
check  
vaccination  
status

for campers nor staff, although reportedly all of the campers are old enough to be eligible for vaccination. Additionally, the camp did not require mask use indoors. The majority of the cases were among teenagers, illustrating the ongoing risk of COVID-19 among younger individuals. IDPH Director Dr. Ngozi

Ezike emphasized that even mild cases of COVID-19 in children pose a risk of transmission and uncertain long-term health effects. Multiple individuals at the camp “also attended a nearby conference, which resulted in 11 additional cases,” 70% of whom were unvaccinated. The facility has [postponed an upcoming](#)



camp  
until  
August  
as  
a  
result  
of  
the  
outbreak.

**US Travel Industry and Retail Supply Chain Updates**

**Weekly Updates on SARS-CoV-2 Vaccines**

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**Date : 10/1/2021 1:19:20 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - October 1, 2021**

**EDUCATIONAL  
OPPORTUNITIES**

The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
provides  
education  
and  
academic  
training  
focused  
on  
Health  
Security  
for  
students  
at  
the  
Johns  
Hopkins  
Bloomberg  
School  
of  
Public  
Health.  
For  
academic  
year  
2022-23,

the  
Center  
will  
provide  
2  
Masters  
of  
Public  
Health  
scholarships  
and  
fund  
2  
PhD  
candidates  
for  
the  
Health  
Security  
PhD  
track  
at  
the  
Johns  
Hopkins  
Bloomberg  
School  
of  
Public  
Health.  
These  
opportunities  
are  
now  
accepting  
applications.  
[Find  
more  
information  
and  
application  
details  
here.](#)

**EPI  
UPDATE**  
The  
[WHO  
COVID-19  
Dashboard](#)  
reports  
233.5

million  
cumulative  
cases  
and  
4.77  
million  
deaths  
worldwide  
as  
of  
October  
1.

After  
plateauing  
since  
late  
July  
and  
recording  
slightly  
fewer  
than  
800  
[deaths](#)  
[per](#)  
[day](#),  
[Russia](#)  
set  
a  
new  
national  
record  
this  
week  
for  
daily  
mortality  
(816.4),  
surpassing  
800  
daily  
deaths  
for  
the  
first  
time  
since

the  
onset  
of  
the  
pandemic.  
Russia  
also  
reported  
a  
[new  
single-  
day  
record](#)  
(852  
deaths)  
on  
September  
28.  
Russia's  
[daily  
incidence](#)  
has  
been  
increasing  
steadily  
since  
mid-  
September,  
up  
from  
approximately  
18,000  
new  
cases  
per  
day  
to  
nearly  
22,000  
(+22%)  
over  
that  
period.  
Russia's  
highest  
average  
daily  
incidence

was  
28,500  
new  
cases  
per  
day  
in  
late  
December  
2020.  
Russia  
has  
[fully](#)  
[vaccinated](#)  
nearly  
30%  
of  
its  
population,  
but  
[daily](#)  
[vaccinations](#)  
have  
steadily  
declined  
to  
less  
than  
25%  
of  
its  
record  
high  
in  
mid-  
July.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
6.14  
billion  
cumulative  
doses  
of  
SARS-

CoV-2  
vaccines  
administered  
globally  
as  
of  
September  
29.

A  
total  
of  
3.51  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.55  
billion  
are  
fully  
vaccinated.

Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
overall  
trend  
in  
[global  
daily  
vaccinations](#)  
continues  
to  
decline,  
remaining  
at  
or  
below

30  
million  
doses  
per  
day  
since  
September  
22\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
3.57  
billion  
[vaccinated  
individuals](#)  
worldwide  
(1+  
dose;  
[45.3%](#)  
of  
the  
global  
[population](#))  
and  
2.65  
billion  
who  
are  
[fully  
vaccinated](#)  
([33.7%](#)  
of



the  
global  
population).

As  
we  
observed  
previously  
with  
1+  
dose  
coverage,  
Oceania's  
full  
vaccination  
coverage  
(32.3%)  
is  
quickly  
approaching  
the  
global  
average  
(33.7%).  
Oceania  
could  
surpass  
this  
benchmark  
in  
the  
next  
several  
days,  
which  
would  
leave  
Africa  
(4.4%)  
as  
the  
only  
continent  
below  
the  
global  
average.  
Oceania  
and

Africa  
were  
reporting  
similar  
full  
vaccination  
coverage  
as  
recently  
as  
late  
May,  
but  
vaccination  
efforts  
in  
Oceania  
have  
progressed  
rapidly  
over  
the  
past  
several  
months.

*\*The  
average  
daily  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data,  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of*

*reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

The  
[WHO's  
Regional  
Office  
for  
Africa  
\(AFRO\)](#)  
announced  
that  
only  
15  
African  
countries  
surpassed  
10%  
[full  
vaccination  
coverage](#)  
by  
the  
target  
date  
of  
September

30.  
The  
goal  
was  
set  
by  
the  
World  
Health  
Assembly  
in  
May  
2021.  
Despite  
accounting  
for  
17%  
of  
the  
global  
population,  
only  
2%  
of  
SARS-  
CoV-2  
vaccine  
doses  
administered  
globally  
have  
been  
in  
Africa,  
illustrating  
the  
magnitude  
of  
ongoing  
disparities  
in  
vaccine  
access.  
These  
countries  
represent  
nearly  
one-

third  
of  
African  
nations  
—  
compared  
to  
nearly  
90%  
of  
high-  
income  
countries  
—  
but  
only  
about  
11%  
of  
the  
African  
population  
(1.3  
billion).  
Most  
of  
the  
countries  
that  
surpassed  
the  
10%  
benchmark  
have  
small  
populations,  
and  
more  
than  
half  
of  
all  
African  
countries  
are  
reporting  
full  
vaccination

coverage  
of  
2%  
or  
less.  
Seychelles  
and  
Mauritius  
remain  
at  
the  
top  
of  
African  
countries  
in  
terms  
of  
full  
vaccination  
coverage,  
with  
72%  
and  
63%,  
respectively.  
Morocco  
surpassed  
50%  
coverage,  
Tunisia  
is  
reporting  
32%,  
and  
Cape  
Verde\*  
is  
reporting  
nearly  
25%.  
Vaccination  
progress  
is  
accelerating,  
however,  
with  
monthly

distributions  
increasing  
10-  
fold  
from  
June  
to  
September.  
The  
target  
by  
the  
end  
of  
2021  
is  
40%  
coverage,  
but  
it  
is  
unlikely  
that  
more  
than  
a  
small  
handful  
of  
African  
countries  
will  
reach  
that  
benchmark.

*\*Or  
Cabo  
Verde.*

*UNITED  
STATES*

The  
[US](#)  
[CDC](#)  
reports  
43.3  
million  
cumulative

COVID-19 cases and 694,701 deaths. Daily incidence continues to decline at the national level, down to approximately 106,000 new cases per day, which is the lowest average since early August. Daily mortality appears to have passed a peak and started to decline. While the average decreased over the



second  
half  
of  
September

—

down  
to  
1,476  
per  
day

—

the  
single-  
day  
total  
for  
September  
29

was  
more  
than  
2,000  
deaths,  
the  
third-  
highest  
since  
February.

At  
the  
current  
pace,  
the  
US  
could  
surpass  
700,000  
cumulative  
deaths  
in  
the  
next  
4  
days\*.

*\*Changes  
in  
state-  
level*

*reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend  
or  
for  
states  
that  
are  
reporting  
mortality  
by  
date  
of  
death.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

*US  
Vaccination*

The  
US  
has  
administered  
393  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines.  
The  
daily  
vaccination  
trend  
continues  
to  
decline  
from  
the  
most  
recent  
peak  
on  
August  
29\*,  
from  
approximately  
850,000  
doses  
per  
day  
to  
slightly  
more  
than  
600,000.  
There  
are  
214.3  
million  
individuals  
who  
have  
received  
at  
least

1  
dose,  
equivalent  
to  
64.6%  
of  
the  
entire  
US  
population.  
Among  
adults,  
77.3%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
14.6  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
184.6  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
55.6%  
of  
the  
total  
population.  
Approximately  
66.9%  
of

adults  
are  
fully  
vaccinated,  
as  
well  
as  
11.9  
million  
adolescents  
aged  
12-17  
years.  
The  
CDC  
recently  
updated  
its  
vaccination  
tracking  
dashboard  
to  
include  
booster  
doses.  
To  
date,  
4.03  
million  
individuals  
have  
received  
booster  
doses,  
the  
majority  
of  
whom  
are  
aged  
50  
years  
and  
older  
(3.35  
million),  
including  
2.50

million  
aged  
65  
years  
and  
older.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.*  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.

## **VACCINE MANDATES**

Evidence  
from  
several  
states  
and  
private  
companies

that  
have  
implemented  
SARS-  
CoV-2  
vaccine  
mandates  
shows  
the  
requirements  
are  
working  
to  
boost  
vaccination  
rates  
among  
healthcare  
workers  
and  
other  
employees.  
In  
California,  
major  
health  
systems  
reported  
a  
statewide  
mandate  
helped  
increase  
vaccination  
rates  
among  
their  
employees  
to  
90%  
or  
more,  
and  
in  
New  
York,  
92%  
of

hospital  
and  
long-  
term  
care  
facility  
employees  
have  
received  
at  
least  
1  
dose  
of  
vaccine  
after  
a  
mandate  
took  
effect  
on  
September  
27,  
an  
increase  
of  
about  
10  
percentage  
points  
over  
1  
week  
ago.  
However,  
hospitals  
in  
New  
York  
continue  
to  
fear  
staff  
shortages.  
New  
York  
Governor  
Kathy



Hochul  
signed  
an  
executive  
order  
earlier  
this  
week  
aimed  
at  
providing  
short-  
term  
relief  
to  
healthcare  
systems  
impacted  
by  
staff  
shortages,  
but  
[no](#)  
[facilities](#)  
[have](#)  
[closed](#)  
since  
the  
mandate  
went  
into  
effect.

Private  
employer  
vaccine  
mandates  
are  
becoming  
more  
common,  
but  
[opposition](#)  
[remains](#).  
United  
Airlines  
announced  
this

week  
the  
company  
would  
terminate  
nearly  
600  
of  
its  
67,000  
employees  
if  
they  
continue  
to  
refuse  
to  
comply  
with  
its  
vaccination  
requirement.  
The  
company,  
one  
of  
the  
first  
large  
US  
corporations  
to  
impose  
a  
mandate,  
said  
99%  
of  
its  
workforce  
is  
vaccinated  
and  
it  
is  
working  
with  
employees

who  
decide  
to  
get  
vaccinated  
after  
the  
initiation  
of  
their  
termination  
proceedings.

Tyson  
Foods,  
which  
announced  
a  
vaccine  
mandate  
for  
employees  
in

August,  
said  
this  
week

that

91%

of

the

company's

120,000

workers

are

now

vaccinated.

Tyson's

frontline

workers

now

have

until

November

1

to

get

vaccinated

or

request  
an  
exemption,  
whereas  
its  
6,000  
office  
workers'  
deadline  
is  
today.  
Earlier  
this  
month,  
US  
President  
Biden  
announced  
a  
federal  
vaccine  
mandate  
for  
companies  
with  
100  
or  
more  
employees,  
to  
be  
enforced  
by  
the  
Occupational  
Safety  
and  
Health  
Administration  
(OSHA).  
The  
US  
Armed  
Forces  
also  
are  
requiring  
vaccinations

for  
active  
duty  
personnel.  
On  
September  
30,  
a  
group  
of  
10  
plaintiffs,  
including  
US  
Air  
Force  
officers  
and  
a  
Secret  
Service  
agent,  
[filed](#)  
[a](#)  
[lawsuit](#)  
[seeking](#)  
[an](#)  
[injunction](#)  
[halting](#)  
[federal](#)  
[vaccination](#)  
[requirements,](#)  
claiming  
the  
mandates  
violate  
the  
First  
Amendment.

## **SCHOOL MASK POLICIES**

Children  
across  
the  
US  
have

had  
a  
tumultuous  
start  
to  
the  
new  
school  
year,  
with  
more  
than  
900,000  
students  
in  
44  
states  
having  
been  
affected  
by  
COVID-19-  
related  
closures  
between  
August  
1  
and  
mid-  
September.  
In  
2  
new  
analyses  
published  
in  
the  
US  
CDC's  
*Morbidity  
and  
Mortality  
Report  
(MMWR)*,  
the  
agency  
adds  
to

the  
growing  
evidence  
that  
school  
mask  
mandates  
can  
help  
prevent  
COVID-19  
outbreaks  
in  
classrooms.  
Using  
information  
from  
520  
US  
counties,  
representing  
16.5%  
of  
the  
nation's  
total  
counties,  
researchers  
found  
that  
pediatric  
COVID-19  
case  
rates  
rose  
more  
sharply  
in  
counties  
without  
school  
mask  
requirements  
between  
July  
1-  
September  
4,

2021,  
when  
compared  
with  
counties  
that  
had  
school  
mask  
mandates.

The  
daily  
case  
rates  
remained  
lower  
in  
schools  
requiring  
masks  
even  
after  
controlling  
for  
covariates.

[Another  
analysis](#)  
examined  
the  
association  
between  
mask  
policies  
and  
school-  
associated  
COVID-19  
outbreaks  
in  
2  
large  
Arizona  
counties  
that  
returned  
to  
in-  
person,



K-12  
schooling  
in  
late  
July/early  
August  
2021.  
The  
researchers  
found  
that  
schools  
without  
mask  
mandates  
were  
3.5  
times  
more  
likely  
to  
have  
a  
school-  
related  
COVID-19  
outbreak  
than  
those  
that  
instituted  
early  
mask  
mandates.

Regardless,  
[legal](#)  
[disputes](#)  
[over](#)  
[mask](#)  
[requirements](#)  
[in](#)  
[schools](#)  
[continue](#)  
[in](#)  
several  
states.  
The

US  
government  
on  
September  
30  
filed  
a  
[formal  
statement](#)  
with  
the  
federal  
district  
court  
in  
Austin,  
Texas,  
saying  
the  
state's  
ban  
on  
school  
mask  
mandates  
[violates  
the  
rights  
of  
students  
with  
disabilities](#)  
if  
it  
prevents  
them  
from  
safely  
attending  
public  
school  
in-  
person.  
In  
Iowa,  
the  
[American  
Academy](#)

of  
Pediatrics  
(AAP)  
and  
its  
state  
chapter  
filed  
an  
amicus  
brief  
on  
behalf  
of  
a  
group  
of  
parents  
and  
disability  
rights  
advocates  
who  
filed  
a  
federal  
lawsuit  
against  
Governor  
Kim  
Reynolds  
seeking  
to  
reverse  
a  
law  
prohibiting  
school  
boards  
from  
imposing  
mask  
mandates.  
The  
AAP  
warned  
that  
pediatric

COVID-19 cases have risen sharply since the beginning of the school year. Legal proceedings over a law in Arizona banning schools from implementing mask requirements are ongoing, with the state Supreme Court on September 29 setting a briefing schedule to hear arguments. And in Michigan, several local health

departments  
are  
working  
to  
understand  
language  
that  
appears  
to  
ban  
school  
mask  
mandates  
contained  
within  
the  
state's  
budget  
signed  
this  
week  
by  
Governor  
Gretchen  
Whitmer.  
Although  
she  
issued  
a  
statement  
saying  
a  
provision  
that  
strips  
state  
funding  
from  
local  
health  
departments  
with  
school  
mask  
mandates  
is  
unconstitutional,  
some

districts  
are  
rescinding  
mask  
requirements  
over  
fear  
of  
lawsuits.

## **VACCINE EFFICACY & EFFECTIVENESS REVIEW**

Researchers  
from  
Johns  
Hopkins  
University  
(US)  
led  
a  
systematic  
review  
of  
the  
efficacy  
and  
effectiveness  
of  
existing  
SARS-  
CoV-2  
vaccines.  
The  
study  
([preprint](#))  
evaluated  
clinical  
trial  
and  
observational  
data  
for  
all  
vaccines  
that

submitted applications for Emergency Use Listing (EUL) from the WHO by August 15, 2021, including data published in peer-reviewed journals and via preprint servers, government public health and regulatory websites and databases, news media, and manufacturers' websites. The researchers accounted for differences in study population, case definition,

follow-up duration, presence of variants of interest or concern (VOIs/VOCs), epidemiological situation (eg, degree of community transmission), and study design.

The study included 24 vaccine products, including multiple vaccine platform technologies, of which 13 had published Phase 3 clinical trial results or data and 6 had



received  
an  
EUL  
from  
the  
WHO.  
The  
researchers  
provide  
an  
overview  
of  
the  
available  
data  
and  
highlight  
outstanding  
gaps,  
including  
specific  
types  
of  
analysis  
(eg,  
effectiveness  
in  
previously  
infected  
individuals,  
efficacy/effectiveness  
against  
the  
Gamma  
variant)  
and  
individual  
products  
(eg,  
Sputnik  
V.  
Sinopharm-  
Beijing).  
Of  
the  
24  
products,  
Phase

3  
clinical  
trial  
data  
were  
available  
for  
15,  
but  
only  
9  
had  
been  
subjected  
to  
peer  
review.  
The  
researchers  
also  
include  
a  
set  
of  
figures  
that  
illustrate  
the  
timing  
of  
Phase  
3  
clinical  
trials  
in  
the  
context  
of  
the  
daily  
COVID-19  
incidence  
in  
various  
countries,  
which  
can  
affect

the  
quality  
of  
study  
data  
and  
the  
duration  
of  
clinical  
trials.  
Overall,  
the  
vaccines  
currently  
in  
use  
have  
demonstrated  
high  
efficacy/effectiveness  
against  
symptomatic  
COVID-19  
disease,  
severe  
disease,  
and  
death,  
and  
analysis  
exists  
that  
also  
shows  
some  
degree  
of  
protection  
against  
infection.  
The  
results  
vary  
between  
products,  
but  
among

those  
with  
available  
estimates,  
the  
efficacy/effectiveness  
against  
symptomatic  
disease  
was  
greater  
than  
65%  
for  
all  
of  
them  
(and  
none  
of  
the  
confidence  
intervals  
fell  
below  
50%).

**ADDITIONAL  
VACCINE  
DOSE  
SAFETY**

People  
who  
received  
a  
third  
dose  
of  
an  
mRNA  
SARS-  
CoV-2  
vaccine  
experienced  
similar  
adverse  
events  
compared

with  
the  
second  
dose,  
according  
to  
a  
report  
published  
September  
28  
in  
the  
US  
CDC's  
*Morbidity  
and  
Mortality  
Weekly  
Report  
(MMWR)*.  
Individuals  
with  
moderate-  
to-  
severe  
immune-  
compromising  
conditions  
became  
eligible  
for  
an  
additional  
dose  
on  
August  
12,  
when  
the  
US  
FDA  
amended  
the  
Emergency  
Use  
Authorizations  
(EUAs)

for  
both  
the  
Pfizer-  
BioNTech  
and  
Moderna  
vaccines.  
The  
[report's](#)  
[data](#)  
[come](#)  
[from](#)  
[voluntary](#)  
[V-](#)  
[SAFE](#)  
[registrants](#)  
who  
completed  
check-  
ins  
for  
all  
3  
doses.  
According  
to  
data  
from  
12,591  
vaccinees  
who  
recorded  
information  
for  
a  
third  
dose  
from  
August  
12-  
September  
19,  
2021,  
79.4%  
reported  
local  
reactions

compared  
to  
77.6%  
of  
individuals  
after  
a  
second  
vaccine  
dose.  
Systemic  
reactions  
were  
reported  
by  
74.1%  
of  
people  
after  
a  
third  
dose  
compared  
with  
76.5%  
after  
the  
second  
dose.  
The  
most  
frequently  
reported  
symptoms  
included  
injection  
site  
pain,  
headache,  
and  
fatigue,  
and  
most  
commonly  
occurred  
the  
day  
after

vaccination.

Overall,  
no  
unexpected  
patterns  
of  
side  
effects  
were  
reported  
among  
more  
than  
22,000  
individuals  
who  
received  
a  
third  
vaccine  
dose  
and  
reported  
to  
V-  
SAFE  
between  
August  
12  
and  
September  
19,  
and  
their  
recorded  
symptoms  
were  
categorized  
as  
mild  
or  
moderate.

## **PREGNANCY & VACCINATION**

The  
US



CDC  
issued  
a  
Health  
Alert  
Network  
(HAN)  
advisory  
recommending  
urgent  
action  
aimed  
at  
vaccinating  
pregnant  
individuals  
against  
SARS-  
CoV-2.  
The  
advisory  
encourages  
those  
who  
are  
pregnant,  
recently  
pregnant  
(including  
lactating  
individuals),  
who  
are  
trying  
to  
become  
pregnant,  
or  
who  
may  
become  
pregnant  
in  
the  
future  
to  
get  
vaccinated.

The advisory comes after the highest reported number of COVID-19-related deaths in pregnant people (n=22) occurred in August 2021, the agency noted, with more than [125,000 laboratory-confirmed cases](#) and [22,000 hospitalizations](#) among pregnant people since January 2020. A similar directive was issued last month, but this

is  
one  
of  
the  
agency's  
strongest  
recommendations  
yet  
for  
pregnant  
individuals.

Vaccination  
coverage  
among  
pregnant  
individuals  
remains  
low,  
at  
32%,  
but  
varies  
by  
race/ethnicity.

The  
lowest  
rate  
for  
fully  
vaccinated  
pregnant  
persons  
is  
among  
non-  
Hispanic  
Black  
individuals  
at  
17%,  
followed  
by  
Hispanic  
or  
Latino  
individuals  
at  
27%.

Asian  
pregnant  
individuals  
have  
the  
highest  
rate  
of  
vaccination  
at  
47%.

Non-  
Hispanic  
White  
individuals  
and  
those  
in  
the  
'other'  
category  
fall  
in  
at  
35%  
and  
32%,  
respectively.

**LONG  
COVID**  
Ongoing  
studies  
are  
helping  
to  
better  
characterize  
and  
determine  
the  
prevalence  
of  
so-  
called  
long  
COVID,  
also

known  
as  
post-  
acute  
sequelae  
of  
SARS  
CoV-2  
infection  
(PASC).  
In  
a  
study  
published  
in  
[PLOS  
Medicine](#),  
researchers  
led  
by  
scientists  
with  
the  
University  
of  
Oxford  
conducted  
a  
retrospective  
cohort  
study  
based  
on  
linked  
electronic  
health  
records  
(EHRs)  
data  
from  
81  
million  
patients  
including  
273,618  
COVID-19  
survivors,  
primarily

in  
the  
US,  
and  
included  
114,449  
patients  
with  
influenza  
as  
a  
control.  
The  
researchers  
found  
that  
nearly  
37%  
of  
COVID-19  
patients  
studied  
reported  
having  
at  
least  
1  
or  
more  
features  
of  
long  
COVID  
between  
3  
and  
6  
months  
after  
their  
initial  
diagnosis,  
a  
higher  
percentage  
than  
the  
10%-30%

reported  
in  
previous  
studies  
and  
significantly  
higher  
than  
after  
influenza.

The  
most  
commonly  
reported  
symptoms  
included  
abnormal  
breathing;  
fatigue;  
chest,  
throat,  
or  
other  
pain;  
headache;  
abdominal  
symptoms;  
and  
anxiety  
or  
depression.

While  
lingering  
symptoms  
occurred  
more  
frequently  
among  
people  
who  
had  
more  
severe  
acute  
COVID-19,  
including  
those  
who

were  
hospitalized,  
and  
older  
individuals,  
the  
researchers  
stressed  
that  
[people  
who  
had  
mild  
disease  
and  
children  
and  
young  
adult  
survivors  
also  
experienced  
long  
COVID.](#)

In  
a  
study  
published  
September  
29  
in  
[JAMA  
Network  
Open,](#)  
researchers  
interviewed  
2,433  
COVID-19  
patients  
who  
were  
discharged  
from  
2  
hospitals  
in  
Wuhan,



China,  
between  
February  
12  
and  
April  
10,  
2020.  
Notably,  
45%  
of  
patients  
reported  
at  
least  
1  
symptom  
at  
1-  
year  
follow-  
up,  
with  
the  
most  
common  
symptoms  
being  
fatigue,  
sweating,  
chest  
tightness,  
anxiety,  
and  
muscle  
pain.  
Patients  
who  
experienced  
more  
severe  
COVID-19  
cases  
and  
who  
were  
older  
were

more likely to have at least 3 lingering symptoms. In yet another study, posted to the preprint server [medRxiv](#), researchers found that SARS-CoV-2 infection, even mild cases, could reduce gray matter thickness in the brain, possibly contributing to [long-term neurological damage](#). Taken together, the studies highlight

the  
fact  
that  
the  
health  
impacts  
from  
COVID-19  
extend  
far  
beyond  
the  
acute  
phase,  
and  
contribute  
more  
knowledge  
about  
the  
risk  
of  
long  
COVID,  
for  
[both](#)  
[unvaccinated](#)  
[and](#)  
[vaccinated](#)  
[individuals](#),  
that  
could  
help  
identify  
those  
at  
greatest  
risk,  
plan  
necessary  
ongoing  
health  
services  
support,  
and  
help  
develop  
treatments

for  
the  
condition.

**COVAX  
2022  
STRATEGY**

The  
governing  
body  
for  
Gavi,  
The  
Vaccine  
Alliance,  
met  
this  
week  
to  
discuss  
its  
primary  
objective  
of  
expanding  
routine  
immunization  
but  
also  
welcomed  
participation  
of  
the  
Co-  
Chairs  
of  
the  
AMC  
Engagement  
Group  
and  
the  
COVAX  
Shareholders'  
Council  
to  
[assess](#)  
[the](#)

vaccine  
initiative's  
"critical  
challenges"  
and  
make  
progress  
toward  
developing  
the  
2022  
COVAX  
strategy.

The  
Co-  
Chairs  
and  
Board  
members  
expressed  
support  
for  
COVAX's  
urgent  
call  
to  
lift  
all  
SARS-  
CoV-2  
vaccine  
export  
restrictions;  
manufacturers  
to  
deliver  
on  
their  
commitments  
to  
COVAX  
with  
transparency  
on  
schedules  
and  
supply  
chains;

countries  
with  
high  
vaccination  
coverage  
rates  
to  
relinquish  
their  
place  
in  
line  
to  
allow  
more  
vaccine  
supply  
to  
go  
to  
COVAX  
and  
low-  
and  
middle-  
income  
countries  
(LMICs)  
in  
need;  
and  
global  
donations  
to  
be  
expanded,  
fast-  
tracked,  
and  
standardized.  
With  
more  
than  
311  
million  
doses  
shipped,  
the

Board highlighted the importance of quickly scaling up vaccine deliveries, as supply is significantly increasing. Echoing the results of the meeting, Gavi Board Chair José Manuel Barroso, a former president of the European Commission, writing in an [opinion piece](#) published in *POLITICO Europe* on September 30, called on

wealthy  
countries'  
governments  
and  
manufacturers  
to  
do  
more  
to  
"close  
today's  
unacceptable  
gap  
in  
vaccine  
equity."

## **US PANDEMIC PREPAREDNESS**

More  
than  
20  
stakeholder  
organizations  
this  
week  
[sent](#)  
[a](#)  
[letter](#)  
to  
the  
US  
Congress  
urging  
them  
to  
provide  
at  
least  
[US](#)  
[\\$16](#)  
[billion](#)  
in  
[pandemic](#)  
[preparedness](#)  
[funding](#)  
included



in  
a  
version  
of  
the  
Build  
Back  
Better  
Act  
passed  
by  
the  
US  
House  
Committee  
on  
the  
Budget.

The  
funding  
would  
go  
toward  
efforts  
to  
improve  
the  
country's  
pandemic  
defenses,  
including  
the  
ability  
to  
produce  
diagnostics,  
vaccines,  
and  
treatments  
for  
known  
and  
future  
biological  
threats;  
track  
and  
monitor

potential  
outbreaks;  
provide  
sufficient  
medical  
supplies;  
improve  
indoor  
air  
quality;  
and  
build  
a  
stronger  
public  
health  
infrastructure.

But

as

journalist

Ed

Yong

highlights

in

a

piece

in

*The  
Atlantic*,

much

more

will

have

to

be

accomplished

in

order

to

protect

the

nation

from

the

next

pandemic,

or

natural

disaster,  
or  
climate  
change  
impact.  
Most  
importantly,  
those  
efforts  
must  
include  
improving  
equity  
—  
in  
education,  
labor  
wages,  
food  
security,  
healthcare  
access,  
and  
other  
social  
factors  
—  
in  
order  
to  
buffer  
against  
the  
next  
crisis.

**SOCIAL  
MEDIA  
&  
VACCINE  
MISINFORMATION**

YouTube  
on  
September  
29  
[announced](#)  
the  
video

platform  
is  
expanding  
its  
medical  
misinformation  
policies,  
including  
new  
guidelines  
for  
any  
vaccine  
that  
is  
approved  
and  
confirmed  
to  
be  
safe  
and  
effective  
by  
local  
and  
global  
health  
authorities.  
Since  
last  
year,  
the  
Google-  
owned  
company  
has  
removed  
more  
than  
130,000  
videos  
for  
violating  
its  
COVID-19  
vaccine  
policies,

but  
the  
new  
guidelines  
extend  
beyond  
the  
current  
pandemic  
and  
apply  
to  
videos  
claiming  
proven  
vaccines  
are  
not  
effective;  
including  
misinformation  
about  
vaccines'  
ingredients;  
or  
claiming  
that  
vaccines  
cause  
autism,  
cancer,  
or  
infertility,  
or  
that  
they  
contain  
tracking  
devices.  
YouTube  
also  
announced  
it  
is  
[removing](#)  
[several](#)  
[channels](#)  
[associated](#)

with  
high-  
profile  
anti-  
vaccine  
proponents,  
including  
Joseph  
Mercola,  
Sherri  
Tenpenny,  
and  
Robert  
F.  
Kennedy  
Jr.  
There  
are  
exceptions  
to  
the  
rules,  
as  
YouTube  
will  
continue  
to  
allow  
content  
providing  
scientific  
discussions  
on  
vaccine  
policies,  
clinical  
trials,  
or  
historic  
vaccine  
successes  
and  
failures,  
as  
well  
as  
testimony  
about

personal  
experiences  
with  
vaccines,  
as  
long  
as  
it  
doesn't  
spill  
over  
into  
advocating  
against  
vaccines.  
The  
expanded  
guidelines  
mark  
a  
turning  
point  
for  
YouTube,  
which  
has  
shown  
some  
hesitancy  
against  
broadening  
its  
policing  
of  
content,  
and  
brings  
its  
policies  
more  
in  
line  
with  
other  
social  
media  
platforms,  
including

Facebook  
and  
Twitter.  
While  
many  
of  
the  
so-  
called  
[Disinformation](#)  
[Dozen](#)  
continue  
to  
have  
active  
accounts  
across  
social  
media  
platforms,  
misinformation  
researchers  
hope  
YouTube's  
policies  
will  
help  
staunch  
the  
flow  
of  
false  
vaccine  
information,  
as  
videos  
from  
the  
channel  
often  
lead  
to  
viral  
posts  
on  
Facebook  
and  
Twitter.



Some researchers warn that anti-vaccine activists will simply [move to other, newer platforms that have fewer restrictions](#), including Telegram or Gab.

### **ANTIVIRAL TREATMENT & PREVENTIVE TRIALS**

Pharmaceutical companies are pushing to develop more effective, easily administered therapeutics for COVID-19, some of which are being studied for

the  
prevention  
of  
SARS-  
CoV-2  
infection.  
This  
morning,  
Merck  
announced  
that  
its  
investigational  
oral  
antiviral  
molnupiravir,  
which  
is  
being  
developed  
with  
Ridgeback  
Biotherapeutics,  
significantly  
reduced  
the  
risk  
of  
hospitalization  
or  
death  
among  
non-  
hospitalized  
adult  
COVID-19  
patients  
with  
mild-  
to-  
moderate  
symptoms  
who  
were  
considered  
high  
risk  
due

to other health conditions such as obesity, diabetes, or heart disease. Among patients who took a 5-day course of the drug, 7.3% (28/385) were hospitalized or died compared with 14.1% (53/377) of patients who took a placebo, according to the interim analysis of the Phase 3 MOVE-

OUT  
trial.  
Merck  
said  
it  
will  
file  
an  
application  
for  
Emergency  
Use  
Authorization  
(EUA)  
with  
the  
US  
FDA  
as  
soon  
as  
possible,  
as  
well  
as  
filing  
applications  
for  
marketing  
with  
regulatory  
agencies  
globally.  
Over  
the  
summer,  
the  
US  
government  
announced  
plans  
to  
purchase  
1.7  
million  
courses  
of  
molnupiravir

from  
Merck  
for  
about  
US  
\$1.2  
billion,  
pending  
US  
FDA  
authorization  
or  
approval.  
If  
authorized,  
the  
drug  
would  
become  
the  
first  
oral  
medication  
available  
to  
treat  
COVID-19.

Pfizer  
announced  
on  
September  
27  
that  
it  
has  
begun  
a  
large  
Phase  
2/3  
clinical  
trial  
—  
named  
EPIC-  
PEP  
(Evaluation

of  
Protease  
Inhibition  
for  
COVID-19  
in  
Post-  
Exposure  
Prophylaxis)  
—  
to  
evaluate  
its  
[investigational](#)  
[oral](#)  
[antiviral](#)  
[drug](#)  
[candidate](#)  
[PF-07321332](#),  
administered  
with  
a  
low-  
dose  
of  
the  
antiviral  
ritonavir,  
for  
the  
prevention  
of  
SARS-  
CoV-2  
infection.  
The  
global  
trial  
is  
a  
randomized,  
double-  
blind,  
placebo-  
controlled  
study  
that  
intends

to  
enroll  
up  
to  
2,660  
healthy  
adult  
participants  
who  
live  
in  
the  
same  
household  
as  
someone  
with  
confirmed,  
symptomatic  
COVID-19  
disease.

In  
a  
different  
study,  
Pfizer  
is  
testing  
the  
experimental  
antiviral  
among  
non-  
hospitalized,  
symptomatic  
adult  
COVID-19  
patients.

Swiss  
pharmaceutical  
company  
[Roche](#)  
[also](#)  
[is](#)  
[reportedly](#)  
[developing](#)  
[similar](#)

treatments  
for  
COVID-19.

So  
far,  
the  
FDA  
has  
approved  
only  
Gilead's  
antiviral  
Veklury  
(remdesivir)  
for  
the  
treatment  
of  
COVID-19  
in  
hospitalized  
patients.  
However,  
the  
drug's  
intravenous  
or  
injection  
administration  
presents  
challenges  
to  
widespread  
use,  
so  
the  
authorization  
or  
approval  
of  
an  
effective  
orally  
administered  
COVID-19  
treatment  
or  
preventive



could  
help  
to  
lower  
the  
burden  
of  
patients  
on  
hospitals.

## **WINTER OLYMPICS**

Less  
than  
2  
months  
from  
the  
end  
of  
the  
2020  
Summer  
Olympic  
Games

—  
which  
took  
place  
a  
year  
late  
due  
to  
the  
COVID-19  
pandemic

—  
organizers  
are  
formulating  
[pandemic  
countermeasures  
for  
the  
upcoming  
2022](#)

Olympic  
and  
Paralympic  
Winter  
Games,  
set  
to  
take  
place  
in  
February  
and  
March  
in  
Beijing.  
This  
week,  
the  
International  
Olympic  
Committee  
announced  
some  
spectators  
will  
be  
allowed  
to  
attend  
events,  
but  
only  
if  
they  
are  
from  
mainland  
China.  
Athletes  
and  
team  
members  
will  
not  
be  
required  
to  
be

fully  
vaccinated  
to  
attend,  
but  
those  
who  
are  
not  
will  
be  
subject  
to  
a  
21-  
day  
quarantine  
upon  
arrival  
in  
Beijing.  
Additionally,  
an  
Olympics  
bubble,  
or  
“closed-  
loop  
management  
system,”  
including  
required  
daily  
testing,  
will  
be  
established  
like  
it  
was  
in  
Tokyo  
in  
order  
to  
help  
improve  
safety.

During  
this  
summer's  
Games  
in  
Tokyo,  
at  
least  
430  
people  
tested  
positive  
for  
SARS-  
CoV-2,  
including  
athletes,  
officials,  
journalists,  
employees,  
contractors,  
and  
volunteers.

[Weekly Updates on SARS-CoV-2 Vaccines](#)

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Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 10/5/2021 1:19:19 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - October 5, 2021**

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
235  
million  
cumulative  
cases  
and  
4.80  
million  
deaths  
worldwide  
as  
of  
October  
4.  
Global  
weekly  
incidence  
and  
mortality  
continue  
to  
decline,

for  
the  
fourth  
consecutive  
week.

Weekly  
incidence  
decreased  
by  
9%  
from  
the  
previous  
week,  
and  
mortality  
fell  
by  
4%.

All  
WHO  
regions  
are  
exhibiting  
steady  
declines  
over  
the  
past  
3-11  
weeks,  
with  
the  
exception  
of  
Europe,  
which  
has  
held  
relatively  
steady  
at  
approximately  
1.1  
million  
new  
cases  
per

week  
since  
mid-  
July.  
The  
WHO  
dashboard  
indicates  
that  
October  
4  
reporting  
is  
delayed  
for  
a  
number  
of  
countries  
in  
the  
Region  
of  
the  
Americas.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
6.19  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
October  
3.  
A  
total  
of



3.53  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.58  
billion  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
overall  
trend  
in  
[global  
daily  
vaccinations](#)  
continues  
to  
decline  
steadily,  
down  
from  
the  
most  
recent  
high  
of  
42  
million  
doses  
per  
day  
on  
August

30  
to  
27  
million  
on  
October  
3  
—  
decreasing  
by  
more  
than  
one-  
third  
over  
that  
period\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
3.61  
billion  
[vaccinated  
individuals](#)  
worldwide  
(1+  
dose;  
[45.8%](#)  
[of](#)  
[the](#)  
[global](#)  
[population](#))

and  
2.69  
billion  
who  
are  
fully  
vaccinated  
(34.2%  
of  
the  
global  
population).  
Oceania's  
full  
vaccination  
coverage  
(34.20%)  
surpassed  
the  
global  
average  
(34.19%),  
which  
leaves  
Africa  
(4.4%)  
as  
the  
only  
continent  
below  
the  
global  
average.  
Oceania  
and  
Africa  
were  
reporting  
similar  
full  
vaccination  
coverage  
as  
recently  
as  
late  
May,

but  
vaccination  
efforts  
in  
Oceania  
have  
progressed  
rapidly  
over  
the  
past  
several  
months.

*\*The  
average  
daily  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data,  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the*

*numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

## **UNITED STATES**

The

**US**

**CDC**

reports

43.6

million

cumulative

COVID-19

cases

and

700,176

deaths.

Daily

incidence

continues

to

decline,

down

to

approximately

103,000

new

cases

per

day,

which

is

the

lowest

average

since

early

August.

Daily

mortality  
appears  
to  
have  
passed  
a  
peak  
and  
started  
to  
decline;  
however,  
the  
trend  
has  
not  
been  
consistent.  
The  
average  
daily  
mortality  
declined  
from  
a  
peak  
of  
1,744  
deaths  
per  
day  
on  
September  
15  
to  
1,460  
on  
September  
28  
before  
jumping  
back  
up  
to  
nearly  
1,500  
on  
September

29.  
The  
US  
reported  
2,025  
deaths  
on  
September  
29,  
the  
third-  
highest  
single-  
day  
total  
since  
mid-  
to-  
late  
February\*.

The  
US  
surpassed  
700,00  
cumulative  
deaths  
on  
October  
3:  
1  
death  
to  
100,000:  
110  
days\*\*  
100k  
to  
200k:  
109  
days  
200k  
to  
300k:  
89  
days  
300k  
to

400k:

33

days

400k

to

500k:

33

days

500k

to

600k:

122

days

600k

to

700k:

112

days

With

87

days

still

remaining

in

2021,

the

US

could

surpass

750,000

cumulative

deaths

by

the

end

of

the

year.

The

US

reported

371,911

total

deaths

in

2020,

which



would  
make  
2021  
even  
more  
deadly  
than  
the  
first  
year  
of  
the  
pandemic,  
despite  
the  
availability  
of  
multiple  
highly  
effective  
vaccines.

*\*Changes  
in  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend  
or  
for  
states  
that  
are  
reporting  
mortality  
by  
date  
of*

death.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.

*\*\*The  
CDC  
reports  
247  
cumulative  
deaths  
on  
February  
3,  
2020,  
the  
first  
date  
with  
available  
mortality  
data.*

### US Vaccination

The  
US  
has  
administered  
397  
million

cumulative  
doses

of  
SARS-  
CoV-2  
vaccines.

The  
daily  
vaccination

trend  
increased

over  
the  
past  
several  
days,

up  
from  
fewer  
than  
600,000

doses  
per  
day  
on  
September  
23

to  
more  
than  
750,000

on  
September  
29

—

a  
25%  
increase  
over  
that  
period.

Even  
with  
expected  
delays  
in  
reporting,  
it

appears  
that  
the  
average  
is  
poised  
to  
continue  
increasing.  
The  
averages  
for  
September  
30  
and  
October  
1  
are  
already  
more  
than  
784,000  
and  
777,000,  
respectively,  
despite  
being  
within  
the  
5-  
day  
window  
during  
which  
we  
expect  
reporting  
delays\*.  
The  
timing  
of  
this  
increase  
corresponds  
to  
the  
FDA  
authorization

and  
CDC  
recommendations  
regarding  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine  
for  
many  
adults.

There  
are  
215.5  
million  
individuals  
in  
the  
US  
who  
have  
received  
at  
least  
1  
dose  
of  
SARS-  
CoV-2  
vaccine,  
equivalent  
to  
64.9%  
of  
the  
entire  
US  
population.  
Among  
adults,  
77.7%  
have  
received  
at

least  
1  
dose,  
as  
well  
as  
14.7  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
185.8  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
56.0%  
of  
the  
total  
population.  
Approximately  
67.3%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
12.0  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of

5.7  
million  
“booster”  
doses  
(ie,  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
or  
Moderna  
vaccine)  
have  
been  
administered  
nationwide\*\*.

Adults  
aged  
50  
years  
and  
older  
have  
received  
4.8  
million  
“booster”  
doses,  
including  
3.7  
million  
among  
adults  
aged  
65  
years  
and  
older.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the*

average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.  
\*\*The  
second  
dose  
of  
the  
Pfizer-  
BioNTech,  
Moderna,  
AstraZeneca-  
Oxford,  
and  
other  
2-  
dose  
vaccines  
is  
technically  
a  
booster  
dose  
as  
well  
(ie,  
part



*of  
a  
prime-  
boost  
regimen),  
but  
here,  
we  
are  
specifically  
addressing  
additional  
"booster"  
doses  
administered  
beyond  
the  
original  
full  
vaccination  
regimen.*

**J&J-  
JANSSEN  
BOOSTER  
DOSE**

Johnson  
&  
Johnson  
(J&J)  
today  
[announced](#)  
it  
has  
submitted  
data  
to  
the  
US  
FDA  
for  
an  
Emergency  
Use  
Authorization  
(EUA)  
amendment  
to

allow  
for  
a  
booster  
dose  
for  
its  
SARS-  
CoV-2  
vaccine,  
developed  
in  
collaboration  
with  
Janssen  
Pharmaceuticals.

In  
a  
press  
release,  
J&J  
reported  
that  
Phase  
3  
clinical  
trial  
data  
indicate  
that  
a  
booster  
dose  
administered  
56  
days  
after  
the  
first  
dose  
provided  
94%  
protection  
against  
moderate-  
to-  
severe  
COVID-19

and  
100%  
protection  
against  
severe  
disease.

The  
booster  
dose  
request  
follows  
a  
previous  
report  
that  
[hundreds  
of  
thousands  
of  
J&J-  
Janssen  
vaccine  
doses  
in  
the  
US  
will  
soon  
expire.](#)

The  
federal  
government  
shipped  
22  
million  
doses  
to  
states  
in  
need,  
but  
only  
15  
million  
were  
administered.  
Several  
independent

experts  
expressed  
concern  
at  
a  
meeting  
of  
the  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
(ACIP)  
in  
September  
that  
J&J-  
Janssen  
vaccine  
recipients  
were  
being  
left  
behind  
in  
discussions  
over  
booster  
doses,  
as  
the  
focus  
has  
been  
on  
the  
Pfizer-  
BioNTech  
and  
Moderna  
mRNA  
vaccines.  
J&J-  
Janssen  
now  
joins

Pfizer-  
BioNTech  
and  
Moderna  
as  
the  
third  
vaccine  
provider  
to  
request  
an  
EUA  
for  
a  
booster  
dose.  
The  
FDA's  
[Vaccine  
and  
Related  
Biological  
Products  
Advisory  
Committee  
\(VRBPAC\)](#)  
is  
scheduled  
to  
discuss  
the  
possible  
EUA  
amendments,  
as  
well  
as  
vaccines  
for  
younger  
children,  
on  
October  
15.

**EU  
BOOSTER/ADDITIONAL**

## **DOSES**

The European Medicines Agency (EMA) on October 4 issued recommendations for third doses of the SARS-CoV-2 vaccines from Pfizer-BioNTech (Comirnaty) and Moderna (Spikevax). The EMA's Committee for Medicinal Products for Human Use (CHMP) differentiated between additional doses—which they recommended for people with severely compromised

immune systems who had received either vaccine, given at least 28 days from the second dose — and [booster doses](#) — which can now be considered for people aged 18 years and older who received the Pfizer-BioNTech vaccine at least 6 months after their second dose. The committee

said  
it  
will  
continue  
to  
evaluate  
data  
on  
booster  
doses  
of  
Moderna's  
vaccine.  
Specific  
recommendations  
on  
booster  
doses  
will  
be  
left  
up  
to  
national-  
level  
public  
health  
bodies,  
the  
CHMP  
noted.  
Some  
EU  
countries  
—  
including  
France  
and  
Germany  
—already  
are  
administering  
additional  
doses  
to  
people  
with  
immunocompromising



conditions,  
whereas  
few  
EU  
countries  
—  
such  
as  
Hungary  
—  
are  
offering  
booster  
doses  
to  
all  
adults.  
The  
regulator  
also  
warned  
of  
the  
risk  
of  
inflammatory  
heart  
conditions  
and  
other  
“very  
rare”  
side  
effects  
following  
a  
third  
dose  
of  
vaccine,  
noting  
they  
will  
continue  
to  
collect  
and  
examine

safety  
and  
effectiveness  
data.

On  
the  
same  
day,  
the  
[WHO](#)  
[updated](#)  
[its](#)  
[interim](#)  
[statement](#)  
[on](#)  
[booster](#)  
[doses](#),  
outlining  
the  
differences  
between  
booster  
and  
additional  
doses,  
as  
well  
as  
factors  
to  
be  
considered  
in  
the  
administration  
of  
booster  
doses.  
The  
statement  
underscores  
WHO's  
position  
that  
the  
introduction  
of

booster  
doses  
"should  
be  
rigorously  
evidence  
driven"  
and  
limited  
to  
populations  
in  
greatest  
need.  
The  
WHO  
continues  
to  
discourage  
broad-  
based  
booster  
dose  
administration,  
as  
it  
risks  
worsening  
global  
inequities  
in  
vaccine  
access.

## **US VACCINE MANDATES**

Vaccine  
mandates  
continue  
to  
take  
effect  
across  
the  
US  
for  
numerous

populations,  
and  
could  
be  
part  
of  
the  
reason  
for  
an  
increase  
in  
daily  
vaccinations  
over  
the  
past  
several  
days.

New  
York  
City's  
requirement  
that  
public  
school  
employees  
be  
vaccinated  
began  
October  
4,  
with  
Mayor  
Bill  
de  
Blasio  
announcing  
95%  
of  
full-  
time  
Department  
of  
Education  
employees  
are  
at

least  
partially  
vaccinated.  
US  
Supreme  
Court  
Justice  
Sonia  
Sotomayor  
on  
October  
1  
denied  
a  
request  
for  
an  
emergency  
injunction  
of  
the  
policy  
made  
by  
4  
teachers  
and  
teaching  
assistants  
who  
claim  
the  
city's  
policy  
violates  
their  
constitutional  
rights.  
The  
decision  
by  
Justice  
Sotomayor,  
who  
offered  
no  
explanation,  
echoes

one  
made  
by  
Supreme  
Court  
Justice  
Amy  
Coney  
Barrett  
in  
August  
when  
she  
turned  
down  
a  
request  
to  
block  
Indiana  
University's  
vaccine  
mandate  
for  
students.  
With  
about  
1,000  
colleges  
and  
universities  
nationwide  
requiring  
vaccinations  
for  
students  
and  
staff,  
some  
students  
have  
decided  
to  
withdraw  
from  
school  
rather  
than

get  
vaccinated,  
even  
as  
other  
cases  
are  
pending.

On  
October  
1,  
[California](#)  
[became](#)  
[the](#)  
[first](#)  
[US](#)  
[state](#)  
to  
require  
SARS-  
CoV-2  
vaccination  
for  
all  
eligible  
public  
and  
private  
schoolchildren,  
similar  
to  
inoculations  
for  
other  
diseases.  
Governor  
Gavin  
Newsom  
[announced](#)  
the  
mandate  
will  
take  
effect  
during  
the  
first

school  
term  
following  
the  
US  
FDA's  
full  
approval  
of  
a  
vaccine  
for  
children  
aged  
12  
and  
older  
—possibly  
as  
soon  
as  
January  
2022—  
with  
vaccinations  
for  
younger  
children  
to  
be  
phased  
in  
after  
approval  
for  
their  
age  
group.  
Notably,  
because  
the  
requirement  
is  
being  
implemented  
through  
a  
regulatory



process,  
the  
rule  
allows  
for  
exemptions  
due  
to  
personal,  
medical,  
and  
religious  
beliefs;  
however,  
the  
state  
legislature  
and  
governor  
could  
later  
approve  
a  
law  
to  
eliminate  
the  
personal-  
belief  
exemption,  
and  
individual  
school  
districts  
are  
able  
to  
implement  
their  
own  
vaccine  
mandates  
sooner  
than  
statewide  
requirements.

The  
White  
House  
is  
pushing  
more  
US  
airlines  
to  
require  
vaccination  
for  
their  
employees.

Many  
large  
US  
airlines  
hold  
federal  
contracts  
and  
therefore  
are  
required  
to  
vaccinate  
their  
employees  
under  
rules  
implemented  
last  
month  
under  
executive  
order.  
American  
Airlines,  
JetBlue  
Airways,  
and  
Alaska  
Airlines  
all  
announced  
last  
week

that  
they  
would  
implement  
vaccine  
mandates  
as  
early  
as  
December  
8,  
the  
deadline  
for  
federal  
contractors  
to  
be  
vaccinated.  
United  
Airlines,  
[one](#)  
[of](#)  
[the](#)  
[first](#)  
[large](#)  
[US](#)  
[companies](#)  
to  
announce  
strict  
vaccine  
requirements  
for  
its  
employees,  
said  
only  
about  
300  
of  
the  
airline's  
67,000  
US-  
based  
staff  
have

not  
yet  
complied  
with  
the  
rule  
and  
about  
2,000  
have  
applied  
for  
exemptions.

Workers  
in  
other  
industries

—  
including  
[healthcare  
workers,](#)  
[firefighters,](#)  
and  
other  
[first  
responders](#)—

are  
being  
fired  
or  
suspended  
for  
missing  
vaccine  
mandate  
deadlines  
or  
are  
seeking  
exemptions.

Meanwhile,  
the  
chronically  
understaffed  
[US  
Occupational  
and  
Safety](#)

Administration  
(OSHA)

is  
preparing  
to  
enforce  
federal  
mandates  
for  
about  
8  
million  
worksites  
nationwide  
with  
only  
1,850  
federal  
and  
state  
inspectors.  
Nevertheless,  
it  
appears  
vaccine  
mandates  
are  
convincing  
more  
people  
to  
get  
the  
shots.

### **COVAX**

The  
COVAX  
facility  
—  
with  
its  
goal  
of  
equitable  
global  
vaccine  
acquisition,

allocation,  
and  
distribution

—

this  
month  
will

for  
the  
first  
time

send  
SARS-  
CoV-2  
vaccines  
only

to  
countries  
with  
the  
least  
amount  
of  
coverage.

The  
policy  
represents

a  
shift  
in

dose  
allocation,  
as

COVAX  
previously  
distributed  
doses

proportionally  
to

countries  
based

on  
population  
size,

not  
need.

According  
to

Our  
World  
in  
Data,  
only  
2.3%  
of  
people  
in  
low-  
income  
countries  
have  
received  
at  
least  
one  
dose  
of  
SARS-  
CoV-2  
vaccine,  
placing  
the  
global  
goal  
of  
40%  
vaccination  
coverage  
far  
out  
of  
reach.  
Under  
the  
new  
plan,  
about  
75  
million  
doses  
of  
the  
Pfizer-  
BioNTech,  
AstraZeneca-  
Oxford,

Moderna,  
J&J-  
Janssen,  
and  
Sinopharm  
vaccines  
will  
be  
distributed  
to  
49  
countries  
most  
in  
need  
this  
month.

While  
many  
experts  
welcomed  
the  
policy  
shift,  
some  
argued  
that  
the  
strategy  
should  
have  
been  
adopted  
at  
COVAX's  
launch.  
Despite  
the  
WHO's  
[call](#)  
[for](#)  
[a](#)  
[moratorium](#)  
[on](#)  
[booster](#)  
[shots](#)  
to



ensure  
equitable  
global  
vaccine  
access,  
the  
US  
and  
several  
other  
countries  
have  
begun  
administering  
additional  
doses.  
Vaccine  
manufacturers  
maintain  
that  
there  
are  
[enough](#)  
[shots](#)  
[for](#)  
[everyone](#),  
with  
about  
1.5  
billion  
doses  
being  
produced  
each  
month.  
The  
concern  
now,  
they  
say,  
is  
that  
many  
doses  
in  
wealthy  
nations  
are

sitting  
unused  
rather  
than  
being  
redistributed  
to  
countries  
in  
need.

## **TRAVEL REQUIREMENTS**

COVID-19-  
related  
travel  
restrictions  
and  
requirements  
are  
becoming  
increasingly  
confusing  
worldwide,  
with  
each  
nation  
implementing  
various  
rules  
pertaining  
to  
whether  
travelers  
need  
to  
be  
vaccinated,  
are  
required  
to  
quarantine,  
or  
can  
even  
enter  
a  
country.

England's  
new  
guidance  
came  
into  
force  
on  
October  
4,  
replacing  
its  
previous  
"traffic  
light"  
system  
with  
a  
single  
"red  
list"  
of  
countries,  
from  
which  
only  
British  
or  
Irish  
nationals  
or  
those  
with  
UK  
residency  
will  
be  
permitted  
to  
enter.  
While  
the  
most  
recent  
iteration  
of  
the  
rules  
eliminates

pre-travel testing for vaccinated individuals arriving from non-red list countries, a maze of requirements — including pre-departure and post-arrival testing, mandatory quarantining, and completing a locator form — remains, largely determined by a traveler's vaccination status. Reportedly, the red list of countries is [expected](#)

to  
be  
trimmed  
from  
54  
to  
9  
later  
this  
week.  
The  
travel  
guidance  
continues  
to  
not  
recognize  
the  
Indian  
version  
of  
the  
AstraZeneca/Oxford  
SARS-  
CoV-2  
vaccine,  
known  
as  
Covishield,  
and  
India  
on  
October  
1  
implemented  
reciprocal  
restrictions  
on  
all  
British  
travelers,  
including  
pre-  
departure  
and  
post-  
arrival  
testing

and  
quarantines.

Beginning  
November  
1,

New  
Zealand  
will  
allow  
only  
fully  
vaccinated  
individuals

aged  
17

years

and  
older

to

enter

the

country

from

abroad,

although

travelers

will

still

be

required

to

show

a

negative

pre-

departure

test

result

and

quarantine

for

14

days

upon

arrival.

Beginning

in

February  
2022,  
Air  
New  
Zealand,  
the  
nation's  
flagship  
airline,  
will  
require  
all  
passengers  
on  
international  
flights  
to  
be  
vaccinated,  
with  
few  
exceptions.  
Australian  
Prime  
Minister  
Scott  
Morrison  
announced  
last  
week  
that  
Australia  
will  
allow  
international  
travel  
for  
fully  
vaccinated  
citizens  
and  
permanent  
residents  
beginning  
in  
November,  
with  
a

required

7

day

quarantine

upon

entry.

The

Australian

government

continues

to

work

on

plans

to

allow

foreign

nationals

to

visit.

The

borders

of

both

New

Zealand

and

Australia

have

been

closed

since

March

2020,

and

both

nations

recently

have

experienced

an

increase

in

COVID-19

cases.

[Japan](#)

[and](#)

[Argentina](#)



also  
recently  
announced  
changes  
to  
their  
travel  
rules.

## **US HEALTHCARE SYSTEM STRAIN**

Healthcare  
workers  
in  
the  
US  
have  
been  
battling  
COVID-19  
for  
over  
18  
months  
and  
continue  
to  
experience  
the  
crippling  
impacts  
of  
chronic  
stress,  
fatigue,  
and  
burnout,  
which  
in  
some  
cases  
is  
impacting  
patient  
care.

A

recent  
influx  
of  
COVID-19  
patients  
in  
several  
regions  
has  
strained  
healthcare  
facilities  
and  
forced  
some  
to  
implement  
crisis  
standards  
of  
care.

At  
the  
beginning  
of  
October,  
20  
out  
of  
31  
healthcare  
facilities  
in  
Alaska  
activated  
emergency  
crisis  
protocols  
that  
allow  
them  
to  
ration  
care  
in  
order  
to  
cope

with  
the  
burden  
of  
COVID-19  
cases.

Several  
factors—  
including  
a  
lack  
of  
supplies,  
resources,  
bed  
space,  
and  
a  
shortage  
of  
healthcare  
workers  
—

led  
the  
state  
to  
implement  
the  
protocols,  
leaving  
decisions  
about  
prioritizing  
treatment  
up  
to  
doctors.

The  
situation  
led  
Alaska  
Governor  
Mike  
Dunleavy  
to  
request  
additional

healthcare  
worker  
support  
from  
the  
US  
government  
at  
the  
end  
of  
September.

Similarly,  
intensive  
care  
units  
(ICUs)  
in  
New  
England  
are  
filling  
amid  
a  
shortage  
in  
healthcare  
workers  
and  
an  
increase  
in  
COVID-19  
cases  
due  
to  
the  
Delta  
variant,  
largely  
among  
unvaccinated  
populations.  
Despite  
having  
some  
of

the highest vaccination coverage rates in the US, public health officials continue to plead with the thousands of people who remain unvaccinated and vulnerable to SARS-CoV-2 infection. Notably, some hospital systems in the region are seeing almost 20 times the number of COVID-19 patients than during June

2020  
and  
have  
no  
open  
ICU  
beds.

## **MULTICOMPONENT PREVENTIVE STRATEGIES**

Youth  
camps  
in  
the  
US  
that  
use  
[multicomponent  
COVID-19  
preventive  
strategies](#)—  
including  
high  
vaccination  
rates  
among  
staff  
and  
campers,  
pre-  
arrival  
and  
frequent  
onsite  
testing,  
podding,  
masking,  
physical  
distancing,  
focusing  
on  
hand  
hygiene,  
and  
wastewater  
surveillance  
—

provide  
a  
safer  
environment  
for  
attendees  
and  
counselors,  
according  
to

2  
studies  
published  
last  
week  
in  
the  
US  
CDC's  
*Mortality  
and  
Morbidity  
Weekly  
Report  
(MMWR)*.

One  
study  
reported

on  
9  
US  
overnight  
camps  
across  
the  
country  
that  
occurred  
during  
June  
through  
August  
2021  
and  
implemented  
multiple  
prevention  
strategies,

including  
having  
a  
vaccination  
rate  
over  
93%  
among  
eligible  
persons  
aged  
12  
years  
or  
older.  
Among  
7,173  
staff  
members  
and  
campers  
from  
50  
states,  
13  
countries,  
and  
US  
military  
overseas  
bases  
who  
took  
tens  
of  
thousands  
of  
rapid  
antigen  
and  
RT-  
PCR  
tests  
over  
the  
2021  
season,  
9



COVID-19 cases were detected at 4 camps, and no secondary transmission was detected.

[Another study](#) examined COVID-19 outbreaks at 14 overnight and 14 day camps in Louisiana during June and July, 2021, as the Delta variant became predominant. During the study period, 321 camp-associated cases were

identified,  
an  
increase  
over  
the  
number  
of  
cases  
observed  
in  
Louisiana  
camps  
the  
previous  
year.  
The  
researchers  
note  
the  
study  
period  
also  
coincided  
with  
an  
“apparent  
underutilization”  
of  
preventive  
measures  
such  
as  
vaccination,  
masking,  
and  
physical  
distancing.  
Together,  
the  
studies  
provide  
support  
for  
the  
[CDC’s  
guidance](#)  
that  
eligible

children  
be  
vaccinated  
and  
highlight  
the  
importance  
of  
simultaneously  
using  
multicomponent  
strategies  
to  
reduce  
the  
risk  
of  
and  
prevent  
SARS-  
CoV-2  
transmission  
at  
camps  
and  
other  
youth-  
focused  
settings  
such  
as  
schools.

## **NEW ZEALAND**

New  
Zealand  
announced  
an  
end  
to  
its  
zero  
tolerance  
approach  
to  
COVID-19  
and

acknowledged  
that  
it  
will  
need  
to  
start  
a  
phased  
reopening  
through  
lessening  
restrictions  
and  
increasing  
vaccination  
rates.

The  
restrictions  
in  
Auckland,  
which  
have  
been  
in  
effect  
for  
7  
weeks,  
will  
[gradually  
ease  
in  
3  
stages.](#)

The  
first  
stage,  
alert  
level  
3,  
will  
allow  
people  
to  
gather  
outdoors  
with

members  
from  
no  
more  
than  
2  
households  
and  
10  
individuals.

Early  
childhood  
education  
centers  
will  
reopen  
and  
people  
will  
be  
able  
to  
take  
part  
in  
certain  
outdoor  
recreational  
activities.

The  
second  
stage,  
alert  
level  
2,  
will  
allow  
the  
reopening  
of  
retail  
stores,  
pools,  
and  
zoos

—  
with  
certain

preventive  
measures

—

and  
the  
number  
of  
individuals  
who  
can  
meet  
outdoors  
will  
increase  
to  
25.

The  
third  
and  
final  
stage,  
alert  
level  
1,  
will  
allow  
for  
the  
opening  
of  
restaurants  
and  
hairdressers  
with  
some  
public  
health  
interventions  
and  
limits  
on  
seating,  
and  
the  
number  
of  
individuals  
who

can  
meet  
outdoors  
will  
increase  
to  
50.

The  
zero  
tolerance  
approach  
to  
COVID-19  
worked  
well  
for  
New  
Zealand  
until  
recently,  
when  
the  
Delta  
variant  
proved  
impossible  
to  
eliminate  
despite  
intensive  
lockdowns.  
New  
Zealanders  
were  
able  
to  
live  
restriction-  
free  
for  
the  
majority  
of  
the  
pandemic  
and  
the

government's  
strategy  
was  
viewed  
in  
a  
highly  
favorable  
light.  
But  
recently,  
public  
opinion  
began  
to  
shift  
when  
thousands  
of  
people  
protested  
the  
restrictive  
public  
health  
measures.  
Prime  
Minister  
Jacinda  
Ardern  
stated  
that  
strict  
lockdown  
measures  
will  
be  
eased  
once  
the  
nation  
reaches  
full  
vaccination  
for  
90%  
of  
the



eligible  
population.  
According  
to  
the  
Ministry  
of  
Health,  
79%  
of  
the  
eligible  
population  
has  
received  
at  
least  
one  
dose,  
but  
efforts  
to  
fully  
vaccinate  
the  
population  
could  
take  
months  
due  
to  
difficulties  
convincing  
the  
remaining  
20%  
to  
get  
the  
shots.

## **PORTUGAL**

More  
than  
85%  
of  
Portugal's  
total

population  
is  
fully  
vaccinated  
against  
SARS-  
CoV-2,  
among  
the  
world's  
leaders  
in  
vaccinations.

In  
fact,  
about  
98%  
of  
those  
eligible  
for  
vaccines

—  
those  
aged  
12  
and  
older

—  
are  
fully  
vaccinated,  
and  
the  
country  
has  
experienced  
a  
sharp  
decline  
in  
the  
number  
of  
new  
COVID-19  
cases  
since

the  
end  
of  
August.  
The  
number  
of  
COVID-19-  
related  
deaths  
are  
down  
too,  
although  
there  
has  
been  
a  
slight  
increase  
in  
the  
7-  
day  
average  
since  
the  
beginning  
of  
October.\*  
The  
government  
this  
week  
lifted  
most  
COVID-19  
restrictions.  
However,  
some  
health  
officials  
are  
concerned  
a  
winter  
surge  
in

cases  
is  
possible,  
including  
more  
hospitalizations,  
as  
many  
people  
—  
and  
especially  
the  
elderly  
—  
received  
their  
vaccinations  
more  
than  
6  
months  
ago.  
Several  
studies,  
including  
one  
conducted  
in  
Portugal,  
provide  
evidence  
that  
a  
drop  
in  
vaccine  
effectiveness  
is  
possible  
over  
time,  
particularly  
in  
older  
populations.  
The  
country

may  
soon  
begin  
administering  
third  
vaccine  
doses  
to  
older  
people  
and  
those  
with  
compromised  
immune  
systems,  
with  
a  
goal  
of  
reaching  
100%  
of  
them  
by  
the  
end  
of  
the  
year.

Many  
credit  
the  
country's  
success  
to  
the  
leadership  
of  
Vice  
Admiral  
Henrique  
Gouveia  
e  
Melo,  
a  
former

submarine  
squadron  
commander  
who  
led  
a  
nationwide  
vaccination  
campaign  
that  
faced  
many  
of  
the  
same  
misinformation  
and  
hesitancy  
challenges  
as  
other  
countries.  
Admiral  
Gouveia  
e  
Melo  
credited  
the  
campaign's  
success  
to  
consistent  
and  
trustworthy  
communication  
from  
elite  
military  
personnel,  
who  
were  
distanced  
from  
politics,  
and  
the  
use  
of

military-  
style  
language  
that  
rallied  
the  
nation  
onto  
a  
war  
footing.  
As  
the  
country  
returns  
to  
a  
sense  
of  
normalcy,  
the  
remainder  
of  
the  
world  
will  
be  
eagerly  
watching.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
deaths  
likely  
are  
less  
accurate  
for  
the  
most  
recent*

5  
*days.*

## **NEXT- GENERATION MASKS**

Masks  
and  
respirators  
have  
played  
an  
essential  
role  
in  
the  
global  
COVID-19  
response;  
however,  
the  
ubiquitous  
disposable  
medical/surgical  
masks  
and  
N95  
respirators  
used  
by  
healthcare  
workers  
have  
not  
appreciably  
improved  
since  
the  
mid-1990s,  
and  
the  
non-  
medical  
masks  
in  
wide  
public  
use



during  
the  
pandemic  
are  
not  
governed  
by  
associated  
quality  
or  
design  
standards.  
The  
Johns  
Hopkins  
Center  
for  
Health  
Security  
published  
a  
report  
outlining  
recommendations  
for  
the  
US  
government  
regarding  
improvements  
to  
mask  
quality  
and  
supply  
and  
developing  
a  
sustainable  
market  
for  
these  
products.  
The  
approach  
outlined  
in  
the

report touches on the development, manufacturing, and stockpiling of masks and respirators for healthcare workers, the non-healthcare workforce, and the broader US public. The report, [Masks and Respirators for the 21st Century: Policy Changes Needed to Save Lives and Prevent Societal Disruption](#), describes a confluence of factors

that  
are  
hindering  
the  
mask  
market,  
including  
industrial  
inertia,  
lack  
of  
competition,  
complacent  
consumers,  
regulatory  
barriers,  
supply  
chain  
limitations,  
an  
uncertain  
market,  
and  
the  
absence  
of  
US  
government  
policy.

The  
report  
calls  
for  
efforts  
to  
improve  
the  
design  
and  
quality  
of  
masks  
and  
respirators,  
including  
their  
degree

of protection, fit and wearability, and durability and reusability. The report also focuses on the importance of developing a robust supply chain that could mitigate the need for and limitations of stockpiling and provide reliable supply capacity during emergencies. The authors also list specific actions for the US

government,  
including  
expanding  
the  
use  
of  
reusable  
products  
(eg,  
elastomer-  
based  
respirators),  
updating  
federal  
procurement  
and  
stockpiling  
systems,  
funding  
the  
development  
of  
improved  
products  
and  
manufacturing  
capacity  
(eg,  
through  
BARDA),  
and  
encouraging  
the  
routine  
use  
of  
masks  
for  
other  
respiratory  
diseases  
(eg,  
seasonal  
influenza).

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

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**centerhealthsecurity@mail301.jh.edu**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : COVID-19 Updates - October 8, 2021**

**UPDATE:**

Starting  
next  
week,  
the  
COVID-19  
Situation  
Report  
will  
be  
delivered  
to  
your  
inbox  
on  
Tuesdays  
and  
Thursdays.  
We  
will  
no  
longer  
include  
detailed  
epidemiological  
analysis  
each  
week,  
but  
we  
will  
continue  
to

provide  
in-  
depth  
looks  
at  
important  
and  
emerging  
trends  
as  
necessary,  
including  
for  
new  
variants  
of  
concern.  
We  
appreciate  
your  
support  
as  
our  
COVID-19  
Situation  
Report  
continues  
to  
evolve.

We  
want  
to  
thank  
Matthew  
Shearer,  
MPH,  
who  
served  
as  
the  
lead  
editor  
of  
the  
Situation  
Report  
since  
January  
2020.  
His  
attention  
to  
detail  
and



critical  
lens  
helped  
shape  
these  
updates.

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
236  
million  
cumulative  
cases  
and  
4.82  
million  
deaths  
worldwide  
as  
of  
October  
7.

[Russia](#)  
continues  
to  
report  
[new](#)  
[records](#)  
[in](#)  
[terms](#)  
[of](#)  
[daily](#)  
[mortality](#),  
as  
its  
current  
surge  
becomes  
its  
second  
largest  
to

date.  
After  
surpassing  
800  
deaths  
per  
day  
for  
the  
first  
time  
in  
late  
September,  
the  
trend  
has  
continued  
sharply  
upward.  
Russia  
is  
now  
reporting  
886  
deaths  
per  
day,  
a  
15%  
increase  
since  
mid-  
September  
and  
still  
increasing.  
Russia  
reported  
910  
deaths  
each  
on  
October  
6  
and  
7,  
its

highest  
single-  
day  
totals  
to  
date.  
Russia's  
[daily  
incidence](#)  
is  
also  
increasing  
rapidly,  
up  
nearly  
40%  
since  
early-  
to-  
mid  
September.

[Syria](#)  
is  
combatting  
its  
[largest  
surge  
to  
date.](#)  
Syria's  
[daily  
incidence](#)  
increased  
from  
5  
new  
cases  
per  
day  
on  
July  
23  
to  
more  
than  
350  
in

late  
September,  
increasing  
by  
a  
factor  
of  
70  
over  
that  
period.

The  
surge  
appears  
to  
have  
peaked  
several  
days  
ago  
at  
more  
than  
double  
the  
previous  
record

—  
161  
in  
late  
March  
2021.

The  
daily  
incidence  
appears  
to  
have  
fallen  
sharply  
over  
the  
past  
several  
days,  
but  
it

is  
still  
in  
excess  
of  
275.  
[Daily  
mortality](#)  
surged  
as  
well,  
increasing  
from  
fewer  
than  
1  
death  
per  
day  
in  
early  
August  
to  
11.6  
in  
late  
September.  
Similar  
to  
daily  
incidence,  
the  
trend  
decreased  
sharply  
over  
the  
past  
several  
days  
—  
as  
low  
as  
8.3  
on  
October  
3

before  
jumping  
back  
up  
to  
10.3  
on  
October  
4  
—  
which  
potentially  
indicates  
that  
reporting  
delays  
could  
be  
a  
factor  
in  
the  
sharp  
downward  
trends.  
Syria's  
current  
daily  
mortality  
is  
9.6  
deaths  
per  
day.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
6.26  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines

administered  
globally  
as  
of  
October  
6.  
A  
total  
of  
3.59  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.61  
billion  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
overall  
trend  
in  
[global  
daily  
vaccinations](#)  
continues  
to  
decline  
steadily,  
down  
from  
the  
most  
recent

high  
of  
42  
million  
doses  
per  
day  
on  
August  
30  
to  
fewer  
than  
25  
million  
—

a  
40%  
decline  
over  
that  
period\*.

The  
global  
trend  
continues  
to  
closely  
follow  
the  
trend  
in  
Asia.

In  
terms  
of  
total  
daily  
vaccinations,  
Africa  
has  
been  
on  
par  
with  
Europe  
and  
North



and  
South  
America  
since  
late  
September,  
with  
more  
than  
1.5  
million  
doses  
administered  
per  
day.  
Africa's  
average  
appears  
to  
have  
decreased  
sharply  
over  
the  
past  
several  
days,  
which  
could  
be  
a  
function  
of  
reporting.  
On  
a  
per  
capita  
basis,  
Africa  
has  
nearly  
reached  
the  
daily  
progress  
in  
Europe,

with  
approximately  
0.2  
daily  
vaccinations  
per  
100  
population.

Our  
World  
in  
Data  
estimates  
that  
there  
are  
3.64  
billion  
vaccinated  
individuals  
worldwide

(1+  
dose;  
46.3%  
of  
the  
global  
population)

and  
2.73  
billion  
who  
are  
fully  
vaccinated  
(34.7%  
of  
the  
global  
population).

*\*The  
average  
daily  
doses  
administered  
may  
exhibit  
a*

*sharp  
decrease  
for  
the  
most  
recent  
data,  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

*UNITED  
STATES  
The  
[US](#)  
[CDC](#)  
reports  
44.0  
million  
cumulative*

COVID-19 cases and 707,065 deaths. Daily incidence continues to decline, down to approximately 95,000 new cases per day, which is the lowest average since August 2. Daily mortality is declining as well, down from the most recent peak of 1,764 deaths per day on September 15 to 1,431

on  
October  
6\*.  
*\*Changes  
in  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend  
or  
for  
states  
that  
are  
reporting  
mortality  
by  
date  
of  
death.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to*

*the  
most  
recent  
dates.*

US  
Vaccination

The  
US  
has  
administered  
399.6  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines.  
The  
daily  
vaccination  
trend  
continues  
to  
increase,  
up  
from  
approximately  
603,000  
doses  
per  
day  
on  
September  
23  
to  
more  
than  
858,000  
on  
October  
1,  
a  
42%  
increase  
over  
that

period.  
The  
current  
average  
is  
the  
highest  
since  
June  
17\*.  
The  
timing  
of  
this  
increase  
corresponds  
to  
the  
FDA  
authorization  
and  
CDC  
recommendations  
regarding  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine  
for  
many  
adults.

There  
are  
216.3  
million  
individuals  
in  
the  
US  
who  
have  
received  
at  
least

1  
dose  
of  
SARS-  
CoV-2  
vaccine,  
equivalent  
to  
65.1%  
of  
the  
entire  
US  
population.  
Among  
adults,  
78.0%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
as  
14.8  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
186.6  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
56.2%  
of  
the  
total



population.  
Approximately  
67.6%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
12.1  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
6.8  
million  
“booster”  
doses  
(ie,  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
or  
Moderna  
vaccine)  
have  
been  
administered  
nationwide\*\*. Adults  
aged  
50  
years  
and  
older  
have  
received  
5.7  
million

of  
the  
“booster”  
doses,  
including  
4.4  
million  
among  
adults  
aged  
65  
years  
and  
older.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.*

*The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

*\*\*The  
second*

dose  
of  
the  
Pfizer-  
BioNTech,  
Moderna,  
AstraZeneca-  
Oxford,  
and  
other  
2-  
dose  
vaccines  
is  
technically  
a  
booster  
dose  
as  
well  
(ie,  
part  
of  
a  
prime-  
boost  
regimen),  
but  
here,  
we  
are  
specifically  
addressing  
additional  
"booster"  
doses  
administered  
beyond  
the  
original  
full  
vaccination  
regimen.

Following  
the  
authorization  
and

recommendations  
regarding  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
and  
Moderna  
vaccines  
("booster"  
doses)  
in  
late  
September,  
daily  
vaccinations  
have  
increased  
at  
the  
national  
level.  
As  
has  
been  
the  
case  
throughout  
the  
US  
COVID-19  
epidemic,  
these  
trends  
vary  
widely  
between  
states  
and  
regions.  
Analysis  
from  
*The  
Washington  
Post*  
indicates

that  
the  
national  
average  
for  
daily  
vaccinations  
increased  
28%  
over  
the  
past  
week.

A  
total  
of  
30  
states  
are  
reporting  
increases  
greater  
than  
the  
national  
average,  
including  
11  
states  
with  
+50%  
or  
greater.

Notably,  
Utah  
(+81%),  
Texas  
(+84%),  
Delaware  
(+92%),  
and  
Vermont  
(+130%)  
are  
all  
reporting  
greater  
than

+75%.  
Illinois  
and  
Colorado  
are  
reporting  
the  
national  
average  
(+28%),  
and  
the  
remaining  
18  
states  
are  
reporting  
less,  
including  
4  
states  
with  
declining  
trends\*\*\*:  
New  
York  
(-1%),  
Alaska  
(-10%),  
Mississippi  
(-11%),  
and  
Alabama  
(-21%).

The  
regional  
trends  
are  
slightly  
less  
clear  
than  
for  
previous  
vaccination  
and  
epidemiological

analyses.  
Based  
on  
the  
distribution  
of  
states  
with  
respect  
to  
the  
national  
average,  
it  
is  
not  
surprising  
that  
most  
regions  
have  
more  
states  
reporting  
higher.  
Notably,  
all  
6  
of  
the  
HHS  
Region  
5  
states  
(Midwest)  
are  
reporting  
above  
the  
national  
average,  
including  
Michigan  
and  
Wisconsin  
with  
greater  
than

+50%.  
All  
but  
one  
state  
in  
Regions  
1,  
7,  
8,  
and  
10  
are  
reporting  
greater  
than  
the  
national  
average.  
The  
lone  
exceptions  
are  
Maine  
(0%  
change),  
Missouri  
(+16%),  
South  
Dakota  
(+8%),  
and  
Alaska  
(-10%),  
respectively.  
On  
the  
opposite  
end  
of  
the  
spectrum,  
7  
of  
the  
8  
states  
in



Region  
4  
(Southeast)  
are  
reporting  
less  
than  
the  
national  
average,  
including  
Mississippi  
and  
Alabama  
with  
downward  
trends.  
As  
with  
other  
percent  
change  
analyses,  
the  
magnitude  
of  
the  
difference  
is  
highly  
impacted  
by  
the  
previous  
level  
of  
activity.  
States  
that  
were  
already  
reporting  
high  
daily  
vaccinations  
tend  
to  
exhibit

less  
relative  
change  
than  
those  
reporting  
lower  
averages  
due  
to  
the  
larger  
denominator,  
which  
will  
certainly  
impact  
the  
trends  
we  
observe  
this  
week.

\*\*\**Maine*

*is  
reporting  
a  
decrease  
of  
less  
than  
1%,  
which  
we  
are  
categorizing  
as  
no  
change.*

## **IMPACT OF US VACCINATION MANDATES**

The  
White  
House

t  
released  
a  
[report](#)  
this  
week  
detailing  
the  
impact  
that  
vaccine  
requirements  
have  
had  
on  
increasing  
vaccine  
uptake  
in  
the  
US.  
According  
to  
the  
report,  
vaccine  
requirements  
helped  
to  
increase  
vaccine  
uptake  
in  
the  
healthcare,  
corporate,  
and  
education  
sectors,  
reduce  
disease  
transmission  
and  
severity,  
and,  
therefore,  
increase  
economic

output.  
The  
report  
also  
argues  
that  
vaccine  
requirements  
increased  
labor  
participation,  
a  
talking  
point  
of  
White  
House  
officials  
over  
the  
past  
few  
months.  
The  
report  
notes  
that  
at  
least  
25%  
of  
all  
US  
businesses  
have  
implemented  
federal  
vaccination  
requirements  
ahead  
of  
deadline  
and  
underscores  
the  
positive  
impacts  
vaccines

have  
had  
and  
will  
continue  
to  
have  
toward  
ending  
the  
COVID-19  
pandemic.  
US  
President  
Joe  
Biden  
[spoke](#)  
about  
vaccine  
requirements  
at  
an  
event  
in  
Elk  
Grove  
Village,  
Illinois,  
on  
October  
7,  
praising  
corporations,  
workers,  
and  
unions  
for  
coming  
together  
to  
fight  
COVID-19  
and  
[calling](#)  
[on](#)  
[more](#)  
[businesses](#)  
[to](#)

require  
vaccinations.

It  
will  
be  
important  
to  
monitor  
changes  
in  
specific  
industries,  
as  
several  
companies  
have  
had  
to  
fire  
or  
place  
on  
unpaid  
leave  
workers  
who  
refuse  
to  
get  
vaccinated,  
and  
some  
experts  
say  
the  
nation  
has  
entered  
the  
“Great  
Resignation,”  
with  
millions  
of  
Americans  
resigning  
or  
considering

quitting  
their  
jobs.

**AT-  
HOME  
TEST  
KITS**

Surging  
demand  
for  
over-  
the-  
counter  
(OTC)  
at-  
home  
SARS-  
CoV-2  
antigen  
tests,  
as  
well  
as  
point-  
of-  
care  
rapid  
tests  
—  
driven  
by  
requirements  
for  
unvaccinated  
employees  
to  
undergo  
weekly  
testing  
and  
parents'  
need  
to  
test  
schoolchildren  
—  
is

squeezing  
the  
US  
supply  
and  
driving  
up  
costs.

In  
a  
move  
aimed  
at  
scaling  
up  
availability  
of  
at-  
home  
rapid  
tests,  
the  
US  
White  
House  
this  
week  
announced  
it  
will  
purchase  
an  
additional  
US  
\$1  
billion  
worth  
of  
the  
tests  
in  
order  
to  
quadruple  
the  
number  
of  
tests



available  
in  
the  
US  
by  
December.  
The  
move  
follows  
a  
[previous](#)  
[US](#)  
[\\$2](#)  
[billion](#)  
[investment](#)  
announced  
in  
September  
meant  
to  
supply  
rapid  
tests  
to  
community  
health  
centers,  
food  
banks,  
and  
schools.  
Expanding  
access  
to  
testing  
is  
part  
of  
US  
President  
Joe  
Biden's  
6-  
pronged  
[COVID-19](#)  
[action](#)  
[plan](#)  
announced

September

9.

Lack

of

access

to

testing

in

the

US

could

be

contributing

to

the

virus's

spread,

as

government-

subsidized

rapid

testing

is

widely

available

in

several

other

countries—

including

Britain,

France,

and

Germany

—

making

it

easier

for

people

to

determine

whether

they

are

infected

after

a

known  
exposure  
or  
when  
experiencing  
symptoms.

Additionally,  
the  
US  
Department  
of  
Defense  
announced  
it  
has  
awarded  
6  
contracts  
worth  
US  
\$2.78  
billion  
to  
purchase  
150  
million  
at-  
home  
and  
400  
million  
point-  
of-  
care  
COVID-19  
test  
kits  
to  
supply  
health  
centers,  
nursing  
homes,  
colleges  
and  
universities,  
and

other  
outlets.  
On  
October  
4,  
the  
US  
FDA  
[authorized](#)  
the  
use  
of  
ACON  
Laboratories'  
Flowflex  
COVID-19  
Home  
Test,  
a  
rapid  
antigen  
test  
that  
shows  
results  
within  
15  
minutes  
and  
retails  
for  
less  
than  
US  
\$10.  
The  
test  
—  
the  
eighth  
rapid  
test  
available  
in  
the  
US  
—  
will

help  
increase  
the  
availability  
of  
at-  
home  
tests,  
a  
White  
House  
official  
said.  
Also  
this  
week,  
Australian  
company  
Ellume  
recalled  
nearly  
200,000  
of  
its  
test  
kits  
over  
concerns  
they  
have  
a  
higher-  
than-  
expected  
false-  
positive  
rate.  
Overall,  
about  
427,000  
test  
kits  
were  
affected  
by  
the  
problem,  
including

some  
provided  
to  
the  
Department  
of  
Defense,  
but  
about  
half  
of  
those  
were  
already  
used.

**US  
COVID-19  
RESPONSE  
FUNDING**

The  
US  
Department  
of  
Treasury  
this  
week  
ordered  
Arizona  
Governor  
Doug  
Ducey  
to  
[stop  
using  
federal  
pandemic  
funding](#)  
to  
fund  
2  
new  
education  
grants  
that  
are  
open  
only

to  
schools  
without  
mask  
mandates,  
in  
line  
with  
a  
state  
law  
enacted  
in  
June.  
In  
a  
[letter](#),  
US  
Deputy  
Treasury  
Secretary  
Adewale  
Adeyemo  
said  
the  
state  
grant  
programs'  
conditions  
"undermine  
evidence-  
based  
efforts  
to  
stop  
the  
spread  
of  
COVID-19"  
and  
asked  
the  
state  
to  
[explain](#)  
[how](#)  
[it](#)  
[will](#)

“remediate”  
the  
problems,  
or  
face  
administrative  
or  
other  
action.  
Governor  
Ducey’s  
office  
indicated  
they  
are  
reviewing  
the  
letter  
and  
will  
respond.  
Arizona  
is  
one  
of  
at  
least  
8  
states  
that  
have  
laws  
or  
executive  
orders  
banning  
school  
mask  
mandates.

In  
Florida,  
one  
of  
those  
states,  
the  
State



Board  
of  
Education  
on  
October  
7  
voted  
to  
withhold  
funding  
from  
8  
school  
districts  
that  
have  
implemented  
mask  
requirements  
despite  
a  
state  
ban  
and  
accepted  
recommendations  
from  
Florida  
Education  
Commissioner  
Richard  
Corcoran  
to  
withhold  
state  
funds  
equivalent  
to  
local  
school  
board  
members'  
salaries  
and  
any  
amount  
the  
district

receives  
in  
federal  
grants  
meant  
to  
backfill  
funding  
to  
districts  
with  
mask  
mandates.

Ahead  
of  
the  
meeting,  
several  
districts

—

including  
Hillsborough,  
Sarasota,  
and  
Indian  
River  
counties

—

loosened  
their  
mask  
requirements  
to  
avoid  
funds  
being  
withheld.

Several  
lawsuits  
challenging  
the  
state's  
ban  
are  
moving  
through  
the  
courts,

and  
the  
US  
Department  
of  
Education  
continues  
civil  
rights  
investigations  
in  
Florida  
and  
other  
states  
with  
mask  
mandate  
bans  
to  
determine  
whether  
the  
policies  
violate  
the  
rights  
of  
students  
with  
disabilities.  
According  
to  
a  
[survey](#)  
by  
Burbio,  
only  
about  
[3%](#)  
[of](#)  
[school](#)  
[districts](#)  
[nationwide](#)  
are  
banned  
from  
implementing

mask  
requirements  
and  
three-  
quarters  
of  
the  
largest  
districts  
had  
mandates  
at  
the  
beginning  
of  
October.  
School  
districts  
and  
parents  
are  
wondering  
[what](#)  
[comes](#)  
[next](#),  
with  
the  
US  
FDA  
set  
to  
discuss  
vaccines  
for  
children  
ages  
5  
to  
11  
and  
a  
future  
existence  
with  
COVID-19  
a  
near  
certainty.

## **PEDIATRIC VACCINE**

As  
expected,  
Pfizer  
and  
BioNTech  
on  
October  
7  
[requested](#)  
the  
US  
FDA  
grant  
Emergency  
Use  
Authorization  
(EUA)  
for  
use  
of  
its  
SARS-  
CoV-2  
vaccine  
in  
children  
ages  
5  
to  
11.  
The  
FDA's  
Vaccines  
and  
Related  
Biological  
Products  
Advisory  
Committee  
(VRBPAC)  
already  
scheduled  
an  
[October  
26](#)

meeting

to  
discuss  
the  
request.

If  
the  
FDA  
authorizes  
the  
vaccine,  
about

28

million

US

children

would  
become  
eligible  
for  
vaccination.

The  
companies  
are  
proposing  
giving  
children

a

2-

dose  
regimen

of

10µg

doses

administered

21

days

apart,

one-

third

of

the

adult

dosage.

Last

month,

the

companies

submitted

to

the

FDA

topline

results

from

a

Phase

2/3

clinical

trial

including

2,268

pediatric

participants

that

showed

a

favorable

safety

profile

and

“robust

neutralizing

antibody

responses.”

While

the

FDA

could

work

quickly

to

review

data

on

the

vaccine

for

younger

populations,

its

availability

will

depend

upon

whether

the companies can provide evidence they are able to appropriately manufacture and label a new pediatric formulation. Notably, children under age 18 accounted for 26.7% of reported weekly COVID-19 cases in the US for the week ending September 30, a disproportionate share of cases given they make up



about  
22.2%  
of  
the  
total  
US  
population,  
according  
to  
the  
American  
Academy  
of  
Pediatrics  
(AAP).

**PRE-  
EXPOSURE  
PROPHYLAXIS**

AstraZeneca  
on  
October  
5  
[submitted](#)  
[a](#)  
[request](#)  
to  
the  
US  
FDA  
for  
an  
Emergency  
Use  
Authorization  
(EUA)  
of  
its  
investigational  
long-  
acting  
antibody  
combination  
drug  
AZD7442  
for  
the  
prevention

of  
symptomatic  
COVID-19.

The  
monoclonal  
antibodies

—

given

as

a

2-

dose

subsequent

injection

—

are

designed

to

remain

in

the

body

for

up

to

a

year

and

could

be

used

in

people

who

do

not

mount

a

strong

immune

response

to

a

SARS-

CoV-2

vaccine

and

those

who  
have  
been  
advised  
to  
not  
take  
the  
vaccine,  
or  
as  
an  
extra  
precaution  
among  
certain  
populations,  
such  
as  
military  
personnel.

In  
August,  
AstraZeneca  
said  
ADZ7442

reduced  
the  
risk  
of  
symptomatic  
COVID-19  
by  
77%

when  
compared  
to  
a  
placebo  
in  
a  
Phase  
3  
trial  
including  
5,197  
participants,  
more

than  
75%  
of  
whom  
had  
comorbidities.

The  
trial  
data  
are  
not  
yet  
published  
or  
peer-  
reviewed.

If  
the  
FDA  
grants  
an  
EUA,  
the  
antibody  
therapy  
would  
be  
the  
first  
of  
its  
kind  
to  
be  
authorized  
as  
a  
pre-  
exposure  
prophylaxis  
option.

In  
September,  
the  
FDA  
authorized  
Regeneron's  
monoclonal

antibody  
combination  
for  
post-  
exposure  
prophylaxis.

**POST-  
VACCINATION  
MYOCARDITIS**

Researchers  
with  
Kaiser  
Permanente  
published  
a

[research  
letter](#)

in  
*JAMA  
Internal  
Medicine*  
examining  
acute  
myocarditis  
in  
adult  
members  
of  
Kaiser  
Permanente  
Southern  
California  
following  
vaccination  
with  
a  
SARS-  
CoV-2  
mRNA  
vaccine  
between  
December  
2020  
and  
July  
2021.

Of

the  
nearly  
2.4  
million  
individuals  
who  
received  
at  
least  
1  
dose  
of  
vaccine,  
the  
researchers  
identified  
only  
15  
confirmed  
cases  
of  
myocarditis.  
Two  
(2)  
of  
the  
cases  
happened  
after  
administration  
of  
the  
first  
dose  
and  
13  
occurred  
after  
the  
second  
dose  
for  
an  
observed  
incidence  
of  
0.8  
cases

per  
1  
million  
first  
doses  
and  
5.8  
cases  
per  
1  
million  
second  
doses  
over  
a  
10-  
day  
observation  
window.  
Notably,  
all  
of  
the  
cases  
occurred  
in  
men  
ages  
20  
to  
32  
(median  
age  
25),  
but  
none  
required  
intensive  
care  
unit  
(ICU)  
admission  
and  
none  
were  
readmitted  
to  
the

hospital  
for  
myocarditis  
following  
discharge.  
Overall,  
incidence  
of  
post-  
vaccination  
myocarditis  
was  
rare  
in  
the  
study's  
diverse  
population.

A  
second  
[paper](#)  
published  
in  
the  
*New  
England  
Journal  
of  
Medicine*  
highlights  
similar  
data  
from  
approximately  
5.1  
million  
individuals  
vaccinated  
in  
Israel.  
Researchers  
retrospectively  
analyzed  
data  
on  
hospitalized  
cases



of  
myocarditis  
that  
occurred  
from  
December  
2020  
to  
May  
2021.

They  
observed  
283  
myocarditis  
cases,  
with  
142  
cases  
occurring  
after  
receipt  
of  
the  
Pfizer-  
BioNTech  
vaccine.

Of  
those  
142  
cases,  
95%  
presented  
with  
mild  
symptoms.

The  
highest  
incidence  
rate

—

13.73  
cases  
per  
100,000  
persons

—

was  
recorded

among  
male  
recipients  
ages  
16  
to  
19  
following  
their  
second  
vaccine  
dose.  
Researchers  
of  
both  
studies  
agreed  
that  
the  
risk  
of  
myocarditis  
remained  
low  
following  
mRNA  
vaccination  
but  
the  
rate  
of  
myocarditis  
in  
young  
men  
receiving  
a  
second  
dose  
warrants  
further  
investigation.

Both  
studies  
support  
some  
countries'

decisions

to  
recommend  
that  
children  
aged  
12  
and  
older  
receive  
only  
a  
single  
dose  
of  
mRNA  
vaccine.

While  
the  
Israeli  
study  
looked  
exclusively  
at  
those  
who  
received  
the  
Pfizer-  
BioNTech  
vaccine,  
data  
from  
the  
Norwegian  
Institute  
of  
Public  
Health  
(NIPH)

suggest

similar  
concerns  
for  
young  
men  
who  
received

Moderna's vaccine. While still rare, myocarditis occurred more frequently in young men who received a second dose of the Moderna mRNA vaccine, the data show. NIPH recommends that all individuals under age 18 be vaccinated with the Pfizer-BioNTech vaccine and that men under age 30 should also

consider  
choosing  
that  
vaccine.  
Other  
Nordic  
countries,  
including  
Finland  
and  
Sweden,  
have  
[followed  
suit,](#)  
limiting  
their  
use  
of  
the  
Moderna  
vaccine  
in  
young  
adults.  
Denmark  
also  
said  
it  
was  
limiting  
use  
of  
the  
vaccine  
but  
later  
[retracted  
that  
statement,](#)  
noting  
the  
vaccine  
is  
still  
available  
for  
people  
under

age

18.

## **VACCINE EFFECTIVENESS**

A

study

published

in

the

peer-

reviewed

journal

*The*

*Lancet*

on

October

4

shows

that

a

decrease

in

effectiveness

of

the

Pfizer-

BioNTech

SARS-

CoV-2

vaccine

may

be

due

to

waning

immunity

rather

than

the

Delta

variant

escaping

the

vaccine.

The

study

examined

3.4

million individuals over the age of 12 years who were members of Kaiser Permanente Southern California. Outcomes were determined by measuring positive PCR tests and hospital admissions related to COVID-19. The vaccine was 93% effective at preventing infection with the SARS-CoV-2 Delta variant 1 month after vaccination,

but  
that  
protection  
fell  
to  
53%  
at  
4  
months  
post-  
vaccination.

The  
vaccine  
was  
97%  
effective  
at  
preventing  
infection  
with  
non-  
Delta  
SARS-  
CoV-2  
one  
(1)  
month  
after  
vaccination,  
but  
that  
protection  
fell  
to  
67%  
at  
4-5  
months  
post-  
vaccination.  
Study  
leader  
Dr.  
Sara  
Tartof  
noted  
that  
waning



protection  
from  
infection  
for  
both  
Delta  
and  
non-  
Delta  
variants  
points  
to  
overall  
waning  
immunity  
and  
not  
Delta  
variant  
escape.

If  
Delta  
were  
able  
to  
escape  
the  
vaccine,  
1-  
month  
protective  
effectiveness  
against  
the  
variant  
would  
have  
started  
low  
and  
remained  
low.

According  
to  
the  
study,  
the  
vaccine

remained  
93%  
effective  
at  
preventing  
COVID-19-  
related  
hospitalization  
for  
all  
age  
groups  
up  
to  
6  
months.

The  
authors  
noted  
it  
is  
possible  
that  
lower  
viral  
loads  
after  
vaccination  
could  
overestimate  
vaccine  
effectiveness  
against  
the  
Delta  
variant  
due  
to  
failed  
genomic  
sequencing.

## **POST COVID-19 CONDITION**

On  
October  
6,

the  
WHO  
released  
a  
[case  
definition  
of  
post  
COVID-19  
condition](#)—  
also  
referred  
to  
as  
post-  
acute  
sequelae  
of  
COVID-19  
(PASC)  
or  
“long  
COVID”—  
based  
on  
interviews  
with  
international  
subject  
matter  
experts  
and  
COVID-19  
patients.  
The  
effort  
[identified  
12  
domains](#)  
that  
were  
important  
for  
establishing  
a  
clinical  
case  
definition:

SARS-CoV-2 infection, laboratory confirmation of infection, a 3-month minimum from onset of symptoms, a 2-month minimum for duration of symptoms, a set of common symptoms, a minimum number of present symptoms, clustering of symptoms, the time course of symptoms, sequelae of COVID-19 complications, no possible

alternative  
diagnosis,  
applicability  
of  
definition  
to  
various  
populations,  
and  
an  
impact  
on  
everyday  
functioning.

Long  
COVID  
symptoms  
include

"brain  
fog,"  
chest  
pressure,  
depression,  
fatigue,  
fever,  
heart  
palpitations,  
and  
shortness  
of  
breath,  
among  
myriad  
others.

The  
WHO  
noted  
that  
a  
separate  
case  
definition  
for  
long  
COVID  
may  
be  
necessary

for  
children.

A  
separate  
study  
published  
in  
the  
peer-  
reviewed  
journal  
*Cardiovascular  
Diabetology*  
reported  
the  
discovery  
of  
microclots  
containing  
inflammatory  
molecules  
that  
are  
resistant  
to  
fibrinolysis  
by  
the  
enzyme  
trypsin  
in  
patients  
with  
long  
COVID.  
The  
clots  
contained  
fibrinogen,  
which  
aids  
clot  
formation,  
and  
alpha  
2-  
antiplasmin,

which prevents the breakdown of blood clots. The study authors said the clots may indicate a broader impact on the cardiovascular system and further research is needed into anti-clotting therapies for long COVID.

## **LATIN AMERICA**

Although daily COVID-19 incidence is trending downward in Latin America, regional

health  
officials  
this  
week  
expressed  
concern  
over  
the  
situations  
in  
several  
countries  
and  
called  
on  
nations  
to  
place  
more  
focus  
on  
a  
“One  
Health”  
approach  
to  
more  
quickly  
detect  
and  
respond  
to  
emerging  
diseases.  
Overall,  
about  
37%  
of  
the  
population  
in  
Latin  
America  
and  
the  
Caribbean  
are  
fully



vaccinated.

Some nations, such as Chile (74%) and Uruguay (75%), have fully vaccinated more than 70% of their population, but at least 10 countries sit at rates below 25%, including Venezuela (21%), Guatemala (16%), Jamaica (10%), Nicaragua (5%), and Haiti (0.2%). Pan American Health Organization (PAHO) Director Dr.

Carissa  
F.  
Etienne  
said  
the  
international  
community  
must  
work  
urgently  
to  
close  
the  
gap  
in  
vaccine  
availability,  
the  
primary  
factor  
in  
lower  
vaccination  
rates  
in  
both  
regions.  
She  
announced  
PAHO  
has  
struck  
deals  
with  
vaccine  
manufacturers  
Sinopharm,  
Sinovac,  
and  
AstraZeneca  
for  
doses  
to  
be  
delivered  
this  
year  
and

next.  
On  
October  
6,  
a  
WHO  
official  
blamed  
wealthy  
nations  
for  
buying  
up  
the  
global  
supply  
and  
vaccine  
producers  
for  
not  
prioritizing  
delivery  
of  
doses  
to  
the  
COVAX  
facility,  
which  
will  
not  
meet  
its  
goals  
for  
delivering  
shots  
to  
Latin  
America  
and  
the  
Caribbean  
this  
year.  
Dr.  
Etienne

also  
pointed  
to  
vaccine  
hesitancy  
as  
one  
factor  
in  
lower  
vaccination  
rates,  
with  
[widespread  
misinformation](#)  
regarding  
the  
vaccines'  
safety  
also  
playing  
a  
role.

## **MODERNA VACCINE FACILITY IN AFRICA**

Only  
[9](#)  
[of](#)  
[Africa's](#)  
[54](#)  
[nations](#)  
[met](#)  
[a](#)  
[WHO](#)  
[goal](#)  
to  
vaccinate  
10%  
of  
their  
population  
against  
SARS-  
CoV-2

by  
the  
end  
of  
September,  
and  
the  
continent  
remains  
far  
behind  
others  
in  
efforts  
to  
reach  
40%  
of  
its  
people  
by  
the  
end  
of  
the  
year,  
with  
only  
about  
4.5%  
overall  
coverage.  
Efforts  
to  
increase  
vaccine  
supply  
on  
the  
continent  
continue,  
and  
there  
were  
[at](#)  
[least](#)  
[12](#)  
[established](#)

or  
planned  
SARS-  
CoV-2  
vaccine  
production  
facilities  
in  
6  
African  
countries  
as  
of  
last  
month.  
This  
week,  
Moderna  
announced  
it  
will  
invest  
\$500  
million  
in  
a  
“state-  
of-  
the-  
art”  
mRNA  
vaccine  
production  
facility  
in  
an  
African  
country,  
with  
the  
goal  
of  
producing  
500  
million  
50µg  
doses  
of

vaccines—  
for  
COVID-19  
and  
other  
diseases  
—  
annually.  
The  
selection  
process  
for  
a  
country  
and  
site  
is  
expected  
to  
begin  
soon,  
but  
completing  
construction  
and  
validation  
likely  
will  
take  
2-4  
years,  
a  
timeline  
that  
does  
not  
address  
Africa's  
current  
vaccine  
access  
challenges.

Notably,  
the  
Moderna  
facility  
will

be  
able  
to  
fully  
manufacture  
mRNA  
vaccines  
on  
the  
continent,  
the  
first  
vaccine  
producer  
to  
do  
so.  
In  
July,  
Pfizer-  
BioNTech  
announced  
a  
deal  
with  
a  
South  
African  
company  
to  
“fill  
and  
finish”  
mRNA  
SARS-  
CoV-2  
vaccines  
on  
the  
continent,  
with  
ingredients  
shipped  
in  
from  
other  
countries.  
Moderna’s



announcement  
comes  
amid  
ongoing  
debate  
between  
pharmaceutical  
companies  
and  
governments  
about  
temporary  
intellectual  
property  
rights  
waivers.  
However,  
talks  
regarding  
waivers  
are  
deadlocked  
at  
the  
World  
Trade  
Organization  
(WTO),  
despite  
the  
support  
of  
more  
than  
100  
countries.  
Additionally,  
anonymous  
sources  
report  
that  
tension  
is  
growing  
between  
Moderna  
and  
the

administration  
of  
US  
President  
Joe  
Biden,  
with  
the  
company  
showing  
reluctance  
to  
make  
additional  
commitments  
to  
the  
US  
government  
to  
increase  
international  
vaccine  
donations.

## **WHO VACCINATION STRATEGY**

The  
WHO  
on  
October  
7  
launched  
its  
"Strategy  
to  
Achieve  
Global  
COVID-19  
Vaccination  
by  
Mid-2022,"  
with  
a  
goal  
of  
vaccinating

40%  
of  
the  
world's  
population  
against  
SARS-  
CoV-2  
by  
the  
end  
of  
2021  
and  
70%  
by  
mid-2022.

At  
a  
[press  
briefing](#)  
announcing  
the  
strategy,  
WHO  
Director-  
General  
Dr.  
Tedros  
Adhanom  
Ghebreyesus  
said  
the  
current  
disparities  
in  
vaccination  
coverage  
are  
[wholly  
due  
to  
gaps  
in  
allocation](#)  
and  
that  
the

new  
goals  
would  
only  
be  
met  
if  
wealthy  
countries  
and  
vaccine  
producers  
prioritize  
contracts  
for  
the  
COVAX  
facility  
and  
the  
African  
Vaccine  
Acquisition  
Trust  
(AVAT).  
To  
reach  
the  
2022  
goal,  
at  
least  
11  
billion  
vaccine  
doses  
are  
needed,  
Dr.  
Tedros  
noted,  
and  
more  
than  
6  
billion  
already  
have

been  
administered  
worldwide.  
Speaking  
at  
the  
same  
event,  
UN  
Secretary-  
General  
Antonio  
Guterres  
called  
vaccine  
inequity  
“immoral”  
and  
“stupid”  
and  
urged  
countries  
—  
including  
G20  
nations  
set  
to  
meet  
later  
this  
month  
—  
to  
commit  
US  
\$8  
billion  
to  
ensure  
equitable  
vaccine  
distribution  
by  
this  
year’s  
end.

## **COVAX REVIEW**

The  
Bureau  
of  
Investigative  
Journalism  
and  
STAT  
today  
published  
an  
[account  
of  
the  
global  
COVAX  
collaboration,](#)  
founded  
in  
April  
2020  
to  
serve  
as  
a  
conduit  
of  
SARS-  
CoV-2  
vaccines  
—  
an  
“insurance  
policy”  
for  
most  
nations  
but  
a  
“lifeline”  
for  
low-  
income  
countries  
amid  
the  
COVID-19

pandemic.  
The  
article  
presents  
reviews  
of  
confidential  
internal  
documents  
and  
accounts  
of  
officials  
from  
at  
least  
12  
countries,  
who  
expressed  
confusion  
and  
frustration  
over  
COVAX's  
operations  
and  
commitments.  
COVAX  
has  
fallen  
short  
of  
its  
goal  
to  
provide  
2  
billion  
doses  
in  
2021,  
contributing  
less  
than  
5%  
of  
all

vaccine  
doses  
administered  
globally.  
The  
story  
highlights  
the  
misalignment  
of  
leadership  
and  
power  
in  
global  
efforts  
to  
end  
the  
COVID-19  
pandemic.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

[Twit](#)

|

[You](#)

|

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**centerhealthsecurity@mail301.jh.edu**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : COVID-19 Updates - October 12, 2021**

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and,  
Rachel  
A.  
Vahey,  
MHS.

**WEBINAR:**  
Please  
join

the  
Johns  
Hopkins  
Center  
for  
Health  
Security  
for  
a  
webinar,  
**Lessons  
from  
eMed:  
COVID-19  
At  
Home  
Testing  
and  
Verifying  
the  
Results,**  
on  
October  
19,  
2021  
at  
10am  
ET.  
We  
will  
discuss  
the  
ongoing  
importance  
of  
COVID-19  
testing  
and  
the  
verification  
of  
testing  
results  
at-  
home.  
Please  
[register  
here.](#)

**EXTENDED  
PRIMARY  
VACCINE  
SERIES**

On  
October  
11,  
[the](#)  
[WHO's](#)  
[Strategic](#)  
[Advisory](#)  
[Group](#)  
[of](#)  
[Experts](#)  
[\(SAGE\)](#)  
[on](#)  
[Immunization](#)  
recommended  
additional  
doses  
of  
SARS-  
CoV-2  
vaccines  
for  
immunocompromised  
individuals.  
The  
recommendation  
applies  
to  
all  
7  
vaccines  
that  
have  
received  
an  
Emergency  
Use  
Listing  
(EUL)  
from  
the  
WHO  
and  
to  
all  
individuals  
who  
are  
moderately

or  
severely  
immunocompromised  
individuals.

SAGE

also  
recommended

a  
third  
dose  
of  
the  
Sinopharm  
and  
Sinovac  
vaccines  
for  
individuals  
aged  
60  
years  
and  
older.

The  
advisory  
group  
emphasized  
that  
countries  
should  
initially  
prioritize  
administering  
the  
full  
original  
vaccine  
regimen  
to  
increase  
vaccination  
coverage,  
but  
an  
additional  
dose  
would  
provide

extra  
protection  
for  
individuals  
at  
the  
highest  
risk  
for  
severe  
disease.

Notably,  
SAGE  
clearly  
distinguished  
its  
updated  
guidance  
from  
booster  
dose  
policies  
being  
implemented  
in  
some  
countries,  
including  
several  
in  
Europe,  
Israel,  
and  
the  
US.  
Specifically,  
the  
additional  
doses  
recommended  
under  
the  
new  
SAGE  
guidance  
are  
intended

“as  
part  
of  
an  
extended  
primary  
series  
since  
[immunocompromised]  
individuals  
are  
less  
likely  
to  
respond  
adequately  
to  
vaccination”  
rather  
than  
as  
a  
general  
boost  
to  
protection  
for  
otherwise  
healthy  
individuals.  
The  
SAGE  
experts  
met  
for  
4  
days  
to  
discuss  
myriad  
vaccine-  
related  
issues,  
including  
non-  
pandemic  
topics  
such

as  
the  
world's  
first  
malaria  
vaccine,  
and  
the  
full  
meeting  
report  
is  
expected  
to  
be  
published  
in  
December.  
Reportedly,  
SAGE  
will  
address  
waning  
immunity  
and  
the  
need  
for  
broader  
booster  
doses  
in  
healthy  
individuals  
at  
a  
meeting  
scheduled  
for  
November  
11.

**MOLNUPIRAVIR**  
**EUA**  
**REQUEST**  
Merck  
and  
Ridgeback

Biotherapeutics  
on  
October  
11  
[submitted](#)  
an  
application  
with  
the  
US  
FDA  
for  
Emergency  
Use  
Authorization  
(EUA)  
of  
molnupiravir,  
an  
investigation  
oral  
antiviral  
medication,  
for  
the  
treatment  
of  
mild-  
to-  
moderate  
COVID-19  
in  
adults  
at  
high  
risk  
of  
severe  
disease.  
Notably,  
if  
authorized  
by  
the  
FDA,  
the  
drug  
would



be  
the  
first  
COVID-19  
treatment  
to  
be  
administered  
orally,  
as  
all  
other  
authorized  
or  
approved  
medications  
are  
delivered  
intravenously  
or  
via  
injection.  
The  
companies'  
submission  
is  
based  
on  
a  
Phase  
3  
clinical  
trial  
interim  
analysis  
showing  
molnupiravir  
reduced  
the  
risk  
of  
hospitalization  
or  
death  
by  
about  
half  
when

compared  
with  
people  
who  
received  
a  
placebo.  
The  
data  
are  
not  
yet  
published  
or  
peer-  
reviewed.  
An  
effective  
therapeutic  
that  
is  
taken  
by  
people  
recovering  
at  
home  
could  
[relieve](#)  
[some](#)  
[pressure](#)  
[on](#)  
[hospitals](#),  
particularly  
in  
areas  
with  
low  
vaccination  
rates.

Two  
Indian  
generic  
drug  
manufacturers  
last  
week

requested  
permission  
to  
[end](#)  
[late-](#)  
[stage](#)  
[clinical](#)  
[trials](#)  
of  
generic  
versions  
of  
molnupiravir,  
after  
the  
drug  
did  
not  
show  
“significant  
efficacy”  
among  
people  
with  
moderate  
COVID-19  
disease.  
A  
Merck  
spokesperson  
noted  
that  
the  
Indian  
studies  
defined  
moderate  
disease  
differently  
than  
the  
FDA  
and  
included  
patients  
with  
more  
severe

disease.  
The  
Indian  
companies  
are  
continuing  
to  
research  
the  
treatment  
among  
people  
with  
mild  
COVID-19.

### **COVID-19 IN PREGNANCY**

Echoing  
[guidance](#)  
[by](#)  
[the](#)  
[US](#)  
[CDC,](#)  
England's  
National  
Health  
Service  
(NHS  
England)  
on  
October  
11  
[encouraged](#)  
[pregnant](#)  
[people](#)  
[to](#)  
[get](#)  
[vaccinated](#)  
against  
SARS-  
CoV-2  
and  
released  
data  
showing  
that,

since  
July,  
nearly  
1  
in  
5  
of  
England's  
most  
critically  
ill  
COVID-19  
patients  
—  
those  
who  
required  
intensive  
care  
unit  
support  
including  
extracorporeal  
membrane  
oxygenation  
(ECMO)  
—  
have  
been  
unvaccinated  
pregnant  
women.  
Notably,  
of  
all  
women  
between  
the  
ages  
of  
16  
and  
49  
who  
have  
required  
ECMO  
in

an intensive care unit, 32% of them have been pregnant, up from 6% at the beginning of the pandemic. NHS England is working to dispel misinformation and fears surrounding SARS-CoV-2 vaccines, pointing to safety data showing the shots are safe for pregnant individuals and their fetuses. According

to  
data  
from  
the  
CDC,  
COVID-19  
poses  
a  
significantly  
higher  
risk  
to  
pregnant  
people  
compared  
with  
non-  
pregnant  
people.

Several  
other  
recently  
released  
studies  
suggest  
that  
pregnant  
people  
with  
symptomatic  
COVID-19  
are  
at  
a  
higher  
risk  
of  
emergency  
complications  
and  
other  
adverse  
perinatal  
and  
neonatal  
outcomes.  
A

not-  
yet-  
peer-  
reviewed  
study  
presented  
over  
the  
weekend  
at  
the  
[Anesthesiology](#)  
[2021](#)  
[Annual](#)  
[Meeting](#)  
and  
a  
peer-  
reviewed  
study  
published  
October  
10  
in  
the  
[Journal](#)  
[of](#)  
[Maternal-](#)  
[Fetal](#)  
[&](#)  
[Neonatal](#)  
[Medicine](#)  
showed  
that  
pregnant  
people  
with  
COVID-19  
who  
were  
symptomatic  
had  
an  
increased  
risk  
of  
giving  
birth



in  
emergency  
circumstances  
and  
were  
more  
likely  
to  
have  
complications  
endangering  
their  
newborns,  
compared  
with  
those  
who  
had  
asymptomatic  
COVID-19  
or  
who  
were  
not  
infected.  
Researchers  
writing  
in  
the  
*American  
Journal  
of  
Obstetrics  
and  
Gynecology*  
found  
that  
the  
recent  
surge  
of  
the  
Delta  
variant  
was  
associated  
with  
increased

morbidity among pregnant people with COVID-19, particularly in underserved populations with low vaccine acceptance, prompting them to highlight the urgency of preventive measures during pregnancy, including vaccination. Additionally, experts attending the recent [American Academy of Pediatrics \(AAP\) virtual meeting](#) discussed neonatal outcomes, an apparent increase in preterm birth

incidence among infected pregnant people compared with the 2019 incidence, as well as higher-than-expected maternal mortality among pregnant people testing positive at or around the day of delivery. All of the studies support emerging trends showing that COVID-19 can severely impact pregnant people and neonates, and

provide evidence that vaccination is critically important for this population.

## **MENTAL HEALTH**

Prior to [World Mental Health Day](#) on October 10, a study published online on October 8 in [The Lancet](#) documented a grim and startling rise in cases of major depressive disorder (53.2 million new cases;

27.6% increase) and anxiety disorders (76.2 million new cases; 25.6% increase) globally from January 1, 2020 to January 29, 2021. The study was a systematic review of the prevalence of major depressive disorder and anxiety disorders during the COVID-19 pandemic across various comprehensive sources, culminating in a meta-

regression  
to  
estimate  
the  
rise  
in  
these  
2  
disorder  
types  
during  
the  
pandemic  
associated  
with  
COVID-19  
impact  
indicators  
(e.g.  
mobility,  
daily  
SARS-  
CoV-2  
infection  
rate).  
Impact  
indicators  
were  
found  
to  
be  
associated  
with  
increased  
prevalence  
of  
major  
depressive  
disorder  
and  
anxiety  
disorders,  
particularly  
among  
women  
and  
younger

age  
groups.

The  
US  
CDC  
*Morbidity  
and  
Mortality  
Weekly  
Report  
(MMWR)*  
also  
published  
a  
similar  
study  
last  
week  
on  
national  
and  
state  
trends  
related  
to  
anxiety  
and  
depression  
during  
the  
pandemic.  
Findings  
noted  
that  
anxiety  
severity  
scores  
and  
depression  
severity  
scores  
increased  
from  
August  
2020  
to  
December

2020  
before  
decreasing  
until  
June  
2021.

## **RACIAL/ETHNIC DISPARITIES**

American  
Indian/Alaska  
Native  
(AI/AN),  
Black,  
and  
Latino  
individuals  
in  
the  
US  
have  
been  
disproportionately  
affected  
by  
the  
COVID-19  
pandemic,  
with  
the  
disease  
causing  
more  
deaths  
by  
population  
size  
—  
both  
directly  
and  
indirectly  
—  
among  
these  
groups  
when  
compared



with  
White  
or  
Asian  
populations.  
In  
a  
study  
published  
last  
week  
in  
the  
*Annals  
of  
Internal  
Medicine*,  
researchers  
reported  
that  
during  
the  
first  
10  
months  
of  
the  
pandemic  
(March-  
December  
2020),  
an  
estimated  
477,200  
excess  
deaths  
occurred  
in  
the  
US  
than  
would  
have  
been  
expected  
based  
on  
2019

data.  
Of  
these  
deaths,  
about  
74%  
were  
directly  
attributable  
to  
COVID-19.  
After  
adjusting  
for  
age,  
overall  
excess  
deaths  
per  
100,000  
persons  
in  
2020  
were  
2  
to  
3  
times  
higher  
among  
AI/AN,  
Black,  
and  
Latino  
individuals  
compared  
with  
White  
and  
Asian  
individuals.  
Although  
the  
reasons  
for  
excess  
mortality  
are

unknown,  
the  
researchers  
noted  
that  
“structural  
and  
social  
determinants  
of  
health

with  
established  
and  
deep  
roots  
in  
racism”—  
including  
an  
increased  
risk  
of  
occupational  
exposure  
and  
lack  
of  
access  
to  
healthcare,  
possibly  
caused  
by  
fear  
during  
the  
pandemic  
—  
or  
misattribution  
of  
causes  
of  
death  
could  
have

played  
roles.

The  
racial  
and  
ethnic  
disparities  
in  
COVID-19-  
related  
deaths  
spill  
over  
into  
the  
pandemic's  
impacts  
on  
children.

According  
to  
a  
modeling  
study  
published  
last  
week  
in

*Pediatrics*,  
children  
of  
racial  
and  
ethnic  
minorities  
accounted  
for  
65%

of  
the  
more  
than  
140,000  
children  
who  
experienced  
orphanhood

or  
lost  
a  
caregiver  
due  
to  
COVID-19  
between  
April  
2020  
and  
June  
2021.  
Compared  
to  
White  
children,  
AI/AN  
children  
were  
4.5  
times  
more  
likely  
to  
lose  
a  
caregiver,  
Black  
children  
were  
2.4  
times  
more  
likely,  
and  
Hispanic  
children  
were  
1.8  
times  
more  
likely.  
The  
highest  
burden  
of  
caregiver

deaths  
due  
to  
COVID-19  
occurred  
in  
states  
on  
the  
Southern  
US  
border,  
in  
the  
Southeast,  
and  
those  
with  
tribal  
areas.

The  
researchers  
concluded  
there  
is  
an  
“urgent  
need”  
to  
provide  
affected  
children  
access  
to  
support  
services.

An  
October  
8  
analysis  
from  
the  
Kaiser  
Family  
Foundation  
using  
CDC  
data

shows that racial disparities in COVID-19 cases and death rates persist among Black, Hispanic, and AI/AN individuals, but data suggest the gap has recently narrowed for Black and Hispanic people. Notably, AI/AN individuals remain at disproportionate risk for COVID-19 disease and death, despite having the highest vaccination rate

across racial/ethnic groups. While the narrowing disparity in some groups could be due to increasing vaccination rates, other factors definitely play a role in ongoing disparities, and more research is needed to understand and address them.

### **AUSTRALIA**

On October 11, Australia began to emerge from its strict



pandemic  
lockdown  
when  
New  
South  
Wales  
(NSW)  
began  
to  
allow  
fully  
vaccinated  
residents  
to  
return  
to  
restaurants,  
bars,  
hair  
salons,  
and  
gyms  
after  
nearly  
4  
months  
of  
restrictions.  
About  
74%  
of  
NSW  
residents  
aged  
16  
and  
older  
are  
fully  
vaccinated,  
enabling  
the  
state  
—  
including  
Sydney,  
Australia's  
most

populous  
city

—

to  
ease  
its  
lockdown  
despite  
an  
ongoing  
outbreak.

NSW  
State  
Premier  
Dominic  
Perrottet  
called  
it

a  
“freedom  
day”

and  
pledged  
to  
lead  
the  
nation  
out  
of  
the  
pandemic,  
but  
not  
without  
challenges.

He  
warned  
that  
the  
number  
of  
new  
COVID-19  
cases  
will  
rise  
following  
reopening,

as  
virus-  
free  
Western  
Australia  
and  
Queensland  
and  
other  
so-  
called  
"zero  
COVID"  
countries  
in  
the  
Asia-  
Pacific  
region  
[watch](#)  
[closely](#)  
to  
see  
whether  
NSW  
can  
adapt  
to  
living  
with  
COVID-19.

### **ITALY'S GREEN PASS**

From  
October  
15  
through  
the  
end  
of  
2021,  
Italian  
workers  
will  
be  
required

to  
present  
a  
digital  
or  
printed  
"Green  
Pass"  
certificate  
upon  
entering  
their  
workplace,  
demonstrating  
that  
they  
have  
recovered  
from  
COVID-19  
in  
the  
last  
six  
months,  
received  
a  
negative  
COVID-19  
rapid  
antigen  
test  
result  
in  
the  
last  
48  
hours,  
received  
a  
negative  
COVID-19  
molecular  
test  
result  
in  
the  
last

72  
hours,  
or  
have  
been  
at  
least  
partially  
vaccinated.

Workers  
who  
do  
not  
comply  
with  
the  
new  
mandate  
[risk](#)  
[fines](#)  
[or](#)  
[suspension.](#)

Both  
civil  
and  
violent  
protests  
have  
broken  
out  
in  
response  
to  
the  
September  
16  
announcement  
regarding  
the  
new  
mandate  
in  
Italy,  
including  
[reported](#)  
[clashes](#)  
over  
the

weekend  
between  
neo-  
fascists  
or  
other  
individuals  
associated  
with  
the  
far  
right  
and  
police.  
Some  
employees  
and  
policymakers  
are  
concerned  
that  
a  
rise  
in  
vaccinations  
may  
not  
occur,  
instead  
leading  
to  
worker  
shortages  
due  
to  
a  
lack  
of  
available  
tests.

The  
Green  
Pass  
already  
is  
required  
in

Italy  
in  
order  
to  
access  
schools  
and  
universities,  
utilize  
public  
transport,  
participate  
in  
gatherings  
related  
to  
civil  
or  
religious  
ceremonies,  
visit  
medical  
facilities  
or  
long-  
term  
care  
facilities,  
access  
certain  
public  
gathering  
events  
or  
spaces,  
and  
pass  
through  
areas  
with  
higher  
COVID-19  
risk  
—  
so-  
called  
“red”  
or

"orange"  
zones.  
The  
Green  
Pass  
also  
is  
recognized  
by  
the  
European  
Union  
to  
help  
travelers  
avoid  
COVID-19  
travel  
restrictions.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

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**Date : 10/14/2021 11:41:12 AM**  
**From : "Johns Hopkins Center for Health Security"**  
**centerhealthsecurity@mail301.jh.edu**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : COVID-19 Updates - October 14, 2021**

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MHS.

**EPI  
UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
238.5  
million  
cumulative  
cases  
and  
4.86  
million  
deaths  
worldwide  
as  
of  
October  
13.  
Global  
weekly  
incidence  
decreased  
by  
6.7%  
compared  
to  
the  
previous  
week,  
and  
mortality  
fell  
by  
9.5%.

*Global  
Vaccination*  
The  
[WHO](#)  
[reported](#)  
6.36  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines

administered  
globally  
as  
of  
October  
10.  
A  
total  
of  
3.63  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.64  
billion  
are  
fully  
vaccinated.  
Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
overall  
trend  
in  
[global  
daily  
vaccinations](#)  
continues  
to  
decline,  
down  
to  
fewer  
than  
23  
million

doses  
per  
day\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
3.78  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
47.97%  
of  
the  
global  
population)  
and  
2.80  
billion  
who  
are  
fully  
vaccinated  
(35.56%  
of  
the  
global  
population).  
*\*The  
average  
daily  
doses  
administered*

*may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data,  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

*UNITED  
STATES  
The  
[US](#)  
[CDC](#)  
reports*

44.5 million cumulative COVID-19 cases and 716,370 deaths. The US has passed a peak in terms of daily incidence. The most recent high was 161,711 new cases per day on September 1, and the trend began to decline slightly before the Labor Day holiday weekend. The current average

is  
approximately  
86,181  
new  
cases  
per  
day  
and  
appears  
to  
be  
decreasing.

Daily  
mortality  
also  
appears  
to  
have  
passed  
a  
peak,  
down  
from  
a  
recent  
high  
of  
1,815  
on  
September  
15  
to  
1,252  
on  
October  
12\*.

*\*Changes  
in  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported*

*data,  
particularly  
over  
weekends.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

According  
to  
an  
[analysis](#)  
published  
October  
13  
by  
the  
Peterson  
Center  
on  
Healthcare  
and  
the  
Kaiser  
Family  
Foundation,  
COVID-19  
continues  
to  
be



a  
leading  
cause  
of  
death  
in  
the  
US.  
While  
daily  
mortality  
is  
now  
falling,  
COVID-19  
was  
the  
second  
leading  
cause  
of  
death  
in  
the  
US  
in  
September  
2021,  
behind  
heart  
disease,  
according  
to  
the  
analysis  
based  
on  
US  
CDC  
and  
other  
data.  
The  
majority  
of  
COVID-19-  
related  
deaths

have  
been  
among  
unvaccinated  
individuals.

US  
Vaccination

The  
US  
has  
administered  
404  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines.

The  
daily  
vaccination  
trend  
rose  
briefly  
following  
authorization  
of  
booster  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine  
for  
some  
populations  
on  
September  
22  
but  
is  
now  
declining  
after  
a

recent  
peak  
on  
October  
1\*.  
There  
are  
217.6  
million  
individuals  
who  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
65.6%  
of  
the  
entire  
US  
population.  
Among  
adults,  
78.5%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
14.7  
million  
adolescents  
aged  
12-17  
years.  
A  
total  
of  
187.9  
million

individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
56.6%  
of  
the  
total  
population.  
Approximately  
68%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
12.1  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5*

*days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

## **VACCINE BOOSTERS**

The  
US  
FDA's  
Vaccines  
and  
Related  
Biological  
Products  
Advisory  
Committee  
(VRBPAC)  
is  
[meeting](#)  
[today](#)  
to  
discuss  
Moderna's  
request  
for  
authorization  
of  
an  
additional  
dose  
of  
its  
SARS-  
CoV-2  
vaccine  
[and](#)  
[on](#)  
[October](#)  
[15](#)

to  
discuss  
a  
similar  
request  
from  
J&J-  
Janssen.  
Any  
recommendations  
the  
committee  
makes  
are  
used  
to  
help  
the  
FDA  
make  
decisions  
but  
are  
not  
binding.  
Moderna  
has  
asked  
regulators  
to  
authorize  
an  
additional  
half-  
dose  
of  
its  
vaccine  
for  
adults  
aged  
65  
and  
older  
—a  
decision  
which  
appears

to  
already  
be  
made  
based  
on  
questions  
submitted  
to  
the  
committee  
—

and  
individuals  
at  
high  
risk  
of  
severe  
COVID-19,  
similar  
to  
the  
authorization  
granted  
last  
month  
for  
the  
Pfizer-  
BioNTech  
vaccine.

An  
FDA  
briefing  
document  
released  
this  
week  
suggests  
that  
a  
booster  
dose  
of  
Moderna's  
vaccine  
administered

at  
least  
6  
months  
from  
the  
second  
dose  
increased  
antibody  
levels  
in  
recipients.  
However,  
the  
difference  
of  
the  
levels  
before  
and  
after  
the  
booster  
dose  
was  
not  
wide,  
and  
the  
agency  
did  
not  
take  
a  
position  
on  
whether  
the  
extra  
dose  
was  
necessary.  
The  
panel  
also  
will  
discuss



the  
risk  
of  
post-  
vaccination  
myocarditis  
and  
other  
adverse  
reactions  
and  
whether  
data  
show  
efficacy  
of  
the  
Moderna  
vaccine  
is  
waning.

In  
separate  
documents  
submitted  
to  
the  
FDA,  
Moderna  
said  
a  
half-  
dose  
(50µg)  
additional  
shot  
provided  
similar  
increases  
in  
antibody  
levels  
as  
the  
full  
dose  
(100µg)  
but

with  
fewer  
side  
effects.

During  
the  
second  
day  
of  
meetings,  
VRBPAC  
will  
consider  
whether  
[data  
presented  
by  
J&J-  
Janssen  
supports  
a  
booster  
dose  
for  
its  
single-  
dose  
SARS-  
CoV-2  
vaccine,  
and  
when  
the  
additional  
dose  
should  
be  
administered.](#)  
In  
a  
[briefing  
document](#)  
released  
October  
13,  
the  
FDA

said  
there  
“may  
be  
a  
benefit”  
in  
giving  
a  
second  
dose  
about  
2  
months  
after  
the  
primary  
dose  
and  
made  
it  
clear  
that  
while  
the  
J&J-  
Janssen  
vaccine  
provides  
protection  
against  
severe  
COVID-19,  
it  
is  
[less  
effective  
than  
the  
mRNA  
vaccines](#)  
from  
Moderna  
and  
Pfizer-  
BioNTech.  
However,  
the

agency  
questioned  
the  
sample  
sizes  
of  
the  
studies  
showing  
a  
benefit  
and  
did  
not  
provide  
a  
clear  
conclusion  
on  
whether  
the  
panel  
would  
recommend  
booster  
doses  
for  
certain  
populations.

VRBPAC  
also  
likely  
will  
discuss  
“mixing  
and  
matching”  
vaccines  
but  
is  
not  
expected  
to  
make  
recommendations  
on  
the

[approach](#).

Highly  
anticipated  
results  
from

a  
US  
NIH-  
sponsored  
study  
were  
posted  
to  
the  
preprint  
server

[medRxiv](#)

on  
October  
13,  
suggesting  
that  
recipients  
of  
the  
J&J-  
Janssen  
vaccine  
might  
produce  
a  
[more](#)  
[intense](#)  
[immune](#)  
[response](#)

to  
a  
booster  
dose  
of  
an  
mRNA  
vaccine  
than  
an  
additional  
dose  
of

the  
J&J-  
Janssen  
vaccine.  
Individuals  
who  
initially  
received  
either  
the  
Moderna  
or  
Pfizer-  
BioNTech  
vaccines  
and  
received  
a  
third  
dose  
of  
either  
shot  
showed  
similarly  
strong  
immune  
responses,  
according  
to  
the  
study,  
which  
is  
not  
yet  
peer-  
reviewed.  
The  
US  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
(ACIP)  
is

scheduled  
to  
meet  
next  
week  
to  
discuss  
the  
FDA's  
recommendations  
on  
booster  
doses.  
If  
regulators  
eventually  
decide  
to  
permit  
mixing  
and  
matching  
vaccines,  
the  
FDA  
will  
have  
to  
amend  
the  
authorizations  
of  
both  
mRNA  
vaccines  
to  
permit  
them  
to  
be  
used  
to  
boost  
the  
J&J-  
Janssen  
vaccine.

## **US TRAVEL REQUIREMENTS**

The  
US  
plans  
to  
ease  
travel  
restrictions

in  
November  
for  
fully  
vaccinated  
individuals  
crossing  
its  
land  
borders  
with  
Canada  
and  
Mexico,  
marking  
a  
reopening  
to  
travelers  
and  
tourists  
after  
being  
closed  
for  
more  
than  
18  
months.  
Unvaccinated  
individuals  
will  
continue  
to  
be  
banned  
from  
crossing



the  
country's  
northern  
and  
southern  
borders  
for  
nonessential  
travel.

The  
new  
rules

—  
which  
[coincide](#)  
[with](#)  
[and](#)  
[are](#)  
[similar](#)  
[to](#)  
[recently](#)  
[updated](#)  
[guidance](#)  
[for](#)  
[air](#)  
[travelers](#)—

will  
be  
implemented  
in  
phases,  
with  
vaccinated  
visitors  
traveling  
for  
nonessential  
reasons  
to  
be  
allowed  
to  
cross  
land  
borders  
in  
November,  
and

all  
inbound  
travelers,  
whether  
essential  
or  
nonessential,  
needing  
proof  
of  
vaccination  
by  
January  
2022.  
Canada  
reopened  
its  
US  
border  
to  
nonessential  
travel  
by  
fully  
vaccinated  
US  
residents  
in  
August,  
and  
Mexico  
never  
closed  
its  
northern  
border.  
Several  
US  
Members  
of  
Congress  
representing  
border  
states  
welcomed  
the  
rule  
changes,

as  
closures  
had  
separated  
cross-  
border  
families  
and  
wrought  
financial  
tolls  
on  
border  
cities.  
Notably,  
the  
US  
will  
[keep](#)  
[in](#)  
[place](#)  
[a](#)  
[separate](#)  
[immigration](#)  
[policy](#)  
that  
allows  
the  
government  
to  
deport  
or  
turn  
away  
any  
migrants  
who  
are  
seeking  
asylum  
or  
economic  
opportunity.

## **VACCINE MANDATES**

Since  
US

President  
Joe  
Biden  
announced  
[SARS-](#)  
[CoV-2](#)  
[vaccination](#)  
[requirements](#)  
for  
federal  
workers  
and  
contractors,  
healthcare  
systems,  
and  
employers  
with  
100  
or  
more  
employees,  
most  
workers  
have  
chosen  
to  
be  
vaccinated,  
despite  
some  
predictions  
mandates  
[might](#)  
[worsen](#)  
[labor](#)  
[shortages](#)  
by  
prompting  
widespread  
resignations.  
The  
requirements  
[boosted](#)  
[vaccination](#)  
[rates](#)  
[by](#)  
[at](#)

least  
20  
percentage  
points,  
White  
House  
officials  
said  
on  
October  
13.  
Aerospace  
company  
Boeing  
and  
Southwest  
Airlines  
are  
the  
latest  
large  
corporations  
to  
announce  
their  
employees  
must  
be  
vaccinated  
or  
receive  
exemptions  
by  
December  
8,  
in  
compliance  
with  
new  
federal  
guidelines  
expected  
to  
be  
finalized  
soon.  
However,  
confusion

arose  
for  
Texas-  
based  
Southwest  
and  
American  
Airlines,  
as  
well  
as  
other  
companies,  
on  
October  
11,  
as  
Texas  
Governor  
Greg  
Abbott  
signed  
an  
executive  
order  
extending  
bans  
on  
COVID-19  
vaccine  
mandates  
by  
any  
entity  
in  
the  
state,  
including  
private  
employers,  
and  
broadening  
reasons  
for  
exemptions.  
A  
previous  
executive

order

from

Governor

Abbott

bans

vaccine

requirements

by

government

agencies,

cities,

counties,

and

school

districts

in

the

state.

Both

Southwest

and

American

indicated

they

will

maintain

their

vaccine

requirements

for

employees.

Most

other

companies

also

likely

will

follow

the

federal

rule,

as

federal

law

takes

precedence

over

state

law  
under  
the  
[Supremacy  
Clause  
of  
the  
US  
Constitution.](#)

But  
questions  
over  
the  
conflicting  
laws  
remain.

[In  
Florida,](#)  
the  
state  
Department  
of  
Health  
levied  
a  
fine  
of  
more  
than  
US  
\$3.5  
million  
on  
Leon  
County  
for  
requiring  
county  
employees  
to  
be  
vaccinated,  
in  
violation  
of  
a  
state



law.  
Under  
the  
law,  
government  
agencies  
can  
be  
fined  
US  
\$5,000  
for  
each  
violation  
of  
requiring  
vaccination  
as  
a  
condition  
of  
employment.  
The  
state  
said  
Leon  
County  
violated  
the  
law  
714  
times,  
for  
each  
of  
its  
employees,  
accruing  
a  
fine  
of  
US  
\$3.57  
million  
it  
must  
pay  
within

30  
days.  
The  
Leon  
County  
administrator  
called  
the  
ban  
politically  
motivated  
and  
vowed  
to  
enforce  
the  
county  
vaccine  
mandate  
“using  
any  
remedies  
available.”

In  
New  
York,  
a  
federal  
judge  
on  
October  
12  
issued  
a  
preliminary  
injunction  
barring  
state  
health  
officials  
from  
interfering  
with  
employers  
who  
allow  
religious

exemptions  
to  
state-  
imposed  
vaccination  
mandates  
for  
all  
healthcare  
workers.  
Judge  
David  
N.  
Hurd  
of  
the  
Northern  
District  
said  
the  
state  
overreached  
by  
barring  
all  
religious  
accommodations  
in  
its  
mandate  
and  
wrote  
that  
the  
17  
healthcare  
workers  
who  
filed  
the  
lawsuit  
were  
likely  
to  
succeed.  
New  
York  
Governor

Kathy  
M.  
Hochul  
vowed  
to  
appeal  
the  
ruling.  
The  
case  
(*Dr.  
A  
et  
al  
v.  
Hochul*)  
provides  
a  
test  
for  
strict  
vaccine  
mandates  
covering  
healthcare  
workers.  
At  
least  
[23](#)  
[states](#)  
[require](#)  
SARS-  
CoV-2  
vaccination  
for  
healthcare  
workers.

### **SARS- CoV-2 ORIGIN**

The  
WHO  
on  
October  
13  
announced  
[26](#)

proposed  
members  
of  
its  
new  
Scientific  
Advisory  
Group  
for  
the  
Origins  
of  
Novel  
Pathogens  
(SAGO),  
which  
is  
tasked  
with  
creating  
a  
global  
framework  
to  
define  
and  
guide  
investigations  
into  
the  
origins  
of  
emerging  
and  
re-  
emerging  
diseases  
of  
epidemic  
and  
pandemic  
potential,  
including  
SARS-  
CoV-2.  
The  
scientists,  
hailing

from  
26  
different  
nations,  
have  
expertise  
in  
a  
wide  
range  
of  
areas,  
from  
molecular  
biology  
to  
animal  
health  
and  
include  
6  
members  
of  
the  
previous  
10-  
person  
joint  
WHO-  
China  
mission  
that  
investigated  
the  
COVID-19  
pandemic's  
origins  
and  
issued  
inconclusive  
findings  
more  
than  
6  
months  
ago.  
The  
WHO

said  
the  
renewed  
effort  
might  
be  
the  
“last  
chance”  
to  
find  
the  
virus’s  
origins,  
but  
some  
questioned  
whether  
an  
advisory  
board  
will  
have  
the  
power  
to  
make  
inroads  
with  
China,  
which  
has  
not  
been  
a  
very  
cooperative  
partner.  
This  
week,  
Chinese  
officials  
said  
the  
country  
plans  
to  
test

up  
to  
200,000  
blood  
bank  
samples  
from  
the  
city  
of  
Wuhan,  
where  
the  
virus  
was  
first  
identified  
in  
December  
2019.  
The  
samples  
have  
been  
in  
storage  
for  
2  
years  
and  
could  
help  
provide  
clues  
as  
to  
when  
and  
where  
the  
virus  
first  
appeared  
in  
humans.

In  
an



editorial  
published  
the  
same  
day  
in  
*Science*,  
WHO  
leadership  
encouraged  
that  
all  
origin  
possibilities  
be  
investigated,  
including  
the  
so-  
called  
“lab-  
leak  
theory”  
that  
the  
virus  
inadvertently  
escaped  
a  
laboratory  
in  
Wuhan.  
Notably,  
the  
previous  
WHO  
investigation  
deemed  
that  
theory  
“very  
unlikely.”  
Chinese  
officials  
continue  
to  
encourage  
researchers

to  
look  
in  
other  
countries  
for  
clues  
but  
have  
said  
they  
will  
work  
within  
the  
framework  
of  
SAGO.

The  
WHO  
plans  
to  
finalize  
the  
SAGO  
members  
following  
a  
2-  
week  
public  
consultation  
period.

Although  
the  
window  
of  
opportunity  
for  
finding  
the  
origins  
of  
the  
current  
pandemic  
is  
closing,

and  
many  
questions  
remain  
unanswered,  
learning  
more  
about  
the  
origins  
of  
SARS-  
CoV-2  
could  
help  
prevent  
the  
next  
outbreak.

## **FLU SEASON**

Medical  
professionals  
and  
public  
health  
experts  
worldwide  
are  
urging  
everyone  
to  
receive  
their  
flu  
vaccine  
in  
advance  
of  
what  
could  
be  
a  
particularly  
severe  
flu  
season

this  
coming  
winter.  
Last  
year,  
SARS-  
CoV-2  
appeared  
to  
displace  
most  
of  
the  
circulating  
seasonal  
influenza  
viruses  
with  
[1](#)  
[pediatric](#)  
[flu](#)  
[death](#)  
in  
the  
US  
for  
2020  
compared  
to  
75-150  
pediatric  
deaths  
in  
previous  
seasons.  
This  
year,  
experts  
are  
warning  
of  
a  
[“twindemic”](#)  
of  
COVID-19  
and  
flu  
cases,

as  
pandemic  
restrictions  
are  
easing.  
Since  
there  
were  
relatively  
few  
cases  
of  
flu  
last  
year,  
experts  
worry  
that  
immunity  
against  
the  
flu  
will  
be  
lower  
in  
the  
general  
population  
this  
year,  
potentially  
resulting  
in  
more  
cases  
and  
hospitalizations.  
Unlike  
with  
SARS-  
CoV-2  
vaccines,  
flu  
vaccines  
are  
approved  
for

children  
6  
months  
and  
older.  
Combined  
with  
effective  
respiratory  
disease  
control  
measures,  
such  
as  
masking  
and  
physical  
distancing,  
it  
is  
doubly  
important  
this  
year  
to  
obtain  
a  
flu  
vaccine.  
A  
[recent  
study](#)  
published  
in  
*PLoS  
One*  
suggested  
that  
flu  
shots  
could  
have  
protective  
effects  
against  
COVID-19  
severe  
outcomes.

In  
a  
retrospective  
cohort  
of  
more  
than  
74,000  
patients  
hospitalized  
with  
COVID-19,  
those  
who  
had  
received  
a  
flu  
vaccine  
had  
significantly  
lower  
risks  
of  
sepsis,  
stroke,  
and  
subsequent  
emergency  
department  
visits  
for  
COVID-19-  
related  
outcomes.  
More  
studies  
are  
needed  
to  
further  
examine  
this  
possible  
correlation,  
but  
the  
results

are  
encouraging  
to  
solidify  
the  
case  
for  
all  
eligible  
persons  
to  
get  
their  
flu  
vaccine.

### **CUREVAC**

CureVac  
[announced](#)  
October  
12  
that  
it  
is  
[withdrawing](#)  
[its](#)  
[first-](#)  
[generation](#)  
[SARS-](#)  
[CoV-2](#)  
[mRNA](#)  
[vaccine](#)  
[candidate,](#)  
CVnCoV,  
from  
the  
current  
approval  
process  
with  
the  
European  
Medicines  
Agency  
(EMA)  
to  
instead  
[focus](#)



on  
developing  
second-  
generation  
mRNA  
vaccine  
candidates  
in  
collaboration  
with  
GlaxoSmithKline  
(GSK).  
The  
company  
also  
terminated  
an  
advance  
agreement  
with  
the  
European  
Commission  
(EC)  
for  
the  
sale  
of  
405  
million  
doses  
of  
the  
vaccine  
after  
approval.  
The  
announcement  
represents  
the  
seventh  
vaccine  
candidate  
to  
be  
abandoned  
after  
clinical

trials,  
in  
part  
due  
to  
the  
success  
of  
mRNA  
vaccines  
from  
Pfizer-  
BioNTech  
and  
Moderna.

## **ABUSE OF SCIENTISTS**

A  
[self-selecting survey](#)  
[by Nature](#)  
of  
more  
than  
300  
scientists  
who  
have  
spoken  
publicly  
about  
COVID-19  
in  
media  
interviews  
or  
on  
social  
media  
found  
15%  
said  
they  
had

received death threats, with nearly 60% of those surveyed saying they had faced other forms of harassment or abuse. Notably, most researchers said their experiences with media interviews were positive but those who reported the highest frequency of personal attacks or trolling were also the most likely to

indicate  
a  
reduced  
willingness  
to  
speak  
with  
the  
media  
in  
the  
future.  
Nature  
predicts  
that  
these  
results  
could  
have  
a  
“chilling  
effect”  
on  
science  
communication.

**Weekly Updates on SARS-CoV-2 Vaccines**

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**Date : 9/3/2021 1:56:43 PM**  
**From : "Johns Hopkins Center for Health Security"**  
**centerhealthsecurity@mail301.jh.edu**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : COVID-19 Updates - September 3, 2021**

*The  
COVID-19  
Situation  
Report  
will  
not  
be  
published  
on  
Tuesday,  
September  
7,  
2021,  
in  
recognition  
of  
the  
Labor  
Day  
holiday  
in  
the  
US.  
The  
report  
will  
resume  
publication  
on  
Friday,  
September  
10.*

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
218.6  
million  
cumulative  
cases  
and  
4.53  
million  
deaths  
worldwide  
as  
of  
September  
3.

### *Global Vaccination*

The  
[WHO](#)  
[reported](#)  
5.29  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
September  
1.  
A  
total  
of  
2.01  
billion  
individuals  
have

received  
at  
least  
1  
dose,  
and  
1.21  
billion  
are  
fully  
vaccinated.

Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
[global  
daily  
vaccinations](#)

are  
holding  
relatively  
steady  
at  
approximately  
41  
million  
doses  
per  
day,  
which  
is  
the  
third  
highest  
peak  
to  
date\*.

The  
global  
trend  
continues  
to  
closely  
follow



the  
trend  
in  
Asia.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
3.16  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
40.1%  
of  
the  
global  
population)  
and  
2.16  
billion  
who  
are  
fully  
vaccinated  
(27.4%  
of  
the  
global  
population).

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most*

*recent  
data  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

*UNITED  
STATES  
The  
[US](#)  
[CDC](#)  
reported  
39.5  
million  
cumulative  
COVID-19  
cases  
and  
641,725  
deaths.*

Daily incidence continues to increase, but the trend is tapering off toward a peak or plateau. On August 27, the US surpassed 150,000 new cases per day, and the current average of 153,245 is the highest since January 28. Daily mortality also continues to increase, and the mortality

trend  
may  
be  
starting  
to  
taper  
off  
as  
well,  
although  
Florida's  
new  
reporting  
scheme  
is  
impacting  
how  
we  
interpret  
the  
current  
trend  
(see  
below).  
The  
US  
surpassed  
1,000  
deaths  
per  
day  
on  
August  
24,  
and  
the  
current  
average  
of  
1,046  
deaths  
per  
day  
is  
the  
highest  
since

March  
11\*.  
*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

The  
[Florida](#)  
[Department](#)  
[of](#)

Health updated its COVID-19 mortality reporting process, which affects how the official state and CDC data are interpreted. Previously, like other states, Florida assigned dates to COVID-19 deaths corresponding to the date they were reported; however, Florida now assigns dates that correspond to the date of death. While

reporting  
mortality  
by  
the  
date  
of  
death  
is  
technically  
the  
most  
accurate  
approach,  
it  
makes  
it  
difficult  
to  
monitor  
current  
trends.  
Deaths  
can  
take  
days  
or  
weeks  
to  
be  
identified,  
confirmed,  
and  
reported,  
which  
results  
in  
a  
sharp  
artificial  
decline  
in  
daily  
mortality  
over  
the  
most  
recent  
several

days,  
even  
though  
the  
actual  
trend  
could  
be  
increasing.

As  
deaths  
are  
confirmed,  
they  
will  
be  
added  
to  
the  
correct  
date  
of  
death,  
so  
the  
data  
from  
recent  
days  
will  
fill  
in  
over  
time.  
These  
delays  
mean  
that  
it  
will  
take  
extra  
time  
to  
identify  
changing  
trends,  
including



the  
peak  
during  
a  
surge  
or  
the  
start  
of  
a  
new  
surge.  
Based  
on  
recent  
trends,  
we  
believe  
Florida  
is  
averaging  
more  
than  
200  
deaths  
per  
day;  
however  
its  
most  
recent  
report  
includes  
only  
11  
deaths  
for  
September  
1,  
bringing  
its  
average  
down  
all  
the  
way  
down  
to

64.  
Because  
Florida  
represents  
approximately  
20%  
of  
the  
average  
national  
daily  
mortality,  
its  
new  
reporting  
scheme  
is  
affecting  
how  
we  
interpret  
the  
national-  
level  
trend  
as  
well.  
The  
US  
average  
could  
easily  
be  
100-150  
deaths  
per  
day  
higher  
than  
the  
current  
reported  
value.

US  
Vaccination  
The  
US

has  
administered  
372  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines,  
and  
daily  
vaccinations  
have  
leveled  
off  
over  
the  
past  
several  
days,  
hovering  
at  
slightly  
more  
than  
800,000  
doses  
per  
day  
since  
August  
23\*.  
We  
have  
not  
observed  
a  
marked  
increase  
in  
daily  
vaccinations  
since  
the  
US  
FDA  
issued

full approval for the Pfizer-BioNTech vaccine. There are 205.9 million individuals who have received at least 1 dose, equivalent to 62.0% of the entire US population. Among adults, 74.5% have received at least 1 dose, as well as 13.5 million adolescents aged 12-17 years. A total of

175.0  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
52.7%  
of  
the  
total  
population.  
Approximately  
63.7%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
10.4  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most*

*recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

As  
we  
have  
covered  
previously,  
there  
are  
considerable  
disparities  
in  
terms  
of  
both  
vaccination  
coverage  
and  
the  
impact  
of  
the  
ongoing  
US  
surge  
at  
the  
state  
and  
regional  
levels.  
This  
week,  
we  
will

look  
more  
closely  
at  
COVID-19  
mortality  
since  
July  
1  
(ie,  
during  
the  
current  
surge)  
and  
any  
potential  
associations  
with  
state-  
level  
full  
vaccination  
coverage.

It  
is  
well  
documented  
that  
full  
vaccination  
provides  
good  
protection  
against  
severe  
COVID-19  
disease  
and  
death,  
including  
from  
the  
Delta  
variant.  
In  
this  
analysis,

we  
will  
compare  
the  
raw  
increase  
in  
per  
capita  
cumulative  
mortality

from  
July  
1-  
September  
1.

Comparing  
the  
per  
capita  
values  
will  
allow  
us  
to  
more  
directly  
compare  
states  
to  
each  
other,  
and  
using  
the  
raw  
increase

—  
ie,  
as  
opposed  
to  
the  
relative  
increase

—  
we  
can



mitigate  
the  
effects  
of  
the  
baseline  
cumulative  
incidence,  
which  
varies  
widely  
by  
state.  
By  
July  
1,  
all  
states  
had  
removed  
eligibility  
restrictions  
and  
opened  
vaccination  
up  
to  
the  
general  
public.  
Daily  
vaccination  
progress  
slowed,  
so  
we  
can  
reasonably  
assume  
that  
coverage  
—  
or  
at  
least  
the  
relative  
differences

in  
coverage  
—  
remained  
relatively  
consistent  
over  
that  
period.

The  
median  
state-  
level  
increase  
in  
per  
capita  
cumulative  
mortality  
over  
this  
period  
was  
8  
deaths  
per  
100,000  
population,  
and  
the  
mean  
was  
11.  
This  
indicates  
that  
most  
states  
reported  
lower  
increases,  
while  
a  
small  
number  
of  
states

reported  
much  
higher  
totals.  
In  
total,  
32  
states  
reported  
increases  
of  
10  
or  
fewer,  
and  
12  
states\*  
reported  
increases  
of  
15  
or  
more,  
including  
4  
states  
with  
increases  
of  
more  
than  
30:  
Louisiana  
(40),  
Florida  
(36),  
Arkansas  
(35),  
and  
Mississippi  
(34).  
Of  
the  
12  
states  
reporting  
increases  
of

more  
than  
15,  
10  
are  
in  
HHS  
Regions  
4  
(Southeast),  
6  
(South  
Central),  
and  
7  
(Central).  
Among  
the  
16  
states  
reporting  
increases  
of  
5  
deaths  
per  
100k  
or  
fewer,  
the  
top  
5  
are  
all  
in  
Region  
1  
(Northeast)\*\*,  
4  
states  
are  
in  
Region  
3  
(Midwest),  
and  
3  
are

in  
Region  
5  
(Mid-  
Atlantic).

Among  
the  
12  
states  
reporting  
increases  
of  
15  
deaths  
per  
100k  
or  
more,  
all  
but  
Florida  
(#21;  
53.4%)  
are  
in  
the  
bottom  
half  
of  
states  
in  
terms  
of  
full  
vaccination  
coverage.  
Florida  
is  
also  
the  
only  
one  
of  
these  
states  
with  
full

vaccination coverage greater than 50%. Eight (8) of these states are in the bottom 12 in terms of vaccination coverage, including #48 Wyoming (39.1%), #49 Alabama (38.6%), and #50 Mississippi (38.5%). Among the top 10 states in terms of full vaccination coverage, 6 are also in the top

10  
in  
terms  
of  
the  
increased  
per  
capita  
mortality.  
Only  
1  
of  
the  
top  
28  
states  
in  
terms  
of  
vaccination  
coverage  
reported  
an  
increase  
in  
mortality  
greater  
than  
10  
deaths  
per  
100k:  
Florida  
(+49).

Several  
states  
reported  
notably  
lower  
or  
higher  
increases  
in  
per  
capita  
mortality  
than

would  
be  
expected  
based  
solely  
on  
their  
vaccination  
coverage.

As  
noted  
above,  
Florida  
reported  
the  
second-  
largest  
increase  
in  
mortality,  
but  
it  
ranks  
#21  
in  
terms  
of  
full  
vaccination  
coverage.  
While  
vaccination  
is  
a  
key  
tool  
in  
terms  
of  
mitigating  
the  
impact  
of  
COVID-19,  
it  
needs  
to  
be



combined  
with  
non-  
pharmaceutical  
interventions  
(NPIs),  
such  
as  
physical  
distancing  
and  
mask  
use,  
to  
slow  
transmission,  
and  
Florida  
officials  
have  
exhibited  
an  
unwillingness  
to  
implement  
those  
types  
of  
measures  
during  
the  
current  
surge.  
Increased  
transmission  
and  
incidence  
will  
inevitably  
lead  
to  
increased  
mortality.  
New  
Jersey,  
Oregon,  
and  
Washington

also  
rank  
considerably  
lower  
in  
terms  
of  
increased  
mortality  
than  
they  
do  
for  
vaccination  
coverage

—  
18,  
19,  
and  
20  
positions  
lower,  
respectively

—  
but  
it  
is  
not  
immediately  
clear  
why  
these  
states,  
in  
particular,  
faced  
elevated  
COVID-19  
mortality  
compared  
to  
their  
vaccination  
coverage.

Conversely,  
North  
and

South  
Dakota  
rank  
much  
better  
in  
terms  
of  
increased  
COVID-19  
mortality  
than  
their  
vaccination  
coverage  
would  
suggest.  
North  
Dakota  
is  
#44  
in  
terms  
of  
vaccination  
coverage  
(41.8%),  
but  
it  
is  
#4  
in  
terms  
of  
the  
increase  
in  
mortality  
(4  
deaths/100k),  
a  
difference  
of  
40  
positions.  
South  
Dakota  
also

ranks  
#4  
in  
terms  
of  
increased  
mortality\*\*,  
but  
it  
ranks  
#26  
in  
terms  
of  
vaccination  
coverage  
(49.4%),  
a  
difference  
of  
22  
positions.  
Similarly,  
Nebraska  
and  
Ohio  
each  
rank  
18  
positions  
higher  
in  
terms  
of  
increased  
mortality  
than  
they  
do  
for  
vaccination  
coverage.  
Notably,  
these  
and  
other  
similar  
states

—  
including  
Idaho,  
Michigan,  
Minnesota,  
and  
West  
Virginia  
—

appear  
to  
still  
be  
in  
the  
early  
stages  
of  
their  
respective  
surges,  
so  
it  
is  
possible  
that  
we  
could  
observe  
larger  
increases  
in  
mortality  
as  
they  
move  
closer  
to  
their  
respective  
peaks.  
In  
contrast,  
most  
of  
the  
Region  
1

states appear to already be peaking in terms of COVID-19 mortality, and their lower mortality during this surge suggests that higher vaccination coverage provided protection against severe disease and death at the state level.

With some notable exceptions, there appears to be an association between higher vaccination

coverage  
and  
lower  
COVID-19  
mortality  
during  
the  
current  
surge.  
The  
surge  
first  
emerged  
in  
Missouri,  
before  
moving  
south  
and  
east,  
into  
Arkansas,  
Louisiana,  
Mississippi,  
Alabama,  
and  
Florida,  
so  
it  
has  
been  
present  
there  
longer  
than  
in  
other  
parts  
of  
the  
country.  
The  
lower  
vaccination  
coverage  
in  
these  
states,

however,  
appears  
to  
be  
contributing  
to  
elevated  
hospitalizations  
and  
mortality

—

in  
some  
instances,  
equal  
to  
or  
worse  
than  
their  
previous  
records.

The  
timing  
of  
the  
geographic  
spread  
of  
the  
surge  
could  
also  
potentially  
factor  
into  
the  
lower  
mortality  
reported  
in  
states  
that  
are  
still  
in  
the  
early



stages  
of  
their  
respective  
surges,  
particularly  
those  
with  
lower  
vaccination  
coverage.  
Additional  
analysis,  
including  
after  
more  
states  
pass  
their  
peaks  
and  
on  
case-  
fatality  
ratios  
over  
this  
period,  
could  
provide  
further  
insight  
into  
the  
association  
between  
state-  
level  
vaccination  
coverage  
and  
COVID-19  
mortality  
during  
this  
surge.  
*\*Delaware  
reported*

an  
overall  
increase  
of  
20  
deaths/100k,  
but  
this  
included  
a  
jump  
of  
13  
on  
August  
1  
due  
to  
a  
bolus  
of  
130  
newly  
reported  
deaths,  
most  
of  
which  
were  
previously  
unreported.  
Without  
this  
reporting  
anomaly,  
Delaware  
would  
have  
had  
an  
estimated  
increase  
of  
7.  
\*\*Including  
ties;  
6  
states

*reported  
increases  
of  
4  
deaths  
per  
100k,  
all  
tying  
for  
the  
#4  
rank.*

**VARIANT  
OF  
INTEREST:  
MU**

In  
its  
[August  
31  
COVID-19  
Epidemiological  
Update,](#)  
the  
WHO  
announced  
the  
addition  
of  
another  
SARS-  
CoV-2  
variant  
to  
its  
list  
of  
variants  
of  
interest  
(VOIs),  
B.1.621  
or  
“Mu.”  
The  
Mu

variant,  
which  
also  
includes  
the  
descendent  
Pango  
lineage  
B.1.621.1,  
includes  
several  
mutations  
that  
show  
the  
potential  
for  
immune  
escape  
in  
both  
people  
previously  
infected  
with  
SARS-  
CoV-2  
and  
those  
who  
are  
vaccinated;  
however,  
more  
research  
is  
necessary  
to  
confirm  
the  
theory.  
As  
of  
August  
29,  
[more  
than  
4,500](#)

sequences

of  
the  
lineage  
were  
recorded  
in  
39  
countries.

The  
Mu  
variant  
was  
first  
identified  
in  
Colombia

in  
January  
2021.  
Since  
then,  
the  
variant  
has  
spread  
worldwide,  
with  
cases  
reported  
in  
the  
UK,  
US,  
Europe,  
and  
Hong  
Kong.  
While  
the  
global  
prevalence  
of  
the  
Mu  
variant  
among  
sequenced

cases  
is  
below  
0.1%  
globally  
and  
declining,  
the  
variant  
accounts  
for  
at  
least  
39%  
of  
cases  
in  
Colombia  
and  
11%  
in  
Ecuador,  
with  
prevalence  
in  
both  
countries  
continuing  
to  
increase.  
But  
WHO  
warned  
that  
reports  
on  
the  
variant's  
prevalence  
should  
be  
"interpreted  
with  
due  
consideration"  
because  
of  
variations

in  
countries'  
sequencing  
capacities.

Mu  
is  
the  
fifth  
variant  
of  
interest  
named  
by  
the  
WHO  
since  
March  
2021.

In  
August,  
Public  
Health  
England  
(PHE)  
released

a  
[risk  
assessment](#)

for  
the  
variant,  
which  
it  
calls  
VUI-21JUL-01,  
highlighting  
that  
laboratory  
findings  
show  
it  
is  
similar  
to  
the  
Beta  
variant  
first

detected  
in  
South  
Africa  
and  
raising  
concerns  
over  
its  
potential  
for  
immune  
escape.  
The  
WHO  
said  
it  
will  
[continue  
to  
monitor  
and  
study](#)  
the  
variant's  
epidemiological  
evolution.

### **MASK- USE TRIAL**

A  
group  
of  
researchers  
from  
Stanford  
Medicine  
and  
Yale  
University  
this  
week  
[released  
findings](#)  
from  
the  
[first](#)



randomized  
controlled  
trial  
(RCT)  
in  
a  
real-  
world  
setting  
designed  
to  
evaluate  
the  
effects  
of  
mask  
use  
on  
SARS-  
CoV-2  
transmission.  
The  
researchers  
found  
that  
mask  
use,  
even  
when  
worn  
inconsistently  
in  
the  
community,  
can  
lead  
to  
a  
reduction  
in  
symptomatic  
COVID-19  
cases.  
Additionally,  
relatively  
low-  
cost,  
targeted

interventions promoting mask wearing can significantly increase the use of face coverings in rural, low-income countries, according to the results. Although the study is not yet published, the researchers have submitted the paper to the journal *Science*, whose editors encouraged its public release given the current public

health  
policy  
relevance,  
as  
the  
pandemic  
worsens  
in  
many  
parts  
of  
the  
world.

The  
study  
included  
more  
than  
340,000  
adults  
in  
600  
villages  
in  
Bangladesh.  
In  
300  
villages,  
researchers  
implemented  
a  
mask  
distribution  
and  
promotion  
initiative,  
now  
called  
the  
"NORM"  
model,  
which  
stands  
for  
"No-  
cost  
mask

distribution,  
Offering  
information,  
Reinforcement  
to  
wear  
masks,  
and  
Modeling  
by  
local  
leaders.”

The  
researchers  
saw  
a  
29  
percentage-  
point  
increase  
in  
mask-  
wearing  
in  
the  
intervention  
villages  
(42%)  
versus  
the  
comparison  
villages  
(13%).  
Overall,  
the  
increased  
mask  
usage  
led  
to  
a  
9%  
reduction  
in  
serologically  
confirmed  
symptomatic  
SARS-

CoV-2 infection. Notably, 100 of the villages received cloth masks, resulting in a 5% reduction in symptoms, while 200 villages that received surgical masks saw a 12% reduction in symptoms. The use of surgical masks was especially effective for people aged 60 years or older, leading to a

35%  
reduction  
in  
symptomatic  
SARS-  
CoV-2  
infections  
in  
that  
age  
group.  
The  
team  
plans  
to  
conduct  
further  
research  
evaluating  
how  
masks  
limit  
symptomatic  
cases,  
whether  
by  
reducing  
exposure  
to  
viral  
load  
or  
by  
preventing  
infections  
entirely.  
For  
now,  
the  
study  
provides  
a  
“gold  
standard”  
showing  
mask  
wearing  
is

an effective way to limit symptomatic COVID-19, and the interventions are being rolled out in other parts of Bangladesh and in Pakistan, India, Nepal, and areas of Latin America.

### **LONG-TERM HEALTH EFFECTS**

The scientific community continues to investigate the long-term impacts of COVID-19 on individual

health.  
Researchers  
from  
the  
University  
College  
of  
London  
announced  
earlier  
this  
week  
that  
their  
survey  
of  
children  
with  
positive  
COVID-19  
diagnoses  
[provided](#)  
reassurance  
that  
post-  
acute  
sequelae  
of  
COVID-19  
(PASC),  
or  
so-  
called  
“long  
COVID,”  
does  
not  
impact  
large  
numbers  
of  
adolescents.  
The  
research  
team  
conducted  
a  
survey



of  
11-  
to  
17-  
year-  
olds  
in  
England  
who  
had  
positive  
SARS-  
CoV-2  
tests  
between  
September  
2020  
and  
March  
2021.  
The  
[study](#),  
which  
is  
not  
yet  
peer-  
reviewed,  
suggests  
that  
2-14%  
of  
children  
with  
a  
positive  
test  
reported  
having  
symptoms  
15  
weeks  
after  
their  
initial  
diagnosis.  
While  
the

reported  
prevalence  
still  
presents  
a  
public  
health  
concern  
for  
children  
with  
COVID-19,  
it  
suggests  
that  
these  
issues  
may  
not  
be  
as  
prevalent  
among  
younger  
people  
as  
previously  
thought.

Research  
also  
continues  
into  
the  
scope  
of  
COVID-19's  
long-  
term  
impacts  
among  
adults.

A  
recent  
article  
published  
in  
*The*

*Lancet*  
describes

1-  
year  
outcomes  
of  
individuals  
who  
survived  
hospitalization  
due  
to  
COVID-19.

The  
study  
included  
1,276  
survivors  
discharged  
from  
the  
Jin  
Yin-  
tan  
Hospital  
in  
Wuhan,  
China,  
between  
January  
7  
and  
May  
29,  
2020.

The  
cohort  
was  
followed  
for  
12  
months,  
with  
follow-  
up  
visits  
at  
6

and  
12  
months.  
The  
research  
team  
found  
that  
the  
proportion  
of  
patients  
with  
at  
least  
1  
residual  
symptom  
decreased  
from  
68%  
to  
49%  
between  
the  
6-  
month  
and  
12-  
month  
follow-  
up  
appointments.  
However,  
researchers  
noted  
a  
slight  
increase  
in  
the  
proportion  
of  
patients  
experiencing  
anxiety  
and  
depression

symptoms  
between  
the  
6-  
month  
check-  
in  
(23%)  
and  
the  
12-  
month  
follow-  
up  
(26%).  
The  
findings  
show  
that  
while  
most  
individuals  
returned  
to  
good  
health  
1  
year  
following  
their  
hospitalization,  
the  
overall  
health  
status  
of  
the  
COVID-19  
survivors  
remained  
lower  
than  
for  
those  
in  
a  
non-  
hospitalized

control  
group.

Another  
[study](#)  
published  
in  
*The  
Lancet  
Infectious  
Diseases*  
analyzed  
the  
risk  
of  
PASC  
among  
vaccinated  
adults.  
The  
research  
team  
conducted  
a  
community-  
based,  
case-  
control  
study  
among  
UK-  
based  
adults  
who  
used  
the  
COVID  
Symptom  
Study  
mobile  
phone  
app.  
The  
study  
matched  
individuals  
who  
contracted

SARS-CoV-2 after vaccination with individuals who contracted the virus before vaccination in an attempt to parse out differences in disease presentation. The research team found that the odds of COVID-19 symptoms persisting for 28 days or more among those who were fully vaccinated was approximately halved (OR

0.51)  
compared  
with  
unvaccinated  
controls.  
While  
this  
risk  
reduction  
provides  
additional  
reasons  
to  
support  
COVID-19  
vaccination,  
there  
is  
still  
a  
low  
but  
present  
risk  
that  
vaccinated  
adults  
could  
develop  
long  
COVID.

There  
already  
are  
[reports](#)  
of  
individuals  
suffering  
long-  
term  
COVID  
symptoms  
who  
feel  
that  
the  
scientific



community  
is  
leaving  
them  
behind.  
Understanding  
and  
minimizing  
the  
long-  
term  
impacts  
of  
COVID-19  
disease  
is  
an  
essential  
part  
of  
response  
and  
recovery,  
and  
research  
endeavors  
such  
as  
the  
ones  
described  
above  
can  
help  
characterize  
what  
could  
be  
a  
long  
tail  
on  
the  
end  
of  
the  
pandemic.

## **US SCHOOLS**

As the school year begins for many in the US, COVID-19 cases among children are rising, with nearly 204,000 new cases added the week ending August 26, representing 22.4% of the total weekly reported cases. This marks the second week with child cases at the level

of  
the  
winter  
surge  
of  
2020-21  
and  
a  
5-  
fold  
increase  
from  
July  
22  
to  
August  
26,  
according  
to  
the  
American  
Academy  
of  
Pediatrics  
(AAP).  
US  
CDC  
data  
show  
the  
number  
of  
COVID-19  
cases  
and  
related  
emergency  
room  
visits  
and  
hospitalizations  
among  
children  
were  
4  
times  
higher  
in

states  
with  
low  
vaccination  
rates  
than  
those  
with  
higher  
vaccination  
rates  
during  
the  
month  
of  
August.  
CDC  
Director  
Dr.  
Rochelle  
Walensky  
said  
last  
week  
that  
recently  
opened  
schools  
with  
COVID-19  
outbreaks  
generally  
are  
not  
following  
federal  
guidelines  
for  
vaccination  
and  
universal  
masking  
among  
staff  
and  
students.  
In  
one

Iowa  
school  
district  
where  
masking  
is  
optional,  
parents  
are  
being  
given  
the  
option  
to  
quarantine  
their  
children  
if  
they  
have  
a  
known  
exposure,  
as  
long  
as  
they  
remain  
symptom-  
free,  
increasing  
the  
risk  
of  
transmission  
among  
asymptomatic  
children.  
In  
schools  
already  
operating,  
some  
outbreaks  
have  
caused  
districts  
to

return  
to  
virtual  
learning,  
including  
one  
Texas  
school  
district  
where  
[2](#)  
[junior](#)  
[high](#)  
[teachers](#)  
[died](#)  
of  
COVID-19  
complications  
the  
same  
week.

The  
US  
Department  
of  
Education  
announced  
this  
week  
it  
has  
[begun](#)  
[investigations](#)  
into  
5  
states  
—  
Iowa,  
Oklahoma,  
South  
Carolina,  
Tennessee,  
and  
Utah  
—  
whose  
bans

on  
mask  
mandates  
in  
schools  
might  
violate  
civil  
rights  
laws  
meant  
to  
protect  
students  
with  
disabilities.  
The  
department  
has  
not  
opened  
investigations  
in  
Florida,  
Texas,  
Arkansas,  
or  
Arizona  
because  
all  
of  
the  
bans  
in  
those  
states  
are  
not  
being  
enforced  
due  
to  
ongoing  
legal  
or  
other  
actions.  
On

August  
27,  
a  
Florida  
judge  
ruled  
that  
Governor  
Ron  
DeSantis  
and  
the  
Florida  
Department  
of  
Education  
had  
[overstepped  
their  
authority](#)  
when  
they  
banned  
mask  
mandates  
in  
the  
state's  
school  
districts  
because  
the  
policy  
does  
not  
provide  
a  
parental  
opt  
out.  
Governor  
DeSantis's  
lawyers  
on  
September  
2  
[filed](#)  
[an](#)



[appeal](#)  
with  
the  
1st  
District  
Court  
of  
Appeal  
in  
Tallahassee.

A  
new  
[survey](#)  
from  
the  
National  
Parent  
Teacher  
Association,  
conducted  
with  
support  
from  
the  
CDC  
Foundation,  
shows  
[fewer](#)  
[parents](#)  
[want](#)  
[their](#)  
[children](#)  
[attending](#)  
[in-](#)  
[person](#)  
[classes.](#)  
Prior  
to  
July  
27,  
when  
the  
CDC  
updated  
its  
health  
guidance

for  
schools  
in  
light  
of  
the  
highly  
contagious  
Delta  
variant,  
58%  
of  
1,448  
parents  
and  
guardians  
surveyed  
said  
they  
wanted  
their  
children  
back  
in  
classrooms,  
but  
that  
figure  
dropped  
to  
43%  
by  
August  
8.  
The  
proportions  
were  
lower  
for  
Black  
(41%)  
and  
Hispanic  
(37%)  
parents,  
who  
expressed  
a

preference  
for  
online  
learning.  
These  
results  
likely  
reflect  
the  
fact  
that  
[Black](#)  
[and](#)  
[Hispanic](#)  
[children](#),  
as  
well  
as  
[adults](#),  
are  
disproportionately  
impacted  
by  
COVID-19.  
On  
August  
31,  
the  
CDC  
released  
[updated](#)  
[FAQs](#)  
for  
parents  
with  
school-  
aged  
children.

## **US PRISONS & JAILS**

Reducing  
the  
number  
of  
people

detained  
in  
US  
prisons  
and  
jails  
could  
have  
[prevented](#)  
[millions](#)  
[of](#)  
[COVID-19](#)  
[cases](#)  
and  
hundreds  
of  
thousands  
of  
related  
deaths,  
as  
the  
overcrowded,  
tight  
quarters  
fuel  
a  
constant  
risk  
of  
outbreaks  
among  
inmates  
and  
staff,  
according  
to  
a  
[study](#)  
published  
September  
2  
in  
*JAMA*  
*Network*  
*Open*.  
Researchers  
from

Northwestern  
Medicine,  
the  
Toulouse  
School  
of  
Economics,  
and  
the  
French  
National  
Centre  
for  
Scientific  
Research  
analyzed  
[data](#)  
[collected](#)  
[in](#)  
[1,605](#)  
[US](#)  
[counties](#)  
from  
January  
to  
November  
2020  
and  
found  
that  
an  
80%  
reduction  
in  
the  
U.S.  
jail  
population  
—  
a  
level  
achievable  
simply  
by  
finding  
alternatives  
to  
jail

detention  
for  
people  
accused  
of  
non-  
violent  
offenses  
—  
was  
associated  
with  
a  
2%  
drop  
in  
the  
growth  
rate  
of  
daily  
COVID-19  
cases.  
The  
reduction  
was  
greater  
in  
counties  
with  
large  
urban  
areas  
and  
when  
jail  
turnover  
was  
taken  
into  
account.  
The  
US  
jail  
population  
has  
a  
55%

weekly turnover rate, the study notes. This turnover, in addition to staff returning home to their communities daily, has contributed immensely to the overall number of COVID-19 cases in the US, according to the researchers. For comparison, the study also looked at other anticontagion policies, finding that nursing

home  
visitation  
bans  
were  
associated  
with  
a  
7.3%  
reduction  
in  
COVID-19  
case  
growth  
rates,  
followed  
by  
school  
closures  
(4.3%),  
mask  
mandates  
(2.5%),  
prison  
visitation  
bans  
(1.2%),  
and  
stay-  
at-  
home  
orders  
(0.8%).  
Besides  
mass  
decarceration  
efforts,  
some  
experts  
are  
calling  
for  
[mandatory  
SARS-  
CoV-2  
vaccinations](#)  
for  
staff  
and



detainees  
in  
jails  
and  
prisons  
to  
help  
reduce  
the  
risk  
of  
outbreaks.

## **US HOSPITAL BURDEN**

Across  
the  
US,  
hospitals  
are  
straining  
under  
the  
volume  
of  
COVID-19  
patients,  
and  
several  
states  
are  
nearly  
out  
of  
ICU  
beds.  
Alabama,  
Arkansas,  
Florida,  
Georgia,  
and  
Texas  
have  
[less  
than  
10%  
of](#)

their  
ICU  
beds  
available.

Georgia  
hospitals  
have  
topped  
their  
January  
highs

on  
some  
days,  
and  
adult  
ventilator  
use  
has  
far  
outpaced  
the  
previous  
high.

A  
US  
Department  
of  
Health  
and  
Human  
Services  
(HHS)  
dashboard

paints  
a  
grim  
picture,  
where  
42  
states  
are  
reporting  
70%  
or  
greater  
use  
of

inpatient  
beds,  
and  
7  
of  
the  
remaining  
8  
are  
in  
the  
60-69%  
use  
category.  
In  
several  
states,  
including  
[Montana](#)  
and  
[Oregon](#),  
the  
National  
Guard  
is  
assisting  
to  
help  
ease  
staffing  
shortages.  
Children's  
hospitals  
are  
no  
exception,  
with  
many  
[at](#)  
[or](#)  
[near](#)  
[capacity](#).  
The  
CEO  
of  
the  
Children's  
Hospital

Association  
wrote  
a  
letter  
to  
US  
President  
Joe  
Biden  
requesting  
federal  
help  
to  
handle  
the  
surge.  
Adding  
to  
the  
stress,  
about  
US  
\$44  
billion  
in  
federal  
aid  
from  
the  
US  
\$178  
billion  
Provider  
Relief  
Fund  
created  
last  
year  
and  
\$8.5  
billion  
allotted  
by  
the  
US  
Congress  
for  
rural

medical  
care  
has  
not  
been  
distributed.  
Healthcare  
institutions,  
advocates,  
and  
lawmakers  
are  
urging  
the  
Biden  
administration  
to  
quickly  
decide  
how  
the  
funds  
will  
be  
divided  
and  
when  
they  
will  
be  
released.  
HHS  
has  
said  
a  
plan  
is  
being  
developed.

**VACCINE  
EFFECTIVENESS  
AMONG  
HEALTHCARE  
WORKERS**

Coincident  
with  
the

end  
of  
California's  
(US)  
mask  
mandates  
in  
June  
2021  
and  
the  
rise  
of  
the  
SARS-  
CoV-2  
Delta  
variant,  
the  
University  
of  
San  
Diego  
Health  
(UCSDH)  
workforce  
experienced  
an  
increase  
in  
SARS-  
CoV-2  
infections,  
despite  
high  
vaccination  
rates.  
According  
to  
[correspondence](#)  
published  
in  
the  
*New  
England  
Journal  
of  
Medicine*

(*NEJM*),  
between  
March  
1  
and  
July  
31,  
2021,  
227  
UCSDH  
healthcare  
workers  
tested  
positive  
for  
SARS-  
CoV-2  
by  
rt-  
PCR,  
of  
whom  
57.3%  
were  
fully  
vaccinated.  
Researchers  
calculated  
vaccine  
effectiveness  
by  
month,  
saying  
effectiveness  
exceeded  
90%  
March  
through  
June,  
but  
fell  
to  
65.5%  
in  
July  
(95%  
confidence  
interval

[CI],  
48.9  
to  
76.9).  
Additionally,  
the  
July  
attack  
rate  
among  
vaccinated  
individuals  
increased  
as  
time  
from  
vaccination  
grew,  
with  
those  
who  
were  
fully  
vaccinated  
later  
in  
the  
year  
(March  
through  
May;  
3.7  
per  
1,000  
persons  
[95%  
CI,  
2.5  
to  
5.7])  
showing  
an  
attack  
rate  
nearly  
half  
that  
of



those vaccinated earlier in the year (January or February; 6.7 per 1,000 persons [95% CI, 5.9 to 7.8]). For unvaccinated workers, the attack rate was much higher (16.4 per 1,000 persons [95% CI, 11.8 to 22.9]). The authors attribute the change in vaccine effectiveness to the rise of

the  
Delta  
variant  
and  
waning  
immunity,  
in  
addition  
to  
the  
end  
of  
masking  
requirements  
that  
likely  
resulted  
in  
increased  
community  
exposure.

But  
some  
experts  
have  
[questioned](#)  
[the](#)  
[study's](#)  
[conclusions](#),  
saying  
the  
reduction  
in  
vaccine  
effectiveness  
could  
be  
due  
to  
several  
additional  
or  
separate  
factors,  
including  
a  
small

sample  
size  
for  
the  
July  
data;  
a  
single,  
large  
outbreak  
of  
70  
cases  
among  
workers  
in  
July;  
and  
an  
increase  
in  
close  
contacts  
due  
to  
loosened  
preventive  
measures.  
As  
more  
studies  
are  
published  
showing  
a  
possible  
decrease  
in  
vaccine  
effectiveness  
over  
time,  
it  
is  
important  
to  
consider  
behavior

changes  
that  
could  
contribute  
to  
outcomes,  
even  
if  
the  
data  
are  
not  
captured  
in  
studies.

**LATIN  
AMERICA  
&  
CARIBBEAN**

The  
Pan-  
American  
Health  
Organization  
(PAHO)  
has  
called  
on  
countries  
with  
surplus  
SARS-  
CoV-2  
vaccines  
to  
[urgently  
donate](#)  
them  
to  
Latin  
American  
and  
Caribbean  
nations,  
where  
[only](#)  
[1](#)

in  
4  
people  
have  
been  
fully  
vaccinated.

While  
vaccination  
coverage  
in  
some  
countries  
such  
as  
Uruguay  
and  
Chile  
have  
exceeded  
60%,  
rates  
are  
much  
lower  
in  
other  
countries,  
including  
Guatemala  
and  
Nicaragua.

At  
a  
news  
conference,  
PAHO  
Director  
Dr.  
Carissa  
F.  
Etienne  
said  
that  
while  
every  
country  
in

the  
region  
has  
begun  
administering  
vaccines,  
“immunizations  
are  
following  
the  
fault  
lines  
of  
inequality”  
in  
the  
region.  
She  
also  
[announced](#)  
the  
launch  
of  
the  
[Regional  
Platform  
to  
Advance  
the  
Manufacturing  
of  
COVID-19  
Vaccines  
and  
other  
Health  
Technologies  
in  
the  
Americas,](#)  
which  
hopes  
to  
ease  
vaccine  
shortages  
within  
the

region.  
During  
a  
recent  
virtual  
meeting,  
Dr.  
Etienne  
invited  
public  
and  
private  
manufacturers  
to  
submit  
proposals  
for  
[transferring  
technologies  
or  
producing  
raw  
materials](#)  
for  
mRNA  
vaccines,  
some  
of  
which  
PAHO  
already  
is  
in  
the  
process  
of  
reviewing.

In  
a  
related  
development,  
Pfizer  
and  
BioNTech  
[announced  
a  
deal](#)

in  
late  
August  
with  
Brazilian  
pharmaceutical  
company  
Eurofarma  
to  
manufacture  
at  
least  
100  
million  
doses  
of  
the  
companies'  
vaccine  
annually  
for  
distribution  
within  
the  
region,  
beginning  
next  
year.  
An  
additional  
540  
million  
doses  
are  
needed  
to  
ensure  
every  
country  
in  
the  
region  
can  
vaccinate  
60%  
of  
the  
population.



## **INDIA**

Since mid-July, India has dramatically increased its SARS-CoV-2 vaccination rates in rural areas, where the majority of the population lives, with 70% of the nearly 120 million shots delivered in the past 3 weeks going to individuals in villages. That is up from about

half  
in  
the  
beginning  
of  
May,  
when  
the  
country  
opened  
up  
vaccine  
eligibility  
to  
all  
adults.  
About  
11%  
of  
the  
country's  
population  
is  
fully  
vaccinated,  
and  
37%  
have  
received  
at  
least  
one  
dose  
as  
of  
September  
1,  
according  
to  
Our  
World  
In  
Data.  
While  
a  
boost  
in  
acceptance

of  
vaccines  
in  
rural  
areas  
is  
promising  
news,  
India  
reported  
the  
largest  
single-  
day  
increase  
in  
new  
COVID-19  
cases  
in  
2  
months  
on  
September  
2,  
recording  
47,092  
cases.  
The  
densely  
populated  
Kerala  
state,  
which  
recently  
ended  
its  
biggest  
festival  
involving  
family  
and  
social  
gatherings,  
accounted  
for  
70%  
of

the  
new  
cases.  
The  
Kerala  
health  
ministry  
warned  
the  
public  
to  
take  
“adequate  
steps”  
to  
prevent  
the  
virus’s  
spread  
into  
surrounding  
states,  
and  
the  
federal  
government  
has  
warned  
that,  
like  
Kerala,  
the  
rest  
of  
[India](#)  
[could](#)  
[see](#)  
[an](#)  
[increase](#)  
[in](#)  
[COVID-19](#)  
[incidence](#)  
as  
festival  
season  
gets  
underway  
this

month  
and  
runs  
through  
early  
November.

Some  
parents  
and  
health  
experts  
are  
concerned  
the  
[reopening](#)  
[of](#)  
[schools](#)  
for  
the  
first  
time  
in  
18  
months  
amid  
an  
uptick  
in  
new  
cases  
could  
increase  
the  
risk  
of  
COVID-19  
outbreaks.  
However,  
others  
say  
that  
without  
the  
ability  
to  
provide  
online

schooling  
for  
poorer  
children,  
in-  
person  
learning  
is  
essential

to  
keep  
kids  
on  
track.

In  
Delhi,  
only  
older  
children  
will  
return  
to  
schools  
and  
strict  
measures  
are  
in  
place  
to  
help  
limit  
transmission,  
including  
vaccinated  
staff,  
limited  
classroom  
capacity,  
mandatory  
temperature  
checks,  
staggered  
lunch  
breaks,  
and  
physical  
distancing

within  
classrooms.  
Several  
large  
Indian  
medical  
organizations  
are  
backing  
the  
resumption  
of  
in-  
person  
classes,  
urging  
governments  
to  
take  
a  
“calculated  
risk.”

A  
recent  
serological  
survey  
conducted  
in  
70  
districts  
across  
21  
states  
showed  
57%  
of  
6-  
to  
9-  
year-  
olds  
had  
antibodies  
to  
SARS-  
CoV-2,  
and  
62%

of  
10-  
to  
17-  
year-  
olds  
had  
antibodies,  
possibly  
boosting  
confidence  
in  
reopening  
schools.  
Still,  
some  
parents  
will  
be  
keeping  
their  
children  
at  
home  
for  
fear  
that  
a  
third  
wave  
could  
be  
looming.

## **NORTH KOREA**

North  
Korea  
has  
[refused](#)  
[a](#)  
[shipment](#)  
of  
nearly  
3  
million  
doses  
of



China's Sinovac SARS-CoV-2 vaccine from the COVAX facility, saying the vaccines should instead be provided to more seriously affected countries due to a limited global supply. Although the country has applied for assistance through COVAX, the government has yet to receive any doses, after the most recent

development  
and  
a  
delay  
in  
a  
planned  
shipment  
of  
about  
2  
million  
AstraZeneca-  
Oxford  
vaccines  
earlier  
this  
year.  
Reportedly,  
the  
government  
[rejected](#)  
[the](#)  
[AstraZeneca-](#)  
[Oxford](#)  
[vaccine](#)  
over  
concerns  
of  
side  
effects.  
North  
Korea's  
state  
media  
have  
reported  
incidents  
of  
breakthrough  
infections  
among  
vaccinated  
individuals  
and  
expressed  
overall  
doubt

in  
the  
vaccines'  
effectiveness.

North  
Korea  
has  
[reported](#)  
[zero](#)  
[confirmed](#)  
[COVID-19](#)  
[cases](#)

to  
the  
WHO,  
but  
many  
health  
experts  
doubt  
those  
claims  
and  
worry  
that  
a  
large  
outbreak  
could  
overwhelm  
the  
country's  
outdated  
healthcare  
infrastructure.

In  
June,  
Supreme  
Leader  
Kim  
Jong-  
Un  
said  
the  
country's  
COVID-19  
situation  
was

grave,  
without  
specifying  
details,  
and  
publicly  
chastised  
several  
high-  
ranking  
officials  
for  
failing  
to  
implement  
long-  
term  
preventive  
measures.  
Both  
the  
US  
and  
South  
Korea  
have  
discussed  
possibly  
offering  
humanitarian  
assistance  
to  
the  
impoverished  
nation,  
and  
Russia  
earlier  
this  
year  
offered  
to  
provide  
its  
Sputnik  
V  
vaccine,  
although

it  
is  
unclear  
whether  
North  
Korea  
accepted.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 9/10/2021 2:04:23 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - September 10, 2021**

**Webinar:  
Community  
Experiences  
with  
CommuniVax:  
Carrying  
Equity  
in  
COVID-19  
Vaccination  
Forward  
in  
Local  
Areas**

As  
the  
COVID-19  
vaccination  
campaign  
continues,  
it  
is  
critical  
that  
vaccines  
are  
delivered  
fairly

and  
equitably

—

so  
that  
everyone  
has  
access.

Join  
CommuniVax  
and  
the  
Johns  
Hopkins  
Center  
for  
Health  
Security  
for  
a  
webinar  
that  
will  
consider  
the  
impact  
of  
research  
and  
outreach  
in  
4  
local  
areas,  
which  
together  
represent  
a  
mix  
of  
Black  
and  
Hispanic/Latino  
communities  
in  
rural  
to

urban  
areas.  
Local  
leaders  
and  
public  
health  
officials  
will  
hear  
about  
these  
communities  
and  
what  
they  
have  
done—and  
are  
doing—to  
address  
the  
challenges  
they  
are  
facing  
related  
to  
COVID-19  
vaccination  
and  
equity.

Please  
register  
[here](#).

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
223  
million  
cumulative



cases  
and  
4.6  
million  
deaths  
worldwide  
as  
of  
September  
9.

Global  
weekly  
incidence  
has  
held  
relatively  
steady  
at  
4.5  
million  
new  
cases  
per  
week  
for  
the  
past  
4  
weeks.

Similarly,  
global  
weekly  
mortality  
has  
held  
steady  
at  
approximately  
67-68,000  
deaths  
per  
week  
over  
that  
same  
period.

Global  
Vaccination

The  
WHO  
reported  
5.35  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
September  
6.

A  
total  
of  
2.02  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
1.24  
billion  
are  
fully  
vaccinated.

Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
global  
daily  
vaccinations

have  
declined  
sharply  
since  
September

1.

Data  
from  
the  
most  
recent  
several  
days  
have  
tended  
to  
be  
artificially  
low  
due  
to  
reporting  
delays;  
however,  
the  
trend  
has  
persisted  
for  
more  
than  
a  
week.

This  
indicates  
that  
there  
is  
an  
actual  
decline  
in  
daily  
vaccinations,  
which  
appears  
to  
be

driven  
by  
a  
sharp  
decline  
in  
Asia\*.  
Notably,  
[daily](#)  
[vaccinations](#)  
[in](#)  
[China](#)  
have  
decreased  
by  
more  
than  
50%  
since  
August  
29  
—  
down  
from  
14.0  
million  
doses  
per  
day  
to  
6.5  
million  
—  
which  
accounts  
for  
the  
majority  
of  
the  
change  
in  
Asia.  
Our  
World  
in  
Data  
estimates

that  
there  
are  
3.27  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
41.5%  
of  
the  
global  
population)  
and  
2.32  
billion  
who  
are  
fully  
vaccinated  
(29.5%  
of  
the  
global  
population).  
At  
the  
continent  
level,  
Oceania  
(40.5%)  
is  
on  
a  
trajectory  
to  
surpass  
the  
global  
average  
vaccination  
coverage  
(1+  
doses),  
which  
would

leave  
Africa  
(5.5%)  
as  
the  
only  
continent  
below  
the  
global  
average.

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here*

*may  
not  
correspond  
to  
the  
most  
recent  
data.*

Toward  
the  
end  
of  
2020,  
the  
cumulative  
global  
case  
fatality  
ratio  
(CFR)  
appeared  
to  
be  
approximately  
2.3%.  
At  
that  
time,  
the  
cumulative  
CFRs  
in  
Africa,  
Europe,  
and  
North  
America  
—  
as  
well  
as  
the  
global  
average  
—  
were  
all

converging  
on  
that  
number.  
The  
CFRs  
in  
Oceania  
(3.0%)  
and  
South  
America  
(3.3%)  
were  
slightly  
higher  
but  
declining  
slowly,  
and  
Asia  
(1.6%)  
was  
slightly  
lower.  
Since  
that  
time,  
the  
trends  
have  
shifted  
at  
the  
continent  
level.  
South  
America's  
CFR  
has  
remained  
elevated,  
holding  
relatively  
steady  
at  
approximately  
3.0%



since  
January  
2021.  
Oceania's  
CFR  
decreased  
slowly  
through  
March  
2021  
before  
declining  
much  
more  
quickly,  
falling  
from  
2.9%  
to  
1.3%  
since  
that  
time.  
Africa's  
CFR  
increased  
slightly  
to  
2.5%  
and  
held  
relatively  
steady,  
and  
Asia's  
fell  
to  
a  
low  
of  
1.3%  
in  
May  
2021  
before  
rising  
back  
to

1.5%.  
Europe  
and  
North  
America  
have  
both  
tracked  
closely  
with  
the  
global  
average,  
declining  
slowly  
in  
2021  
to  
approximately  
2.0%.  
In  
terms  
of  
the  
[rolling  
weekly  
average](#),  
CFR  
trends  
have  
generally  
decreased  
since  
the  
spring  
or  
early  
summer  
2021.  
While  
Europe's  
current  
average  
CFR  
is  
lower  
than  
it

was  
in  
late  
June,  
it  
has  
exhibited  
a  
marked  
increase  
since  
early  
August,  
up  
from  
a  
low  
of  
0.76%  
on  
August  
1  
to  
1.25%.  
Currently,  
South  
America  
(2.2%)  
is  
the  
only  
continent  
reporting  
CFR  
greater  
than  
2%,  
and  
Oceania  
(0.7%)  
is  
the  
only  
continent  
reporting  
less  
than  
1%.

CFR  
varies  
widely  
at  
the  
national  
level,  
with  
countries  
ranging  
from  
well  
below  
1%  
to  
nearly  
20%\*\*.

A  
total  
of  
17  
countries  
are  
reporting  
cumulative  
CFRs  
of  
0.5%  
or  
less,  
including  
Bhutan  
(0.12%),  
Laos  
(0.10%),  
and  
Singapore  
(0.08%)  
with  
less  
than  
0.25%.

On  
the  
other  
end  
of

the spectrum,  
14 countries are reporting cumulative CFRs greater than 4% (more than double the global average), including Mexico (7.7%), Peru (9.2%), and Yemen (18.7%) with greater than 7.5%. Over time, as the cumulative incidence and mortality increased, many countries settled into a relatively consistent cumulative CFR value.

The trends were generally higher at the beginning of their respective epidemics and then declined to a steady-state value.

*\*\*Vanuatu has reported exactly 25.00% consistently since April 2021, and the actual value of its CFR is unclear.*

Despite that overall trend, a number of countries' CFRs

have  
changed  
substantially  
in  
recent  
months.  
Since  
January  
1,  
2021,  
13  
countries  
have  
reported  
increases  
in  
their  
cumulative  
CFRs  
of  
greater  
than  
1  
percentage  
point  
(pp).  
Notably,  
7  
of  
these  
countries  
are  
in  
Africa,  
where  
many  
national  
epidemics  
faced  
major  
COVID-19  
surges  
later  
than  
other  
parts  
of  
the

world.  
While  
Taiwan  
is  
not  
a  
member  
of  
the  
WHO,  
it  
is  
reporting  
the  
largest  
increase  
in  
CFR  
since  
January,  
up  
from  
0.9%  
to  
5.2%  
(+4.3pp).  
Over  
that  
same  
period,  
14  
countries  
reported  
decreases  
in  
their  
CFRs  
of  
greater  
than  
1pp,  
including  
Yemen,  
which  
fell  
from  
29.0%  
to



18.7%  
(-10.3pp)

since  
January

1.

Interestingly,

this  
group  
includes

a  
relatively  
balanced  
mix  
of

countries  
reporting  
CFRs

that  
are  
higher

(6)  
and  
lower  
(8)

than  
the  
global  
average.

The  
decreases  
in

2  
of  
these  
countries

—

Brunei  
(0.44%)  
and  
Mauritius  
(0.29%)

—

brought  
them  
below

the  
1%  
CFR

threshold,  
each  
cutting  
their  
respective  
CFRs  
by  
more  
than  
three-  
quarters.  
Australia  
(from  
3.2%  
to  
1.5%),  
Fiji  
(4.1%  
to  
1.1%),  
and  
Iran  
(4.5%  
to  
2.16%)  
also  
cut  
their  
respective  
CFRs  
by  
more  
than  
half.

#### *UNITED STATES*

The  
US  
surpassed  
40  
million  
cumulative  
cases  
on  
September  
4:

1  
case\*  
to  
10  
million:  
288  
days  
10  
to  
20  
million:  
54  
days  
20  
to  
30  
million:  
83  
days  
30  
to  
40  
million:  
165  
days  
*\*The  
US  
CDC  
now  
reports  
35  
cumulative  
cases  
on  
January  
23,  
2020,  
the  
first  
day  
included  
in  
the  
official  
data.*

The  
[US](#)

CDC

reports

40.5

million

cumulative

COVID-19

cases

and

652,480

deaths.

Daily

incidence

appears

to

have

passed

a

peak;

however,

this

is

likely

due,

at

least

in

part,

to

delayed

reporting

over

the

US

Labor

Day

holiday

weekend

(September

4-6).

We

will

have

a

clearer

picture

of

the

longer-

term  
trends  
next  
week,  
once  
reporting  
catches  
up  
from  
the  
holiday.

A  
similar  
trend  
is  
evident  
for  
daily  
mortality  
as  
well.

At  
more  
than  
1,000  
deaths  
per  
day,  
we  
expect  
the  
US  
to  
surpass  
660,000  
cumulative  
deaths  
within  
the  
next  
week.

This  
threshold  
corresponds  
to  
1  
death  
for

every  
500  
people  
in  
the  
US.  
The  
US  
surpassed  
1  
death  
per  
1,000  
population  
on  
December  
18,  
2020\*\*.

**\*\*Changes**

*in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the*

*numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

US  
Vaccination

The  
US  
has  
administered  
378  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines,  
and  
daily  
vaccinations  
peaked  
at  
nearly  
830,000  
doses  
per  
day  
on  
August  
29.  
The  
5-  
day  
window  
during  
which  
we  
expect  
delayed

reporting  
still  
includes  
most  
of  
the  
US  
Labor  
Day  
holiday  
weekend,  
but  
the  
trend  
peaked  
prior  
to  
the  
holiday,  
which  
could  
indicate  
the  
early  
stages  
of  
a  
longer-  
term  
downward  
trend\*.  
In  
light  
of  
the  
new  
US  
vaccination  
mandates  
announced  
on  
September  
9,  
we  
will  
closely  
monitor  
trends



in  
daily  
vaccinations  
for  
any  
effects  
of  
the  
mandates.

There  
are  
208.3  
million  
individuals  
who  
have  
received  
at  
least  
1  
vaccine  
dose,  
equivalent  
to  
62.7%  
of  
the  
entire  
US  
population.  
Among  
adults,  
75.3%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
13.9  
million  
adolescents  
aged  
12-17

years.  
A  
total  
of  
177.4  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
53.4%  
of  
the  
total  
population.  
Approximately  
64.5%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
10.8  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less*

*accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

## **US COVID-19 RESPONSE**

In  
a  
[speech](#)  
delivered  
on  
September  
9  
from  
the  
White  
House,  
US  
President  
Joe  
Biden  
laid  
out  
a  
[6-  
pronged  
COVID-19  
pandemic  
action  
plan,](#)  
including  
[new](#)

federal  
vaccine  
requirements  
for  
about  
two-  
thirds  
of  
the  
nation's  
federal  
and  
private  
workforce,  
in  
an  
effort  
to  
stem  
the  
surge  
caused  
by  
the  
Delta  
variant  
and  
jumpstart  
economic  
recovery.  
President  
Biden  
excoriated  
unvaccinated  
individuals,  
saying  
"our  
patience  
is  
running  
thin"  
and  
blaming  
them  
for  
harming  
fellow  
Americans.

He  
also  
pushed  
back  
against  
the  
politicization  
of  
the  
pandemic,  
promising  
to  
use  
the  
power  
of  
the  
federal  
government  
to  
take  
on  
state  
elected  
officials  
who  
are  
“undermining”  
the  
implementation  
of  
vaccination  
requirements,  
mask  
mandates,  
and  
other  
preventive  
measures.

Under  
the  
new  
plan,  
all  
private  
sector  
companies

employing  
more  
than  
100  
people  
will  
be  
required  
to  
mandate  
vaccination  
or  
conduct  
weekly  
testing,  
affecting  
about  
80  
million  
people.  
Workers  
at  
healthcare  
facilities  
that  
receive  
Medicare  
or  
Medicaid  
funding,  
about  
17  
million  
people,  
also  
will  
have  
to  
be  
vaccinated,  
extending  
an  
earlier  
requirement  
for  
workers  
at  
nursing

homes  
to  
include  
facilities  
such  
as  
hospitals,  
home-  
health  
agencies,  
and  
dialysis  
centers.  
President  
Biden  
also  
is  
requiring  
all  
executive  
branch  
employees  
and  
federal  
contractors  
to  
be  
fully  
vaccinated,  
with  
no  
testing  
option,  
covering  
several  
million  
more  
workers.  
Additionally,  
employees  
of  
Head  
Start  
programs  
and  
schools  
run  
by

the  
Department  
of  
Defense  
and  
Bureau  
of  
Indian  
Education,  
about  
300,000  
people,  
will  
be  
required  
to  
be  
vaccinated.

President  
Biden  
announced  
several  
other  
pieces  
of  
the  
plan,  
including  
a  
[doubling  
of  
fines](#)  
for  
travelers  
who  
refuse  
to  
wear  
masks  
in  
transit  
stations  
or  
on  
airplanes  
or  
trains.



The government also is working with manufacturers and large retailers, including Walmart, Amazon, and Kroger, to lower the cost of at-home SARS-CoV-2 tests and distribute the tests to easily accessible sites such as shelters and food banks. The Department of Defense plans to send more teams

into  
hard-  
hit  
areas,  
and  
the  
federal  
government  
will  
increase  
shipments  
of  
monoclonal  
antibody  
treatments  
and  
offer  
new  
support  
to  
small  
businesses.

Altogether,  
President  
Biden's  
plan  
represents  
the  
government's  
most  
aggressive  
steps  
yet  
to  
urge  
US  
residents  
to  
get  
vaccinated  
and  
help  
get  
the  
economy  
back  
on

track.  
However,  
several  
of  
the  
new  
measures  
are  
expected  
to  
undergo  
political  
and  
legal  
challenges.  
Reactions  
to  
the  
announcements  
were  
mixed,  
with  
physicians  
praising  
the  
efforts  
to  
get  
more  
people  
vaccinated,  
some  
experts  
saying  
the  
plan  
could  
be  
“too  
little,  
too  
late,”  
and  
some  
politicians  
saying  
the  
measures

overstep  
the  
government's  
authority  
and  
are  
"unconstitutional."

Though  
the  
White  
House  
has  
repeatedly  
said  
the  
federal  
government  
does  
not  
have  
the  
authority  
to  
implement  
broad  
vaccine  
requirements  
for  
the  
general  
population  
or  
require  
a  
federal  
vaccine  
passport,  
the  
new  
measures  
likely  
will  
help  
boost  
the  
nation's  
vaccination  
rate.

## **US PANDEMIC PREPAREDNESS**

The  
US  
government  
on  
September  
3  
released  
a  
[US  
\\$65.3  
billion  
plan](#)  
to  
improve  
the  
nation's  
pandemic  
preparedness  
strategy  
over  
the  
next  
10  
years,  
to  
be  
in  
a  
stronger  
position  
to  
handle  
infectious  
disease  
outbreaks  
such  
as  
SARS-  
CoV-2.  
The  
plan,  
titled  
["American  
Pandemic](#)

Preparedness:  
Transforming  
our  
Capabilities,”

outlines

5

key  
areas

that

require

urgent

attention

and

provide

opportunities,

including

transforming

medical

defenses,

such

as

vaccines,

therapeutics,

and

diagnostics;

ensuring

situation

awareness

regarding

disease

threats;

strengthening

public

health

systems

both

domestically

and

internationally;

building

core

capabilities,

including

manufacturing

and

supply

chains

and

regulatory  
strategies;  
and  
managing  
the  
mission,  
with  
a  
focus  
similar  
to  
the  
effort  
that  
took  
astronauts  
to  
the  
moon  
in  
the  
late-1960s.  
Officials  
called  
for  
an  
immediate  
outlay  
of  
at  
least  
\$15  
billion  
to  
“jump  
start”  
the  
efforts  
and  
proposed  
establishing  
a  
centralized  
“Mission  
Control”  
that  
would  
draw

on  
US  
government-  
wide  
expertise.  
US  
President  
Joe  
Biden  
signed  
an  
[executive  
order](#)  
on  
January  
20  
directing  
a  
whole-  
of-  
government  
review  
of  
US  
national  
biopreparedness  
policies  
and  
re-  
establishing  
the  
National  
Security  
Council  
Directorate  
on  
Global  
Health  
Security  
and  
Biodefense,  
and  
this  
plan  
is  
a  
core  
element



of  
a  
larger  
government  
strategy  
resulting  
from  
that  
review.

On  
September  
8,  
the  
Trust  
for  
America's  
Health  
(TFAH)  
released  
a  
report  
saying  
that  
20  
years  
after  
the  
attacks  
of  
September  
11,  
2001,  
the  
[US](#)  
[remains](#)  
[unprepared](#)  
for  
public  
health  
emergencies.  
The  
report,  
"2021  
[Ready](#)  
[or](#)  
[Not:](#)  
[Protecting](#)

the  
Public's  
Health  
from  
Diseases,  
Disasters  
and  
Bioterrorism,"  
calls  
on  
federal,  
state,  
and  
local  
policy  
makers  
to  
prioritize  
health  
security,  
amid  
the  
ongoing  
COVID-19  
pandemic,  
raging  
wildfires  
in  
the  
West,  
and  
recent  
damaging  
weather  
events  
in  
the  
South  
and  
Northeast.  
The  
report  
makes  
several  
recommendations,  
including  
calling  
for

more  
investments  
in  
public  
health  
infrastructure,  
workforce,  
and  
data  
systems  
at  
all  
levels.

**GLOBAL  
COVID-19  
SUMMIT**

US  
President  
Joe  
Biden  
is  
[expected](#)  
[to](#)  
[announce](#)  
[plans](#)  
for  
a  
global  
COVID-19  
summit  
at  
the  
UN  
General  
Assembly  
meetings  
the  
week  
of  
September  
20  
to  
discuss  
vaccine  
access  
for  
low-

and  
middle-  
income  
countries  
(LMICs).

Topics  
could  
include

how  
to  
ramp  
up  
vaccine  
manufacturing  
and  
distribution,  
improve  
oxygen  
supplies  
to  
countries  
in  
need,  
and  
cooperation  
on  
research  
and  
development  
for  
COVID-19-  
related  
products.

According  
to  
officials,  
the  
Biden  
administration  
is

setting  
up  
talks

between  
the  
President  
and  
other

national  
leaders,  
but  
a  
more  
formal  
announcement  
is  
expected  
soon.

On  
September  
2,  
administration  
officials  
announced  
the  
US  
government  
plans  
to

invest  
\$2.7  
billion

to  
increase  
domestic  
production  
of  
SARS-  
CoV-2  
vaccine  
components  
as

part  
of  
President  
Biden's  
pledge  
to  
make  
the  
US  
an  
"arsenal  
of  
vaccines  
for

the  
world.”

Additionally,  
a  
group  
of  
US  
lawmakers  
last  
week  
[launched](#)  
the  
[COVID-19](#)  
[Global](#)  
[Vaccination](#)  
[Caucus](#)  
to  
advocate  
for  
vaccine  
manufacturing,  
production,  
and  
distribution  
in  
LMICs  
as  
a  
means  
to  
increase  
vaccination  
rates  
in  
those  
countries.

## **COVAX FORECAST**

The  
COVAX  
initiative,  
aimed  
at  
guaranteeing  
global  
access

to  
SARS-  
CoV-2  
vaccines,  
on  
September  
8  
[cut](#)  
[its](#)  
[forecast](#)  
[for](#)  
[vaccine](#)  
[doses](#)  
available  
for  
delivery  
between  
now  
and  
the  
end  
of  
the  
year,  
amounting  
to  
[more](#)  
[disappointing](#)  
[news](#)  
for  
the  
effort  
[already](#)  
[hindered](#)  
by  
production  
slowdowns,  
regulatory  
delays,  
export  
bans,  
and  
vaccine  
hoarding  
by  
wealthier  
nations.  
COVAX

said  
it  
expects  
to  
have  
access  
to  
a  
total  
of  
1.425  
billion  
vaccine  
doses  
by  
the  
end  
of  
2021,  
a  
number  
about  
25%  
lower  
than  
the  
initiative's  
July  
forecast.  
About  
1.2  
billion  
of  
those  
doses  
will  
be  
made  
available  
to  
92  
low-  
income  
countries  
(LICs)  
participating  
in  
the



COVAX  
Advance  
Market  
Commitment  
(AMC).  
COVAX's  
2021  
goal  
of  
delivering  
2  
billion  
doses  
is  
now  
projected  
to  
be  
reached  
in  
the  
first  
quarter  
of  
2022.  
In  
its  
first  
6  
months  
of  
operation,  
the  
initiative  
has  
delivered  
more  
than  
240  
million  
vaccine  
doses,  
but  
experts  
predict  
11  
billion  
doses

are  
needed  
worldwide  
to  
slow  
the  
spread  
of  
the  
virus.

## **BOOSTER DOSES**

WHO  
Director-  
General  
Dr.  
Tedros  
Adhanom  
Ghebreyesus  
this  
week  
doubled  
down  
on  
an  
appeal  
for  
a  
moratorium  
on  
vaccine  
booster  
dose  
programs  
through  
the  
end  
of  
September,  
this  
time  
calling  
on  
wealthy  
nations  
to  
[delay](#)

administering  
third  
doses

to  
large  
swaths  
of  
their  
populations  
through  
the  
end  
of  
2021  
and  
instead  
divert  
those  
supplies  
to  
low-  
and  
middle-  
income  
countries  
(LMICs).

Dr.  
Tedros  
also  
said  
he  
was  
“appalled”  
by

a  
pharmaceutical  
industry  
projection

that  
SARS-  
CoV-2  
vaccine  
production  
could  
exceed  
12  
billion  
doses

by  
the  
end  
of  
the  
year  
and  
reach  
24  
billion  
by  
June  
2022,  
berating  
manufacturers  
for  
fulfilling  
bilateral  
contracts  
with  
wealthy  
nations  
while  
low-  
income  
countries  
(LICs)  
are  
“deprived  
of  
the  
tools  
to  
protect  
their  
people.”  
In  
a  
[statement](#)  
regarding  
the  
[projection](#),  
which  
was  
conducted  
by  
London-  
based

Airfinity,  
the  
International  
Federation  
of  
Pharmaceutical  
Manufacturers  
&  
Associations  
(IFPMA)  
called  
on  
governments  
to  
step  
up  
efforts  
to  
equitably  
redistribute  
doses  
to  
LMICs  
by  
sharing  
“a  
meaningful  
proportion  
of  
their  
doses  
in  
a  
responsible  
and  
timely  
way  
through  
COVAX  
or  
other  
efficient  
established  
mechanisms.”  
About  
5.4  
billion  
vaccine

doses  
have  
been  
administered  
globally,  
but  
about  
80%  
of  
those  
have  
gone  
to  
high-  
or  
upper-  
middle  
income  
countries,  
according  
to  
the  
WHO.

Additionally,  
2  
of  
the  
WHO's  
top  
officials  
denounced  
wealthy  
nations  
for  
hoarding  
SARS-  
CoV-2  
vaccines,  
treatments,  
and  
protective  
equipment,  
saying  
the  
inequities  
in  
distribution

are  
“unfair,”  
“immoral,”  
and  
prolonging  
the  
pandemic.  
The  
Airfinity  
model  
predicts  
that  
even  
if  
the  
world’s  
wealthiest  
nations  
vaccinated  
all  
those  
individuals  
currently  
eligible  
and  
provided  
third  
doses  
to  
vulnerable  
populations,  
they  
would  
[still](#)  
[have](#)  
[1.2](#)  
[billion](#)  
[doses](#)  
[left](#)  
for  
redistribution  
this  
year.  
On  
September  
9,  
Africa  
CDC

John  
Nkengasong  
and  
WHO  
Africa  
Regional  
Director  
Matshidiso  
Moeti  
called  
on  
wealthy  
nations  
to  
forego  
boosters  
and  
redirect  
those  
extra  
doses  
to  
LICs,  
particularly  
on  
the  
African  
continent,  
which  
has  
been  
struggling  
to  
receive  
adequate  
supplies.

Notably,  
in  
addition  
to  
obtaining  
sufficient  
vaccine  
supplies,  
LICs  
will  
need



to  
significantly  
increase  
their  
health  
expenditures—  
by  
almost  
57%  
—  
to  
cover  
the  
costs  
of  
vaccinating  
70%  
of  
their  
populations,  
if  
a  
2-  
dose  
regimen  
costs  
US  
\$35  
and  
associated  
distribution  
cost  
is  
US  
\$3.70  
per  
person.  
These  
costs  
—  
according  
to  
estimates  
from  
the  
Vaccine  
Affordability  
Index,

part  
of  
the  
Global  
Dashboard  
on  
COVID-19  
Vaccine  
Equity  
supported  
by  
the  
UN  
Development  
Programme  
(UNDP),  
the  
WHO,  
and  
the  
University  
of  
Oxford

—  
likely  
will  
need  
to  
be  
covered  
by  
further  
donations,  
grants,  
or  
loans,  
as  
LICs  
face  
negative  
economic  
consequences  
due  
to  
the  
pandemic.

## **VACCINE DEVELOPMENT**

The  
COVID-19  
pandemic  
prompted  
vaccine  
development  
to  
move  
at  
record  
speed,  
with  
more  
vaccines  
simultaneously  
being  
tested  
in  
clinical  
trials  
than  
ever  
before  
for  
any  
infectious  
disease.  
However,  
the  
development  
of  
next-  
generation  
SARS-  
CoV-2  
vaccines  
is  
under  
threat,  
the  
Coalition  
for  
Epidemic  
Preparedness  
Innovations  
(CEPI)

warned  
in  
a  
[letter](#)  
published  
September  
7  
in  
the  
journal  
*Nature*.  
According  
to  
Melanie  
Saville,  
CEPI's  
Director  
of  
Vaccine  
Research  
and  
Development,  
most  
SARS-  
CoV-2  
vaccines  
in  
use  
today  
were  
tested  
in  
placebo-  
controlled  
trials  
among  
unvaccinated  
individuals.  
However,  
as  
the  
number  
of  
vaccinated  
people  
increases,  
new  
vaccine

candidates  
will  
need  
to  
be  
tested  
against  
existing  
vaccines  
instead  
of  
placebos.  
Therefore,  
manufacturers  
and  
governments  
must  
release  
doses  
of  
these  
“comparator  
vaccines”  
to  
support  
clinical  
trials  
testing  
new  
vaccines,  
particularly  
to  
see  
how  
they  
perform  
against  
new  
viral  
variants.  
But  
with  
most  
doses  
already  
spoken  
for  
in

bilateral  
contracts  
that  
specifically  
spell  
out  
how  
the  
vaccines  
are  
to  
be  
used,  
current  
demand  
outpacing  
supply,  
and  
the  
possibility  
that  
a  
new  
vaccine  
will  
work  
better  
than  
the  
comparator,  
there  
is  
little  
incentive  
to  
release  
extra  
doses  
for  
studies.  
[CEPI](#)  
[is](#)  
[working](#)  
[with](#)  
[manufacturers](#)  
[and](#)  
[governments](#)  
[to](#)

find  
workarounds  
to  
the  
issue,  
but  
unless  
a  
solution  
is  
found,  
the  
world  
will  
remain  
dependent  
upon  
the  
current  
vaccines  
authorized  
for  
use,  
even  
if  
new,  
more  
dangerous  
variants  
emerge.

## **DENMARK**

After  
nearly  
550  
days  
with  
restrictions  
to  
limit  
the  
spread  
of  
SARS-  
CoV-2,  
Denmark  
on  
September

10  
lifted  
the  
last  
of  
its  
requirements,  
including  
no  
longer  
needing  
digital  
proof  
of  
vaccination  
to  
enter  
certain  
venues.  
This  
was  
the  
last  
of  
the  
restrictions,  
most  
of  
which  
have  
been  
lifted  
slowly  
since  
mid-  
August.  
The  
government  
stopped  
categorizing  
COVID-19  
as  
a  
“socially  
critical  
disease,”  
attributing  
control



of  
the  
virus  
to  
a  
successful  
vaccination  
rollout,  
strong  
epidemic  
control  
measures,  
and  
the  
efforts  
of  
the  
Danish  
people.  
More  
than  
83%  
of  
eligible  
individuals  
are  
fully  
vaccinated,  
according  
to  
the  
Danish  
Health  
Authority.  
With  
fewer  
than  
500  
new  
COVID-19  
cases  
reported  
daily  
and  
a  
reproduction  
rate  
less

than  
1,  
officials  
say  
they  
have  
the  
virus  
under  
control.  
However,  
they  
indicated  
they  
are  
prepared  
to  
reinstitute  
control  
measures  
if  
the  
number  
of  
COVID-19  
hospitalizations  
begins  
to  
rise.  
The  
WHO  
has  
urged  
caution,  
warning  
the  
global  
situation  
remains  
critical.  
With  
large  
concerts  
already  
scheduled  
and  
people  
returning

to  
“normal”  
life,  
the  
world  
is  
watching  
whether  
Denmark  
can  
remain  
restriction-  
free.

**US  
HOSPITAL  
CRISIS  
STANDARDS  
OF  
CARE**

Hospitals  
in  
northern  
Idaho  
(US)  
this  
week  
began  
operating  
under  
“[crisis  
standards  
of  
care](#),”  
allowing  
healthcare  
workers  
to  
[ration  
care](#)  
as  
facilities  
struggle  
to  
handle  
an  
influx  
of

COVID-19 patients amid an increase in cases and staff shortages. Notably, Idaho has [one of the lowest vaccination rates](#) of any US state. The move, [enacted](#) by the Idaho Department of Health and Welfare for 10 hospitals and healthcare systems in the panhandle and north-central regions, allows

hospitals  
to  
apportion  
certain  
resources,  
such  
as  
intensive  
care  
unit  
(ICU)  
beds,  
to  
patients  
they  
deem  
most  
likely  
to  
survive.  
Other  
patients  
will  
still  
receive  
care  
but  
might  
go  
without  
some  
life-  
saving  
medical  
equipment.  
The  
region  
is  
[receiving  
federal  
assistance](#),  
with  
a  
20-  
person  
team  
from  
the

US  
Department  
of  
Defense,  
150  
National  
Guard  
troops,  
and  
about  
200  
federal  
contractors,  
but  
the  
state  
says  
the  
additional  
resources  
are  
not  
enough  
to  
handle  
the  
current  
surge.

Officials  
in  
neighboring  
Oregon  
also  
have  
warned  
the  
state  
is  
close  
to  
filling  
its  
ICU  
beds  
and  
activating  
crisis

standards  
of  
care.  
Notably,  
Oregon  
last  
year  
said  
its  
crisis  
standards  
of  
care  
document  
was  
discriminatory,  
and  
in  
December  
2020  
replaced  
the  
document  
with  
4  
“crisis  
care  
principles,”  
developed  
with  
community  
input.  
The  
Oregon  
Association  
of  
Hospitals  
and  
Health  
Systems  
said  
the  
lack  
of  
crisis  
standards  
is  
“really

troubling,”  
but  
the  
state’s  
Health  
Authority  
asked  
that  
providers  
apply  
the  
principles  
if  
necessary  
and  
noted  
that  
hospitals  
can  
implement  
their  
own  
crisis  
care  
standards  
and  
triage  
guidelines  
amid  
a  
public  
health  
emergency.

Officials  
in  
both  
states,  
as  
well  
as  
others  
including  
Louisiana  
and  
Texas,  
also  
are



expressing  
concern  
over  
a  
rising  
number  
of  
child  
hospital  
admissions,  
as  
many  
schools  
around  
the  
country  
are  
opening.  
Pediatric  
ICUs  
typically  
have  
a  
smaller  
number  
of  
beds  
than  
adult  
ICUs  
and  
are  
filling  
quickly  
nationwide.  
The  
increase  
in  
childhood  
COVID-19  
hospitalizations  
has  
led  
healthcare  
providers  
and  
hospital  
executives

to  
implore  
adults  
to  
get  
vaccinated  
and  
use  
other  
preventive  
measures,  
such  
as  
mask  
wearing  
and  
physical  
distancing,  
to  
help  
protect  
children,  
especially  
those  
under  
age  
12  
who  
are  
not  
yet  
eligible  
for  
vaccination  
in  
the  
US.

## **VACCINE MANDATES**

Even  
prior  
to  
US  
President  
Joe  
Biden's  
September

9  
announcement  
of  
federal  
vaccine  
mandates,  
including  
for  
larger  
private  
companies,  
several  
other  
vaccine  
mandates  
in  
the  
US  
made  
the  
news  
over  
the  
past  
week.  
[United  
Airlines,](#)  
which  
[announced  
its  
mandate](#)  
in  
early  
August,  
is  
requiring  
all  
employees  
to  
be  
vaccinated  
by  
September  
27  
(5  
weeks  
from  
the

Pfizer-BioNTech vaccine receiving full FDA approval). This week, United announced that employees who receive an exemption will be placed on temporary leave while the airline implements appropriate safety precautions for unvaccinated employees. Those who receive a medical exemption will reportedly be placed on temporary medical leave, and

those  
who  
receive  
a  
religious  
or  
personal  
beliefs  
exemption

will  
be  
placed  
on  
unpaid  
personal  
leave.

According  
to  
United  
Airlines  
officials,  
more  
than  
half  
of  
its  
employees  
who  
were  
unvaccinated  
when  
the  
mandate  
was  
announced  
have  
been  
vaccinated  
since  
then,  
an  
indication  
that  
the  
policy  
could  
be

encouraging  
vaccination.

The  
Los  
Angeles  
Unified  
School  
District  
(California)

—  
the  
United  
States'  
second  
largest  
school  
district,  
covering  
nearly  
650,000  
students

—  
is  
mandating  
SARS-  
CoV-2  
vaccination  
for  
all  
students  
aged  
12  
years  
and  
older.

The  
county  
school  
board  
voted  
unanimously  
in  
favor  
of  
the  
mandate  
(7-0,

with  
1  
recusal).  
The  
school  
district  
previously  
mandated  
vaccinations  
for  
all  
employees,  
without  
a  
testing  
option  
that  
would  
allow  
individuals  
to  
opt  
out  
of  
vaccination.  
The  
student  
mandate  
will  
be  
implemented  
in  
phases,  
starting  
with  
students  
who  
participate  
in  
in-  
person  
extracurricular  
activities  
(eg,  
band,  
clubs,  
sports),  
who

must  
be  
fully  
vaccinated  
by  
October  
31.

All  
other  
students  
must  
be  
fully  
vaccinated  
by  
December  
19,  
and  
students  
who  
turn  
12  
must  
be  
fully  
vaccinated  
no  
later  
than  
8  
weeks  
after  
their  
12th  
birthday.

The  
school  
district  
began  
offering  
vaccinations  
at  
schools  
via  
a  
mobile  
vaccination  
clinic



on  
August  
30.  
Notably,  
the  
US  
FDA  
has  
issued  
an  
Emergency  
Use  
Authorization  
(EUA)  
for  
use  
of  
the  
Pfizer-  
BioNTech  
vaccine  
in  
children  
12-15  
years  
old,  
but  
none  
of  
the  
currently  
available  
vaccines  
have  
received  
full  
approval  
for  
this  
age  
group.  
The  
announcement  
was  
met  
with  
opposition  
from

some  
parents,  
and  
anti-  
vaccine  
organizations  
have  
already  
indicated  
that  
they  
will  
file  
lawsuits  
that  
aim  
to  
overturn  
the  
policy.

### **SCHOOL MASK MANDATES**

Legal  
and  
legislative  
battles  
over  
mask  
mandates  
to  
help  
mitigate  
the  
spread  
of  
SARS-  
CoV-2  
in  
schools  
continue  
across  
the  
US.  
In  
Florida,  
a

Leon  
County  
judge  
[ruled](#)  
[against](#)  
Governor  
Ron  
DeSantis  
on  
September  
8,  
allowing  
school  
districts  
to  
mandate  
mask  
use  
while  
the  
case  
challenging  
the  
state's  
ban  
on  
mask  
mandates  
continues.  
Hours  
later,  
DeSantis'  
administration  
[filed](#)  
[a](#)  
[41-](#)  
[page](#)  
[emergency](#)  
[motion](#)  
asking  
the  
1st  
District  
Court  
of  
Appeal  
to  
allow

the  
executive  
order  
prohibiting  
mask  
mandates  
to  
remain  
in  
effect.

Reportedly,  
the  
parents  
who  
filed  
the  
initial  
lawsuit  
[filed](#)  
[their](#)  
[response](#)  
[Thursday](#)  
[evening](#),  
but

it  
remains  
unclear  
when  
the  
appeals  
court  
will  
rule  
on  
the  
motion  
or  
the  
lawsuit  
itself.

At  
least

13

Florida  
school  
districts  
have  
implemented

mask  
mandates  
that  
do  
not  
give  
parents  
an  
option  
to  
opt  
out  
of  
the  
mandate,  
which  
violates  
the  
executive  
order.  
At  
a  
September  
8  
news  
conference,  
Governor  
DeSantis  
said  
he  
[expects](#)  
[to](#)  
[win](#)  
the  
case  
on  
appeal.

More  
school  
districts  
across  
the  
country  
are  
[implementing](#)  
[mask](#)  
[mandates](#)

as  
COVID-19  
cases  
due  
to  
the  
Delta  
variant  
surge,  
in  
some  
instances  
leading  
to  
the  
deaths  
of  
teachers.

But  
most  
allow  
for  
medical  
or  
parental  
exemptions,  
allowing  
many  
students  
to  
opt  
out  
of  
the  
requirements

—  
up  
to  
30%  
in  
one  
Tennessee  
district

—  
even  
amid  
rising  
numbers

of  
COVID-19  
cases  
among  
children.  
Advocacy  
groups,  
some  
physicians,  
and  
even  
state  
and  
local  
governments  
are  
advising  
parents  
how  
to  
write  
exemption  
letters  
or  
use  
federal  
disability  
laws  
to  
avoid  
mask  
mandates.  
In  
Kentucky,  
both  
houses  
of  
the  
state  
General  
Assembly  
have  
[advanced](#)  
[bills](#)  
that  
would  
[abolish](#)  
[a](#)

statewide  
mask  
mandate  
in  
K-12  
schools  
implemented  
by  
Governor  
Andy  
Beshear.  
According  
to  
a  
new  
USA  
TODAY/Ipsos  
poll,  
about  
two-  
thirds  
of  
those  
surveyed  
support  
school-  
or  
state-  
implemented  
mask  
mandates  
for  
teachers  
(65%  
of  
the  
general  
public,  
64%  
of  
parents  
with  
school-  
aged  
children)  
and  
mask  
mandates



for  
students  
(65%  
and  
62%,  
respectively).

## **HYBRID IMMUNITY**

A  
[preprint](#)  
published  
in  
*bioRxiv*  
is  
the  
latest  
[among  
several  
studies](#)  
evaluating  
hybrid  
immunity  
to  
SARS-  
CoV-2.  
Hybrid  
immunity,  
which  
some  
are  
calling  
“[superhuman  
immunity](#),”  
can  
exist  
in  
people  
previously  
infected  
with  
SARS-  
CoV-2  
and  
who  
are  
fully  
vaccinated,

as  
their  
immune  
systems  
can  
produce  
an  
extremely  
powerful  
immune  
response,  
including  
very  
high  
levels  
of  
antibodies  
with  
wide  
variant-  
neutralizing  
capability.  
For  
the  
*bioRxiv*  
study,  
which  
is  
not  
yet  
peer-  
reviewed,  
researchers  
created  
'polymutant'  
spike  
proteins  
that  
resisted  
polyclonal  
antibody  
neutralization  
to  
a  
degree  
similar  
to  
already

circulating variants of concern (VOCs). They found that 20 naturally occurring mutations in the SARS-CoV-2 spike protein are enough to confer almost complete resistance to the polyclonal neutralizing antibodies produced independently by convalescents and mRNA vaccine recipients. Notably, however, they found that plasma from previously infected individuals

who  
later  
received  
mRNA  
vaccination  
neutralized  
the  
synthetic  
'polymutant'  
as  
well  
as  
related  
but  
diverse  
sarbecoviruses,  
resulting  
in  
the  
so-  
called  
hybrid  
immunity.  
The  
sarbecoviruses  
included  
SARS-  
CoV-1,  
which  
caused  
the  
2009  
SARS  
pandemic,  
two  
viruses  
found  
in  
pangolins,  
and  
one  
in  
bats.

Another  
[study](#)  
published  
in

the  
*New  
England  
Journal  
of  
Medicine*  
last  
month  
found  
similar  
results  
among  
people  
who  
had  
previous  
SARS-  
CoV-1  
infection  
and  
were  
vaccinated  
with  
the  
Pfizer-  
BioNTech  
SARS-  
CoV-2  
vaccine.  
This  
study  
examined  
the  
breadth  
of  
antibody  
cross-  
neutralization  
against  
10  
different  
sarbecoviruses:  
7  
from  
the  
SARS-  
CoV-2  
clade

and  
3  
from  
the  
SARS-  
CoV-1  
clade,  
which  
overlap  
with  
the  
viruses  
included  
in  
the  
*bioRxiv*  
study.  
The  
individuals  
produced  
broad-  
spectrum  
antibodies  
capable  
of  
cross-  
clade  
neutralization  
of  
known  
VOCs  
and  
potentially  
emerging  
viruses. Though  
previous  
infection  
together  
with  
vaccination  
might  
help  
improve  
immune  
responses  
to  
future  
exposure,

scientists  
warn  
that  
people  
should  
not  
intentionally  
expose  
themselves  
to  
infection  
with  
SARS-  
CoV-2.

**REDUCED  
RISK  
OF  
“LONG  
COVID”  
AMONG  
VACCINATED**

Individuals  
who  
are  
fully  
vaccinated  
against  
SARS-  
CoV-2  
appear  
to  
have  
a  
lower  
risk  
of  
developing  
post-  
acute  
sequelae  
of  
COVID-19  
(PASC),  
so-  
called  
“long  
COVID,”

than  
unvaccinated  
people,  
even  
when  
they  
experience  
breakthrough  
infections,  
according  
to  
a  
[study](#)  
published  
in  
*The  
Lancet  
Infectious  
Diseases*.  
Researchers  
examined  
data  
self-  
submitted  
by  
more  
than  
1.2  
million  
adults  
in  
the  
UK  
who  
use  
the  
COVID  
Symptom  
Study  
phone  
app,  
and  
only  
included  
the  
mRNA  
vaccines  
from



Pfizer-  
BioNTech  
or  
Moderna  
and  
the  
viral  
vector  
vaccine  
from  
AstraZeneca-  
Oxford.  
Of  
those  
fully  
vaccinated,  
only  
0.2%  
reported  
a  
breakthrough  
infection.  
Among  
those  
people  
who  
received  
2  
doses  
of  
vaccine,  
the  
risk  
of  
long  
COVID  
—  
defined  
as  
having  
symptoms  
lasting  
at  
least  
4  
weeks  
after  
infection

—  
was  
reduced  
by  
almost  
half,  
the  
risk  
of  
hospitalization  
was  
reduced  
by  
73%,  
and  
the  
risk  
of  
acute  
symptoms  
was  
reduced  
by  
31%.  
While  
the  
researchers  
noted  
the  
study  
had  
limitations,  
including  
that  
the  
data  
were  
self-  
reported,  
they  
said  
it  
is  
“encouraging”  
that  
the  
overall  
proportion

of  
cases  
who  
had  
long-  
lasting  
symptoms  
is  
reduced  
among  
fully  
vaccinated  
individuals  
and  
called  
for  
additional  
research  
to  
better  
characterize  
long  
COVID.

### **UNREPORTED DEATHS IN NURSING HOMES**

Due  
to  
delays  
in  
reporting  
case  
and  
mortality  
data,  
researchers  
suspect  
that  
nursing  
homes,  
with  
residents  
already  
at  
high

risk  
of  
SARS-  
CoV-2  
infection  
and  
illness,  
may  
have  
a  
higher  
burden  
of  
COVID-19  
than  
previously  
reported  
in  
federal  
data.  
According  
to  
a  
[cross-  
sectional  
study](#)  
published  
in  
*JAMA  
Network  
Open*  
and  
involving  
15,307  
US  
nursing  
homes  
in  
the  
National  
Healthcare  
Safety  
Network  
(NHSN),  
researchers  
estimate  
there  
were

more  
than  
68,000  
COVID-19  
cases  
and  
16,000  
related  
deaths  
nationally  
that  
were  
not  
recorded  
in  
federal  
data  
during  
the  
early  
months  
of  
the  
pandemic,  
through  
May  
24,  
2020.  
These  
numbers  
represent  
11.6%  
of  
COVID-19  
cases  
and  
14%  
of  
COVID-19  
deaths  
among  
nursing  
home  
residents  
in  
2020.  
Overall,  
a

mean  
of  
43.2%  
of  
all  
COVID-19  
cases  
and  
39.6%  
of  
COVID-19  
deaths  
in  
nursing  
homes  
counted  
by  
state  
health  
departments  
went  
unreported  
in  
federal  
databases,  
the  
research  
suggests.  
Researchers  
and  
policymakers  
are  
considering  
that  
SARS-  
CoV-2  
outbreaks  
in  
nursing  
homes  
may  
have  
been  
more  
onerous  
than  
previously  
believed,

and  
a  
failure  
to  
accurately  
collect  
case  
and  
death  
data  
may  
have  
led  
to  
inaccurate  
conclusions  
about  
the  
role  
of  
nursing  
homes  
in  
COVID-19  
outbreaks.

## **IVERMECTIN USE IN ARKANSAS JAIL**

A  
doctor  
at  
an  
Arkansas  
(US)  
jail  
is  
under  
investigation  
after  
[using](#)  
[the](#)  
[drug](#)  
[ivermectin](#)  
to  
treat

inmates  
with  
COVID-19,  
reportedly  
without  
their  
consent  
and  
despite  
[warnings](#)  
[from](#)  
[the](#)  
[US](#)  
[FDA](#)  
to  
not  
use  
the  
drug  
to  
treat  
or  
prevent  
the  
disease  
outside  
of  
approved  
clinical  
trials.  
Several  
inmates  
at  
a  
Washington  
County  
jail  
said  
they  
were  
told  
the  
pills  
were  
antibiotics,  
vitamins,  
or  
steroids,



not  
ivermectin,  
which  
is  
an  
antiparasitic  
primarily  
used  
in  
livestock.

Jail  
physician  
Dr.  
Rob  
Karas  
and  
Washington  
County  
Sheriff  
Tim  
Helder  
both

confirmed  
that  
ivermectin  
was  
prescribed  
to

inmates,  
beginning  
late  
last  
year,  
but  
they  
claimed  
detainees  
consented  
to  
taking  
the  
pills.

However,  
at  
least  
3  
inmates  
said

they  
would  
never  
have  
taken  
the  
drug  
if  
they  
knew  
it  
was  
ivermectin,  
indicating  
they  
felt  
as  
though  
they  
were  
being  
experimented  
on.  
After  
hearing  
from  
inmates,  
the  
American  
Civil  
Liberties  
Union  
(ACLU)  
called  
for  
the  
administration  
of  
ivermectin  
to  
end  
immediately  
and  
said  
[inmates](#)  
[are](#)  
[prepared](#)  
[to](#)

file  
a  
lawsuit  
to  
end  
the  
practice.  
As  
we  
previously  
reported,  
cases  
of  
ivermectin  
poisoning  
have  
risen  
over  
the  
past  
several  
weeks,  
as  
some  
conservative  
lawmakers,  
groups,  
and  
celebrities  
tout  
the  
drug,  
which  
has  
not  
been  
proven  
to  
work  
as  
prevention  
or  
treatment  
of  
SARS-  
CoV-2  
infection.  
Even

the  
drug's  
manufacturer,  
Merck,  
[released](#)  
[a](#)  
[statement](#)  
in  
February  
announcing  
that  
the  
drug  
was  
not  
effective  
in  
treating  
COVID-19  
and  
should  
not  
be  
used  
to  
do  
so.  
The  
Arkansas  
case  
is  
a  
disturbing  
example  
of  
how  
jail  
and  
prison  
detainees  
continue  
to  
be  
[dehumanized](#)  
[and](#)  
[exploited](#)  
for  
medical

experimentation  
in  
the  
US.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

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**Date : 9/14/2021 1:53:30 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - September 14, 2021**

**Webinar:  
COVID-19  
and  
Crisis  
Standards  
of  
Care:  
The  
Fourth  
Wave  
and  
the  
Future**

COVID-19  
has  
fundamentally  
changed  
the  
delivery  
of  
health  
care  
services  
worldwide,  
forcing  
difficult  
choices  
on

health  
professionals  
and  
laying  
bare  
many  
pre-  
existing  
health,  
medical,  
and  
public  
health  
sector  
frailties.

A  
fourth  
wave  
of  
the  
pandemic,  
driven  
by  
the  
Delta  
variant,  
extreme  
shortages  
of  
key  
resources  
have  
again  
brought  
the  
necessity  
of  
crisis  
standards  
of  
care  
to  
the  
forefront  
of  
the  
minds  
of

many  
clinicians  
and  
patients.

This  
free  
webinar,  
hosted  
by  
the  
National  
Academy  
of  
Medicine  
on  
September  
17  
from  
1:00-3:00  
p.m.  
EDT,  
will  
feature  
discussions  
on  
past  
and  
current  
challenges  
in  
ethically  
allocating  
scarce  
resources  
in  
the  
face  
of  
surging  
demand,  
including  
the  
healthcare  
staffing  
crisis,  
and  
identify



possible  
solutions  
to  
real-  
time  
issues  
and  
ways  
to  
ensure  
fair  
decisions  
are  
made  
even  
when  
systems  
are  
strained.

Find  
more  
information  
and  
[register  
here](#).

## **EPI UPDATE**

The  
[WHO  
COVID-19  
Dashboard](#)  
reports  
225  
million  
cumulative  
cases  
and  
4.63  
million  
deaths  
worldwide  
as  
of  
September  
13.

Global weekly mortality decreased substantially for the first time since early June, falling 12.7% from the previous week. Weekly mortality decreased as well — for the first time since late June\* — down 7.3% compared to the previous week. *\*With the exception of the week of July 19,*

when  
[Ecuador](#)  
reported  
8,786  
deaths.

Global  
Vaccination

The  
[WHO](#)  
reported  
5.53  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
September  
13.

A  
total  
of  
3.2  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.3  
billion  
are  
fully  
vaccinated.

Analysis  
from  
Our  
World  
in

Data indicates that [global daily vaccinations](#) leveled off after a week of sharp decline, holding relatively steady at 32-33 million doses per day\*. The global trend continues to closely follow Asia. Our World in Data estimates that there are 3.3 billion [vaccinated individuals](#) worldwide (1+ dose; [42.3%](#) of

the  
global  
population)  
and  
2.4  
billion  
who  
are  
fully  
vaccinated  
(30.1%  
of  
the  
global  
population).  
In  
terms  
of  
1+  
dose  
coverage,  
we  
expect  
Oceania  
(42.1%)  
to  
surpass  
the  
global  
average  
in  
the  
next  
several  
days,  
which  
would  
leave  
Africa  
(5.8%)  
as  
the  
only  
continent  
below  
the  
global  
average.

*\*The  
average  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

*UNITED  
STATES*

The  
US  
CDC  
reports  
41.0  
million  
cumulative  
COVID-19  
cases  
and  
658,410  
deaths.  
Daily  
incidence  
appears  
to  
have  
passed  
a  
peak;  
however,  
this  
likely  
still  
includes  
some  
effects  
from  
delayed  
reporting  
over  
the  
US  
Labor  
Day  
holiday  
weekend  
(September  
4-6).  
A  
similar  
trend  
is  
evident  
for  
daily  
mortality  
as

well.  
Even  
with  
the  
delayed  
reporting  
over  
the  
Labor  
Day  
weekend,  
the  
average  
daily  
mortality  
is  
still  
more  
than  
1,000  
deaths  
per  
day,  
and  
we  
expect  
the  
US  
to  
surpass  
660,000  
cumulative  
deaths  
in  
the  
next  
1-2  
days.  
This  
threshold  
corresponds  
to  
1  
death  
for  
every  
500  
people



in  
the  
US.  
The  
US  
surpassed  
1  
death  
per  
1,000  
population  
on  
December  
18,  
2020\*\*.

The  
US  
is  
#22  
globally  
in  
terms  
of  
per  
capita  
cumulative  
mortality.

*\*\*Changes  
in  
the  
frequency  
of  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In*

*an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

US  
Vaccination

The  
US  
has  
administered  
381  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines,  
and  
daily  
vaccinations  
peaked  
at  
nearly  
834,000  
doses  
per  
day  
on  
August  
29

and then decreased sharply over the Labor Day holiday weekend. Considering the expected delays in vaccination reporting, it could be another week or so before we can reassess the longer-term trends\*. There are 209.7 million individuals who have received at least 1 dose, equivalent to 63.2% of

the entire US population. Among adults, 75.7% have received at least 1 dose, as well as 14.1 million adolescents aged 12-17 years. A total of 179.0 million individuals are fully vaccinated, which corresponds to 53.9% of the total population. Approximately 65.0% of adults are fully vaccinated, as well

as  
11.1  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

## **VACCINE EFFECTIVENESS**

With  
about  
54%  
of  
the  
total

US  
population  
vaccinated,  
public  
health  
officials  
continue  
to  
urge  
people  
to  
get  
vaccinated  
and  
protect  
themselves  
from  
severe  
illness,  
hospitalization,  
and  
death.  
As  
daily  
incidence  
and  
mortality  
continue  
to  
rise,  
including  
among  
younger  
individuals,  
evidence  
continues  
to  
emerge  
regarding  
the  
effectiveness  
of  
SARS-  
CoV-2  
vaccines.  
Recent  
studies  
from

the  
US  
CDC  
show  
that  
unvaccinated  
individuals  
are  
10  
times  
more  
likely  
to  
be  
hospitalized  
and  
11  
times  
more  
likely  
to  
die  
from  
COVID-19  
than  
vaccinated  
individuals,  
illustrating  
the  
effect  
of  
SARS-  
CoV-2  
vaccines  
in  
terms  
of  
preventing  
severe  
disease  
and  
death.  
A  
study  
conducted  
by  
the  
CDC's

COVID-19  
Response  
Team  
evaluated  
vaccine  
effectiveness  
after  
the  
Delta  
variant  
became  
dominant  
in  
the  
US,  
based  
on  
data  
collected  
from  
June  
20-  
July  
17.  
The  
researchers  
found  
that  
[vaccinated  
individuals](#)  
were  
4.5  
times  
less  
likely  
to  
be  
infected  
with  
SARS-  
CoV-2  
compared  
with  
vaccinated  
individuals.  
While  
the  
estimated



vaccine  
effectiveness  
against  
infection  
fell  
from  
91%  
before  
June  
20  
to  
78%  
after  
that  
date,  
effectiveness  
remained  
greater  
than  
90%  
against  
both  
hospitalization  
and  
death.

### **ARGUMENT AGAINST BOOSTERS**

In  
an  
[expert  
review](#)  
published  
September  
13  
online  
in  
the  
peer-  
reviewed  
journal  
*The  
Lancet*,  
a  
group  
of  
US

and international scientists claim current evidence does not support providing booster doses of SARS-CoV-2 vaccines to the general public. The group —including 2 departing US FDA officials and WHO experts — said that any decision to provide additional vaccine doses should be evidence-based, concluding that despite

a  
small  
drop  
in  
protection  
against  
symptomatic  
disease  
caused  
by  
the  
Delta  
variant,  
authorized  
vaccine  
regimens  
continue  
to  
provide  
high  
levels  
of  
protection  
against  
severe  
disease  
and  
hospitalization  
for  
all  
major  
SARS-  
CoV-2  
variants.  
The  
authors  
acknowledged  
that  
some  
additional  
doses  
might  
be  
needed  
immediately  
for  
certain  
elderly

and immunocompromised populations, but they encouraged prioritizing primary immunizations over booster shots for the general public.

The authors also acknowledged that booster doses [might be necessary in the future](#) due to waning immunity or the emergence of a vaccine-resistant variant but that current evidence does not

warrant  
additional  
doses  
now  
because  
"efficacy  
against  
severe  
disease  
remains  
high."

The  
authors  
noted  
that  
currently  
available  
vaccine  
doses  
could  
save  
more  
lives  
and  
provide  
better  
protection  
against  
the  
emergence  
of  
new  
SARS-  
CoV-2  
variants  
if  
used  
in  
previously  
unvaccinated  
populations,  
especially  
those  
in  
low-  
and  
middle-

income  
countries.

**GLOBAL  
COVID-19  
SUMMIT**

US  
President  
Joe  
Biden  
plans  
to  
call  
on  
global  
leaders  
to  
[make  
new  
commitments](#)  
to  
help  
end  
the  
COVID-19  
pandemic  
during  
a  
virtual  
summit  
to  
be  
hosted  
by  
the  
White  
House  
next  
week.  
The  
[list  
of  
goals,](#)  
obtained  
by  
*The  
Washington  
Post,*

includes  
fully  
vaccinating  
at  
least  
70%  
of  
the  
world's  
population  
within  
the  
next  
year;  
improving  
access  
to  
medical  
supplies  
and  
treatments,  
including  
the  
establishment  
of  
a  
US  
\$2  
billion  
strategy  
to  
support  
"oxygen  
ecosystems";  
and  
forming  
and  
financing  
a  
global  
health  
security  
financial  
intermediary  
fund  
(FIF)  
this  
year.

The event, the Global COVID-19 Summit: Ending the Pandemic and Building Back Better, is expected to bring together heads of state, global health experts from non-profit organizations and academia, and private sector representatives, and is scheduled to be held September 22 during the UN General Assembly meetings.



In related news, the US government reportedly is in discussions with [India](#) to lift its ban on vaccine exports. India is the world's largest manufacturer of vaccines, but the government halted exports of SARS-CoV-2 vaccines in March 2021 when the country was experiencing a surge

in  
COVID-19  
cases.  
The  
ban  
has  
been  
particularly  
hard  
on  
lower-  
income  
countries  
(LICs)  
that  
expected  
to  
receive  
Indian-  
produced  
vaccines  
through  
the  
COVAX  
facility.  
India  
sold  
or  
donated  
about  
66  
million  
vaccine  
doses  
to  
nearly  
100  
LICs  
prior  
to  
the  
ban,  
the  
government  
claims.  
According  
to  
UNICEF,

the  
US  
is  
the  
largest  
donor  
of  
SARS-  
CoV-2  
vaccines  
globally,  
based  
on  
publicly  
available  
data.  
The  
US  
has  
donated  
and  
delivered  
more  
than  
114  
million  
doses,  
followed  
by  
China  
at  
34  
million.  
The  
WHO  
estimates  
11  
billion  
doses  
are  
needed  
to  
fully  
vaccinate  
at  
least  
70%  
of

the  
world's  
population.

## **US CHILD VACCINATION**

The  
number  
of  
new  
COVID-19  
cases  
among  
children  
in  
the  
US  
has  
[risen](#)  
[exponentially](#)  
in  
recent  
weeks,  
according  
to  
the  
[American  
Academy  
of  
Pediatrics](#),  
causing  
many  
parents  
to  
become  
[increasingly](#)  
[eager](#)  
[to](#)  
[vaccinate](#)  
their  
young  
kids,  
especially  
as  
they  
[return](#)  
[to](#)

school.

But  
none  
of  
the  
available  
vaccines  
are  
authorized  
for  
children  
under  
age  
12,  
prompting  
the  
US  
FDA  
this  
week  
to

warn  
parents  
to

not  
seek  
out  
SARS-  
CoV-2  
vaccines  
for  
children  
who  
are  
not  
yet  
eligible  
and  
physicians  
not  
to  
use  
the  
now  
fully  
approved  
Pfizer-  
BioNTech

vaccine  
"off-label"  
in  
younger  
patients,  
as  
they  
might  
need  
smaller  
dosages.  
The  
regulatory  
agency  
said  
it  
is  
"working  
around  
the  
clock"  
to  
support  
the  
review  
process  
necessary  
to  
safely  
and  
expeditiously  
authorize  
or  
approve  
a  
vaccine  
for  
children.  
US  
health  
officials  
say  
they  
are  
hopeful  
that  
a

vaccine  
will  
be  
available  
for  
5-  
to  
11-  
year-  
olds  
by  
the  
end  
of  
the  
year.  
Pfizer  
and  
BioNTech  
said  
they  
plan  
to  
present  
data  
on  
their  
vaccine  
among  
younger  
children  
“in  
the  
coming  
weeks,”  
raising  
hopes  
that  
a  
vaccine  
could  
be  
made  
available  
by  
the  
end  
of

October.

Until  
the  
FDA  
authorizes  
a  
vaccine,  
families  
should  
continue  
taking  
other  
precautions,  
including  
mask  
wearing.

## **PREGNANCY LOSS**

Pregnant  
people  
are  
at  
risk  
of  
severe  
illness  
due  
to  
COVID-19,  
and  
infection  
with  
SARS-  
CoV-2  
during  
pregnancy  
is  
associated  
with  
several  
adverse  
maternal  
and  
neonatal  
outcomes,  
including  
death,



stillbirth,  
and  
miscarriage.

In  
Mississippi  
(US),  
health  
officials  
are  
urging  
pregnant  
individuals  
to  
be  
vaccinated  
after  
noting  
they  
have

[recorded](#)

[72](#)

[fetal  
deaths](#)

past

20

weeks'

gestation

since

the

beginning

of

the

pandemic,

double

the

pre-

pandemic

rate.

State

officials

also

are

investigating

the

[deaths](#)

[of](#)

[8](#)

[infected](#)

pregnant  
people  
over  
the  
past  
4  
weeks,  
all  
of  
whom  
were  
unvaccinated.  
Only  
about  
25%  
of  
pregnant  
people  
have  
been  
vaccinated  
during  
pregnancy  
since  
December  
2020,  
according  
to  
US  
CDC  
data.

Several  
recently  
published  
studies  
support  
CDC  
guidance  
for  
pregnant  
people  
to  
get  
vaccinated,  
showing  
that  
expectant

individuals  
who  
receive  
a  
SARS-  
CoV-2  
vaccine  
are  
not  
at  
an  
increased  
risk  
of  
miscarriage.

In  
a  
research  
letter  
published  
online  
in  
the  
*Journal  
of  
the  
American  
Medical  
Association  
(JAMA)*,  
researchers  
concluded  
that  
among  
more  
than  
105,000  
pregnancies,  
miscarriages  
were  
no  
more  
likely  
to  
occur  
within  
28  
days

of  
vaccination  
compared  
with  
ongoing  
pregnancies  
regardless  
of  
which  
vaccine  
was  
received  
and  
gestational  
age.  
Similarly,  
in  
a  
[letter](#)  
published  
in  
the  
*New  
England  
Journal  
of  
Medicine  
(NEJM)*,  
CDC  
researchers  
said  
that  
although  
risk  
of  
miscarriage  
rose  
with  
increasing  
maternal  
age  
among  
vaccinated  
pregnant  
individuals,  
the  
risk  
was

within  
the  
expected  
range  
of  
11-22%  
of  
recognized  
pregnancies.  
Additionally,  
CDC  
researchers  
[updated](#)  
a  
[previous](#)  
[NEJM](#)  
[study](#)  
published  
in  
June  
in  
response  
to  
a  
[letter](#)  
published  
last  
week,  
finding  
the  
estimated  
risks  
of  
miscarriage  
among  
vaccinated  
pregnant  
people  
remained  
consistent  
with  
the  
risk  
reported  
in  
the  
general  
population.

Taken together, the studies and the real-world data support the need for vaccination of pregnant individuals to help lower the risk of adverse maternal and fetal outcomes amid the pandemic.

### **DISRUPTIONS IN HOSPITAL CARE**

An influx of COVID-19 patients and staffing shortages continue to plague hospitals

across  
the  
US,  
with  
many  
having  
to  
turn  
away  
patients  
or  
pause  
certain  
services.  
On  
September  
1,  
a  
73-  
year-  
old  
Alabama  
man  
died  
of  
cardiac  
complications  
after  
emergency  
staff  
[contacted](#)  
[43](#)  
[hospitals](#)  
[in](#)  
[3](#)  
[states](#)  
searching  
for  
a  
cardiac  
intensive  
care  
unit  
(ICU)  
bed,  
as  
most  
were

full  
with  
COVID-19  
patients.  
The  
man  
was  
transported  
to  
a  
hospital  
200  
miles  
from  
his  
home,  
where  
he  
died.  
ICUs  
in  
Alabama  
have  
been  
at-  
capacity  
in  
recent  
weeks  
amid  
a  
surge  
in  
cases  
due  
to  
the  
highly  
contagious  
Delta  
variant  
and  
low  
vaccination  
rates.  
In  
the  
man's



obituary,  
his  
family  
urged  
people  
to  
get  
vaccinated  
“in  
an  
effort  
to  
free  
up  
resources  
for  
non-  
COVID-  
related  
emergencies.”  
Recent  
data  
from  
the  
US  
CDC  
show  
that  
unvaccinated  
people  
are  
more  
than  
10  
times  
more  
likely  
to  
be  
hospitalized  
and  
11  
times  
more  
likely  
to  
die  
from

COVID-19  
than  
people  
who  
are  
vaccinated.

In  
Washington  
state,  
already-  
stressed  
[hospitals](#)  
[are](#)  
[taking](#)  
[on](#)  
[even](#)  
[more](#)  
[COVID-19](#)  
[patients](#)  
from  
neighboring  
Idaho,  
where  
some  
hospitals  
in  
the  
northern  
part  
of  
the  
state  
are  
operating  
under  
[crisis](#)  
[standards](#)  
[of](#)  
[care](#).  
Some  
leaders  
in  
Washington  
—  
where  
indoor  
masking

is  
mandatory  
and  
many  
workers  
are  
required  
to  
be  
vaccinated  
—

are  
expressing  
frustration  
over  
Idaho's  
lack  
of  
aggressive  
efforts  
to  
confront  
the  
pandemic,  
even  
amid  
a  
surge  
in  
cases,  
saying  
the  
situation  
is  
an  
example  
of  
how  
one  
state's  
crisis  
can  
intensify  
a  
crisis  
in  
another.

The situation helps to spotlight the importance of vaccination, but in some states, even vaccine requirements are backfiring.

A hospital in upstate New York said it will “pause” infant deliveries on September 24 after 6 maternity unit employees resigned over the state’s SARS-CoV-2 vaccination requirements for all

hospital  
and  
long-  
term  
care  
facility  
workers.  
Though  
the  
employee  
vaccination  
rate  
among  
Lewis  
County  
Health  
System  
employees  
is  
73%,  
[165](#)  
[employees](#)  
[remain](#)  
[unvaccinated](#)  
with  
the  
September  
27  
deadline  
to  
get  
at  
least  
one  
shot  
looming.  
The  
health  
system's  
CEO  
said  
he  
plans  
to  
focus  
on  
recruiting  
healthcare

workers  
who  
are  
vaccinated  
or  
get  
assistance  
from  
the  
state  
to  
be  
able  
to  
restart  
deliveries  
in  
the  
county.

### **ENGLAND VACCINE PASSPORTS**

England  
has  
[abandoned](#)  
[its](#)  
[previously](#)  
[announced](#)  
[plan](#)  
to  
implement  
a  
SARS-  
CoV-2  
vaccine  
passport  
program  
by  
the  
end  
of  
this  
month  
that  
would  
have  
required

people  
to  
show  
proof  
of  
vaccination  
to  
enter  
the  
country's  
nightclubs  
and  
certain  
other  
crowded  
venues,  
UK  
Health  
Secretary  
Sajid  
Javid  
told  
the  
BBC  
on  
September  
12.  
The  
announcement  
was  
made  
following  
opposition  
from  
some  
members  
of  
Parliament  
as  
well  
as  
representatives  
of  
the  
hospitality  
industry,  
who  
said

such  
a  
program  
would  
create  
a  
burden  
for  
businesses  
and  
infringe  
on  
residents'  
rights.

Speaking  
on  
the  
Andrew  
Marr  
Show,  
Secretary  
Javid  
said  
the  
government  
decided  
against  
the  
passports  
after  
"properly"  
looking  
at  
the  
issue  
and  
determining  
other  
factors  
could  
help  
keep  
COVID-19  
incidence  
down,  
including  
high  
vaccine



uptake,  
testing,  
surveillance,  
and  
treatments.  
Some  
people  
suggested  
the  
passport  
proposal  
simply  
was  
a  
ruse  
to  
encourage  
young  
people  
to  
be  
vaccinated,  
although  
Secretary  
Javid  
hinted  
the  
government  
could  
reverse  
course  
again  
if  
the  
number  
of  
new  
cases  
rises.  
About  
66%  
of  
the  
population  
of  
England  
is  
fully

vaccinated.  
Several  
days  
prior  
to  
the  
announcement,  
British  
researchers  
[published](#)  
[a](#)  
[paper](#)  
in  
*EClinicalMedicine*  
casting  
doubt  
on  
whether  
vaccination  
passport  
programs  
would  
incentivize  
more  
people  
to  
get  
the  
shots  
and  
calling  
for  
additional  
research  
into  
the  
matter.

## **FRANCE**

Former  
French  
Health  
Minister  
Dr.  
Agnès  
Buzyn  
has  
been

charged  
with  
"endangering  
the  
lives  
of  
others"  
for  
her  
management  
of  
the  
COVID-19  
pandemic,  
after  
a  
formal  
investigation  
found  
sufficient  
evidence  
to  
prosecute.  
Dr.  
Buzyn,  
who  
resigned  
in  
February  
2020  
to  
run  
for  
Mayor  
of  
Paris,  
has  
come  
under  
fire  
for  
her  
initial  
comments  
on  
the  
pandemic,  
when

she  
said  
there  
was  
little  
risk  
of  
the  
new  
coronavirus  
first  
detected  
in  
Wuhan,  
China,  
spreading  
among  
the  
general  
population.

But  
before  
she  
left  
her  
post,  
Dr.  
Buzyn  
backpedaled,  
warning  
President  
Emmanuel  
Macron  
that  
“the  
tsunami  
has  
yet  
to  
come.”

At  
a  
hearing  
on  
September  
10,  
Dr.  
Buzyn

said  
she  
welcomed  
“an  
excellent  
opportunity  
for  
me  
to  
explain  
myself  
and  
to  
establish  
the  
truth,”  
and  
indicated  
she  
plans  
to  
appeal.  
The  
case,  
which  
marks  
[one](#)  
[of](#)  
[the](#)  
[first](#)  
worldwide  
where  
a  
leading  
public  
official  
is  
being  
held  
legally  
accountable  
for  
their  
handling  
of  
the  
pandemic,  
presents

a  
challenge  
for  
President  
Macron,  
who  
will  
be  
campaigning  
for  
reelection  
over  
the  
coming  
year.

### **SARS- CoV-2/INFLUENZA VACCINES**

With  
research  
ongoing  
into  
the  
necessity  
of  
SARS-  
CoV-2  
vaccine  
booster  
doses,  
at  
least  
2  
pharmaceutical  
companies  
are  
banking  
on  
the  
need  
for  
annual  
shots,  
similar  
to  
influenza  
vaccinations,

and  
working  
on  
combining  
the  
2  
vaccines.  
Moderna  
on  
September  
9  
said  
it  
is  
developing  
a  
single  
shot  
containing  
a  
booster  
dose  
for  
its  
SARS-  
CoV-2  
vaccine  
and  
an  
experimental  
flu  
vaccine.  
The  
company  
said  
it  
eventually  
hopes  
to  
add  
vaccines  
for  
other  
respiratory  
diseases,  
including  
respiratory  
syncytial

virus  
(RSV),  
into  
a  
single  
annual  
shot.  
On  
September  
8,  
Novavax  
[announced](#)  
it  
has  
begun  
a  
Phase  
1/2  
clinical  
trial  
testing  
a  
combination  
vaccine  
using  
the  
company's  
vaccine  
candidates  
for  
seasonal  
influenza  
and  
SARS-  
CoV-2.  
Both  
vaccines  
have  
been  
tested  
in  
Phase  
3  
trials,  
but  
neither  
has  
received



regulatory  
authorization  
or  
approval.  
Combination  
vaccines  
have  
several  
potential  
benefits,  
including  
lowering  
the  
number  
of  
shots  
needed  
annually,  
improving  
vaccine  
coverage  
rates,  
and  
reducing  
costs  
for  
healthcare  
facilities  
and  
individuals.

### **COVID-19 IN GORILLAS**

Several  
western  
lowland  
gorillas  
at  
Zoo  
Atlanta  
have  
tested  
positive  
for  
the  
Delta  
variant

of  
SARS-  
CoV-2  
after  
employees  
of  
the  
zoo  
noticed  
some  
members  
of  
the  
gorilla  
population  
exhibiting  
symptoms  
such  
as  
coughing,  
nasal  
discharge,  
decreased  
appetite,  
and  
decreased  
activity.  
A  
total  
of  
20  
gorillas  
live  
in  
4  
troops  
at  
the  
zoo,  
and  
officials  
said  
that  
18  
of  
them  
were  
experiencing

varying  
degrees  
of  
symptoms.  
Sam  
Rivera,  
Senior  
Director  
of  
Animal  
Health  
for  
Zoo  
Atlanta,  
said  
the  
gorillas  
are  
receiving  
the  
best  
care  
possible  
and  
that  
at-  
risk  
members  
of  
the  
population  
are  
being  
treated  
with  
monoclonal  
antibodies.  
The  
gorillas  
will  
be  
provided  
with  
the  
Zoetis  
SARS-  
CoV-2  
vaccine

specifically  
designed  
for  
animals  
when  
they  
recover.  
Zoo  
Atlanta  
also  
announced  
plans  
to  
vaccinate  
their  
Bornean  
orangutan,  
Sumatran  
orangutan,  
African  
lion,  
and  
clouded  
leopard  
populations.

Zoo  
Atlanta  
expressed  
concern  
that  
the  
infections  
occurred  
despite  
rigorous  
safety  
measures  
when  
team  
members  
interact  
with  
great  
ape  
populations.  
Viral  
transmission

likely  
happened  
due  
to  
interactions  
with  
an  
asymptomatic  
but  
infected  
team  
member  
who  
was  
fully  
vaccinated  
and  
donning  
the  
appropriate  
personal  
protective  
equipment.  
The  
team  
member  
did  
not  
test  
positive  
until  
after  
the  
incident.  
The  
zoo  
provided  
further  
assurance  
that  
safety  
measures  
such  
as  
the  
use  
of  
N95

masks,  
increased  
ventilation,  
modified  
cleaning  
protocols,  
and  
social  
distancing  
barriers  
between  
the  
gorillas  
and  
team  
members  
have  
been  
implemented.  
The  
distance  
between  
the  
gorillas  
and  
visitors  
to  
the  
zoo  
would  
make  
zoonotic  
transmission  
of  
the  
disease  
unlikely,  
and  
the  
US  
CDC  
states  
that  
animals  
are  
not  
a  
significant

source  
of  
disease  
transmission  
to  
humans.

**Weekly Updates on SARS-CoV-2 Vaccines**

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**Date : 9/17/2021 1:08:55 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - September 17, 2021**

**New  
from  
the  
Center:**

The  
CommuniVax  
Coalition,  
led  
by  
the  
Johns  
Hopkins  
Center  
for  
Health  
Security  
and  
the  
Department  
of  
Anthropology  
at  
Texas  
State  
University,  
released  
4  
new  
reports



that  
share  
findings  
from  
local  
rapid  
research  
within  
Black  
and  
Hispanic/Latino  
communities  
in  
Alabama,  
California,  
Idaho,  
and  
Maryland.  
The  
reports  
highlight  
the  
urgent  
need  
to  
humanize  
delivery  
and  
communication  
strategies  
for  
SARS-  
CoV-2  
vaccines,  
develop  
heterogenous  
messaging,  
and  
implement  
anchor  
vaccination  
efforts  
in  
severely  
affected  
communities  
in  
a

holistic  
“whole  
person”  
recovery  
process.

You  
can  
[access  
the  
reports  
here.](#)

### **EPI UPDATE**

The  
[WHO  
COVID-19  
Dashboard](#)  
reports  
226  
million  
cumulative  
cases  
and  
4.65  
million  
deaths  
worldwide  
as  
of  
September  
16.

### *Global Vaccination*

The  
[WHO  
reported](#)  
5.63  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines

administered  
globally  
as  
of  
September  
15.

A  
total  
of  
3.25  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.34  
billion  
are  
fully  
vaccinated.

Analysis  
from  
Our  
World  
in  
Data  
indicates  
that  
the  
overall  
trend  
in  
[global  
daily  
vaccinations](#)  
continues  
to  
decline.  
After  
peaking  
3  
times  
at  
more

than  
42  
million  
doses  
per  
day  
between  
late  
June  
and  
early  
September,  
the  
average  
has  
fallen  
to  
fewer  
than  
30  
million.  
In  
mid-  
July,  
between  
the  
2  
highest  
peaks,  
the  
averaged  
dropped  
to  
20  
million  
before  
rebounding,  
so  
the  
longer-  
term  
trend  
remains  
uncertain\*.  
The  
global  
trend  
continues

to  
closely  
follow  
Asia.

Our  
World  
in  
Data  
estimates  
that  
there  
are  
3.37  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
42.8%  
of  
the  
global  
population)  
and  
2.45  
billion  
who  
are  
fully  
vaccinated  
(31.1%  
of  
the  
global  
population).  
Since  
mid-  
August,  
China  
has  
updated  
its  
cumulative  
1+  
dose  
vaccination

[totals](#)  
every  
7-14  
days,  
which  
causes  
a  
substantial  
jump  
in  
the  
global  
totals.  
Oceania  
(43.7%)  
surpassed  
the  
global  
average  
in  
terms  
of  
1+  
dose  
coverage.  
At  
5.9%  
coverage,  
Africa  
is  
now  
the  
only  
continent  
below  
the  
global  
average,  
by  
a  
factor  
of  
more  
than  
7,  
illustrating  
the  
stark

disparity  
in  
access  
to  
SARS-  
CoV-2  
vaccines.

*\*The  
average  
daily  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond*

*to  
the  
most  
recent  
data.*

*UNITED  
STATES*

The

[US](#)

[CDC](#)

reports

41.6

million

cumulative

COVID-19

cases

and

666,440

deaths.

After

decreasing

following

the

US

Labor

Day

holiday

weekend

(September

4-6),

daily

incidence

over

the

past

5

days.

The

US

appeared

to

be

approaching

a

peak

or

plateau



prior  
to  
the  
holiday  
weekend,  
so  
it  
is  
unclear  
how  
the  
trend  
over  
the  
coming  
week  
will  
compare  
to  
the  
pre-  
holiday  
trend.  
The  
current  
average  
(146,182  
new  
cases  
per  
day)  
is  
still  
approximately  
13,000  
fewer  
new  
cases  
per  
day  
than  
the  
most  
recent  
high  
on  
August  
31.

A similar trend is evident for daily mortality as well, although the current average has already surpassed the pre-holiday peak. With 1,447 deaths per day, the US is at its highest daily mortality since March 1\*. The US reported more than 1,900 deaths each of the last

2  
days,  
the  
highest  
single-  
day  
totals  
since  
February  
19.  
The  
US  
surpassed  
660,000  
cumulative  
deaths  
on  
September  
13,  
which  
corresponds  
to  
1  
death  
for  
every  
500  
people  
in  
the  
US.  
The  
US  
surpassed  
1  
death  
per  
1,000  
population  
on  
December  
18,  
2020.  
*\*Changes  
state-  
level  
reporting  
may*

*affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

If  
California  
continues  
on  
its  
current  
trajectory,  
it  
could  
soon  
drop  
from  
the  
High  
community

transmission  
( $\geq 100$   
new  
weekly  
cases  
per  
100,000  
population)  
to  
Substantial  
(50-99.9).  
It  
was  
briefly  
categorized  
as  
Substantial  
this  
week,  
but  
it  
moved  
back  
up  
to  
High  
as  
surveillance  
data  
caught  
up  
from  
the  
Labor  
Day  
holiday  
weekend.  
Connecticut  
has  
also  
been  
holding  
relatively  
steady  
at  
slightly  
more  
than

100  
and  
could  
fall  
to  
the  
Substantial  
category  
as  
well.  
The  
CDC  
also  
includes  
test  
positivity  
in  
its  
community  
transmission  
determination,  
but  
test  
positivity  
is  
not  
reported  
for  
either  
California  
or  
Connecticut.

California  
passed  
its  
most  
recent  
peak  
in  
mid-  
August,  
but  
unlike  
many  
other  
states,  
its

current  
surge  
was  
far  
smaller  
than  
its  
winter  
2020  
surge.  
In  
fact,  
California's  
most  
recent  
peak  
was  
less  
than  
one-  
third  
of  
its  
highest  
peak.  
In  
contrast,  
numerous  
states,  
particularly  
in  
HHS  
Regions  
4  
(Southeast),  
6  
(South  
Central),  
and  
7  
(Central),  
have  
approached  
or  
surpassed  
their  
previous  
highest

peaks  
during  
the  
current  
surge.  
For  
example,  
Florida  
spent  
nearly  
3  
weeks  
at  
its  
highest  
peak,  
reporting  
more  
than  
21,000  
new  
cases  
per  
day  
from  
August  
10-29

—  
approximately  
40%  
higher  
than  
its  
previous  
record

—  
before  
its  
epidemic  
began  
to  
recede.  
Louisiana  
set  
a  
new  
record  
high



of  
5,839  
new  
cases  
per  
day  
on  
August  
13,  
more  
than  
50%  
higher  
than  
its  
January  
2021  
peak.  
And  
Alabama,  
Georgia,  
and  
South  
Carolina  
peaked  
at  
96%,  
97%,  
and  
93%  
of  
their  
previous  
records,  
respectively.

Texas'  
surge  
continues  
to  
increase,  
up  
to  
nearly  
20,000  
new  
cases  
per

day  
on  
September  
14,  
86%  
of  
its  
record  
peak  
in  
January  
2021.  
Kentucky,  
Tennessee,  
and  
West  
Virginia  
are  
all  
setting  
new  
records  
with  
their  
current  
surges  
as  
the  
Delta  
wave  
moves  
north  
from  
Alabama,  
Florida,  
and  
Louisiana.  
Continuing  
north  
into  
Regions  
1,  
2,  
and  
3,  
daily  
incidence  
trends

are  
increasing  
in  
most  
states,  
but  
most  
are  
nowhere  
near  
their  
current  
records.  
Several  
states  
already  
appear  
to  
be  
approaching  
or  
passing  
their  
respective  
peaks

—  
including  
Connecticut,  
Massachusetts,  
New  
York,  
New  
Jersey,  
and  
Rhode  
Island

—  
and  
Region  
2,  
as  
a  
whole  
appears,  
to  
be  
peaking.  
The

muted  
impact  
of  
the  
Delta  
variant  
in  
these  
states  
is  
likely  
driven  
by  
a  
combination  
of  
higher  
vaccination  
coverage  
and  
reinstating  
various  
protective  
measures.

In  
fact,  
with  
the  
exception  
of  
West  
Virginia  
(#50,  
40.0%),  
all  
states  
in  
Regions  
1,  
2,  
and  
3  
are  
in  
the  
top  
20  
nationally

in  
terms  
of  
full  
vaccination  
coverage,  
ranging  
from  
56%  
(Pennsylvania)  
to  
69%  
(Vermont).

In  
addition  
to  
California,  
other  
states  
on  
the  
West  
Coast  
(in  
Regions  
9  
and  
10)  
were  
affected  
early  
in  
the  
Delta  
wave  
as  
well.  
The  
West  
Coast  
states  
have  
leveled  
off  
or  
peaked  
already,

but moving east, Idaho's epidemic is currently at 77% of its record high and still increasing sharply, mirroring trends in neighboring Region 8 (Mountain) states. Unlike states in the Southeast, however, most of the West Coast states remained well below their record highs. Oregon is the exception, peaking

at  
50%  
higher  
than  
its  
previous  
record  
daily  
incidence,  
even  
with  
nearly  
60%  
full  
vaccination  
coverage  
(#12  
nationally).

The  
Delta  
wave  
appears  
to  
be  
spreading  
inward  
from  
the  
coasts.  
The  
states  
in  
Region  
5  
(Midwest)  
are  
generally  
exhibiting  
increasing  
trends  
in  
daily  
incidence,  
with  
most  
currently  
around

50%  
of  
their  
highest  
peak  
and  
still  
accelerating.

In  
Region  
7  
(Central),  
Missouri

—  
which  
was  
affected  
very  
early  
in  
the  
surge

—  
passed  
its  
peak  
in  
early  
August,  
but  
it  
did  
not  
peak  
as  
high  
as  
the  
states  
in  
the  
Southeast  
region  
(~57%  
of  
its  
highest  
peak).



Iowa  
is  
exhibiting  
an  
accelerating  
trend,  
but  
it  
is  
still  
less  
than  
40%  
of  
its  
highest  
peak.  
A  
number  
of  
other  
states  
in  
Regions  
5  
and  
7  
were  
exhibiting  
accelerating  
trends  
prior  
to  
the  
Labor  
Day  
holiday  
weekend,  
but  
do  
not  
appear  
to  
have  
caught  
up  
from  
delayed

holiday  
reporting,  
including  
Indiana,  
Illinois,  
Kansas,  
Nebraska,  
and  
Wisconsin.  
States  
in  
Regions  
5  
and  
7  
generally  
fall  
between  
47%  
and  
57%  
full  
vaccination  
coverage  
(ranking  
#17-39).  
Considering  
the  
accelerating  
trajectories  
and  
low-  
to-  
moderate  
vaccination  
coverage  
in  
some  
states,  
Regions  
5  
and  
7  
could  
potentially  
face  
a  
severe

COVID-19  
surge  
in  
the  
coming  
weeks.

In  
Region  
6  
(South  
Central),  
New  
Mexico  
appears  
to  
have  
passed  
its  
peak  
as  
well,  
although  
the  
timing  
suggests  
that  
delayed  
holiday  
reporting  
could  
be  
a  
factor  
in  
its  
recent  
decrease.  
Notably,  
New  
Mexico  
only  
reached  
approximately  
30%  
of  
its  
record

high,  
which  
could  
be  
a  
result  
of  
the  
state  
having  
highest  
full  
vaccination  
coverage  
outside  
of  
Regions  
1,  
2,  
and  
3  
(#11;  
62%).  
All  
of  
the  
states  
in  
Region  
8  
(Mountain)  
are  
exhibiting  
accelerating  
trends  
in  
daily  
incidence.  
Most  
of  
these  
states  
are  
currently  
at  
approximately  
30%  
of

their  
record  
highs,  
but  
Montana  
and  
Wyoming  
are  
closer  
to  
60%.  
The  
accelerating  
trends  
indicate  
that  
these  
states  
may  
still  
be  
early  
in  
their  
respective  
surges,  
and  
most  
of  
these  
states  
are  
reporting  
less  
than  
50%  
full  
vaccination  
coverage  
—  
including  
#49  
Wyoming  
(40%)  
and  
#45  
North

Dakota  
(43%).

US  
Vaccination

The  
US  
has  
administered  
383  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines.

Daily  
vaccinations

peaked  
at  
837,000  
doses  
per  
day  
on  
August  
29  
and  
then  
began  
to  
decline  
going  
into  
the  
Labor  
Day  
holiday  
weekend.

The  
7-  
day  
average  
window  
still  
includes  
delayed

holiday  
weekend  
reporting,  
so  
it  
will  
be  
at  
least  
another  
several  
days  
before  
we  
can  
get  
a  
clearer  
picture  
of  
the  
longer-  
term  
trend\*.  
There  
are  
210.7  
million  
individuals  
who  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
63.5%  
of  
the  
entire  
US  
population.  
Among  
adults,  
76.1%  
have

received  
at  
least  
1  
dose,  
as  
well  
as  
14.2  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
180.1  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
54.2%  
of  
the  
total  
population.  
Approximately  
65.4%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
11.2  
million  
adolescents  
aged  
12-17  
years.



*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

## **UK VACCINE EFFECTIVENESS**

New  
[real-  
world  
data](#)  
from  
England  
offer  
additional  
evidence  
that  
full  
vaccination

can  
significantly  
reduce  
the  
risk  
of  
COVID-19  
mortality.

The  
UK  
Office  
of  
National  
Statistics  
(ONS)  
reported  
51,281  
COVID-19  
deaths  
in  
England  
from  
January  
2-  
July  
2,  
2021.

Of  
these,  
only  
256  
(0.5%)  
were  
classified  
as  
“breakthrough  
deaths”—  
ie,  
occurring  
in  
individuals  
who  
were  
fully  
vaccinated  
at  
least  
14

days  
before  
diagnosis\*.

\*A

*total  
of  
640  
deaths  
were  
in  
individuals  
who  
received  
all  
necessary  
doses  
of  
the  
vaccine,  
including  
those  
who  
were  
infected  
prior  
to  
receiving  
the  
second  
dose.*

The  
ONS  
also  
[provides  
weekly  
age-  
standardized  
mortality  
rates](#)  
(ASMRs)  
for  
COVID-19  
deaths  
as  
well  
as  
additional

information on the overall health of breakthrough deaths. The median age of breakthrough deaths was 84 years, which is 2 years older than the average for other COVID-19 deaths. Among breakthrough deaths, 61.1% were male, compared to 52.2% for other COVID-19 deaths. Notably, 13.1% of breakthrough deaths occurred

in individuals who were immunocompromised, compared with 5.4% of other COVID-19-related deaths. Additionally, 76.6% of breakthrough deaths occurred among individuals who were classified as “clinically extremely vulnerable”—based on age, underlying health conditions, and other factors associated with elevated risk of severe COVID-19 disease and death. In comparison

—  
which  
was  
slightly  
higher  
than  
for  
other  
COVID-19  
deaths  
(74.5%).  
While  
experts  
cautioned  
the  
data  
need  
to  
be  
interpreted  
in  
context—  
considering  
trends  
in  
COVID-19  
mortality  
during  
the  
study  
period  
and  
the  
emergence  
of  
the  
Delta  
variant  
in  
June  
—  
the  
ONS  
analysis  
provides  
additional  
evidence  
that

full  
vaccination  
offers  
very  
high  
protection  
against  
death  
from  
COVID-19.

**UK  
AUTUMN/WINTER  
PLAN**

On  
September  
14,  
the  
UK  
government  
published  
its  
[COVID-19  
Autumn  
and  
Winter  
Plan  
2021](#),  
an  
effort  
to  
mitigate  
impacts  
on  
the  
National  
Health  
System  
(NHS)  
and  
mitigate  
the  
need  
for  
future  
“lockdowns.”  
The  
plan

is  
separated  
into  
2  
parts:  
Plan  
A  
lays  
out  
a  
comprehensive  
approach  
to  
pandemic  
preventive  
efforts,  
and  
Plan  
B  
outlines  
measures  
that  
would  
only  
be  
enacted  
if  
epidemiological  
trends  
illustrate  
a  
need  
for  
additional  
risk  
mitigation.  
Most  
notably,  
Plan  
A  
includes  
a  
booster  
shot  
program  
for  
approximately  
30



million individuals, despite the WHO's call for a moratorium on such initiatives in higher-income countries so that additional doses can be allocated to low- and middle-income countries (LMICs).

Beginning next week, the UK government plans to provide booster doses —primarily of the Pfizer-BioNTech vaccine,

regardless  
of  
which  
vaccine  
was  
administered  
first  
—  
to  
adults  
aged  
50  
years  
and  
older,  
those  
with  
underlying  
health  
conditions,  
and  
healthcare  
workers,  
following  
a  
[recommendation  
from  
the  
UK  
Joint  
Committee  
on  
Vaccination  
and  
Immunization  
\(JCVI\)](#)  
that  
additional  
doses  
be  
administered  
at  
least  
6  
months  
after  
the  
second

dose.  
According  
to  
[data](#)  
[published](#)  
[this](#)  
[week](#)  
by  
[Public](#)  
[Health](#)  
[England](#)  
(PHE),  
the  
level  
of  
protection  
provided  
by  
2-  
dose  
vaccines  
against  
severe  
disease  
and  
death  
begins  
to  
wane  
approximately  
3  
months  
after  
the  
second  
dose.  
While  
the  
science  
underpinning  
the  
need  
for  
booster  
doses  
remains  
unclear,  
most

experts generally agree that additional doses are warranted for individuals who may not have mounted a strong immune response to the initial doses, such as the immunocompromised. The UK has no plans to offer the additional doses to the general population under age 50 this year.

Plan  
A  
also  
includes  
offering  
1  
dose  
of  
vaccine  
to  
adolescents  
aged  
12  
to  
15  
years,  
after  
a  
unanimous  
recommendation  
by  
the  
Chief  
Medical  
Officers  
(CMOs)  
from  
the  
4  
UK  
nations  
that  
children  
in  
this  
age  
bracket  
receive  
their  
first  
dose  
of  
the  
Pfizer-  
BioNTech  
vaccine.  
Additionally,  
Plan

A  
includes  
promoting  
SARS-  
CoV-2  
vaccination  
for  
those  
currently  
unvaccinated,  
keeping  
in  
place  
associated  
travel  
restrictions  
and  
providing  
[additional  
funding  
to  
the  
NHS](#)  
to  
support  
its  
COVID-19  
response  
over  
the  
next  
6  
months.  
If  
enacted,  
Plan  
B  
would  
involve  
requesting  
the  
public  
to  
act  
more  
carefully,  
instituting  
mandatory

vaccine  
passports  
for  
certain  
events  
and  
settings,  
and  
requiring  
mask  
use  
in  
some  
settings.

**US  
FDA  
MEETING  
ON  
VACCINE  
BOOSTERS**

The  
US  
FDA  
[Vaccines  
and  
Related  
Biological  
Products  
Advisory  
Committee](#)  
(VRBPAC)  
is  
meeting  
today,  
in  
part,  
to  
discuss  
a  
proposed  
plan  
to  
administer  
a  
[third  
dose  
of](#)

the  
Pfizer-  
BioNTech  
vaccine

6  
months  
after  
the  
initial  
2-  
dose  
course.

Last  
month,  
the  
Biden  
Administration  
announced  
plans  
to  
initiate  
booster  
dose  
campaigns  
for  
the  
Pfizer-  
BioNTech  
vaccine  
starting  
September  
20.

While  
the  
plan  
was  
announced  
weeks  
ago,  
the  
vaccine  
has  
not  
been  
authorized  
for  
a  
third



dose  
for  
most  
people.  
The  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
(ACIP)  
is  
scheduled  
to  
meet  
next  
week  
to  
explore  
the  
same  
issue.  
If  
either  
the  
FDA  
or  
CDC  
advisory  
bodies  
push  
back  
on  
the  
need  
for  
booster  
doses,  
it  
would  
put  
the  
country's  
leading  
health  
authorities  
at

odds  
with  
the  
White  
House.

The  
Biden  
Administration  
initially  
announced  
plans  
for  
booster  
doses  
after  
unpublished  
data  
from  
a  
[study](#)  
[in](#)  
[Israel](#)  
suggested  
that  
the  
Pfizer-  
BioNTech  
vaccine  
demonstrated  
reduced  
efficacy  
months  
after  
the  
initial  
inoculation.  
[Pfizer's](#)  
[company](#)  
[leadership](#)  
echoed  
these  
claims,  
suggesting  
that  
a  
booster  
dose

would  
be  
able  
to  
counteract  
waning  
immunity  
in  
individuals  
who  
received  
their  
full  
vaccine  
regimen  
months  
earlier.  
Pfizer  
released  
additional  
data  
from  
a  
booster  
dose  
campaign  
in  
Israel,  
in  
which  
a  
third  
dose  
increased  
effectiveness  
against  
symptomatic  
COVID-19  
back  
to  
approximately  
95%,  
similar  
to  
the  
initial  
efficacy  
after

2  
doses  
demonstrated  
in  
clinical  
trials.  
[Moderna](#)  
[also](#)  
[released](#)  
[data](#)  
suggesting  
that  
an  
increase  
in  
breakthrough  
cases  
made  
the  
idea  
of  
booster  
doses  
more  
reasonable.  
Despite  
these  
early  
claims,  
[Moderna's](#)  
[president](#)  
released  
a  
statement  
questioning  
the  
necessity  
of  
future  
vaccine  
doses.  
Documents  
[released](#)  
[by](#)  
[the](#)  
[FDA](#)  
[earlier](#)  
[this](#)

week  
in  
advance  
of  
the  
VRBPAC  
meeting  
showed  
that  
FDA  
scientists  
questioned  
the  
necessity  
of  
booster  
doses,  
considering  
that  
the  
vaccines  
are  
still  
exhibiting  
high  
levels  
of  
protection  
against  
severe  
disease  
and  
death  
in  
the  
US.  
Several  
FDA  
scientists  
published  
a  
commentary  
in  
*The  
Lancet*  
arguing  
that  
there

is  
not  
enough  
evidence  
to  
indicate  
waning  
protection  
from  
SARS-  
CoV-2  
vaccination.

## **VACCINE MANDATES**

A  
federal  
judge  
in  
New  
York  
state  
[blocked](#)  
[a](#)  
[statewide](#)  
[vaccine](#)  
[mandate](#)  
for  
healthcare  
workers  
late  
Tuesday.  
[Former](#)  
[New](#)  
[York](#)  
[Governor](#)  
[Andrew](#)  
[Cuomo](#)  
issued  
the  
mandate  
last  
month,  
and  
it  
was  
scheduled  
to

take  
effect  
September  
27.  
Plaintiffs  
in  
the  
lawsuit  
argue  
that  
the  
[absence](#)  
[of](#)  
[a](#)  
[religious](#)  
[exemption](#)  
violates  
the  
US  
Constitution,  
the  
New  
York  
State  
Human  
Rights  
Law,  
and  
New  
York  
City  
Human  
Rights  
Law.  
The  
17  
healthcare  
workers  
who  
filed  
the  
lawsuit  
have  
[objected](#)  
[to](#)  
[the](#)  
[vaccine](#)  
[requirement](#)

on  
the  
grounds  
that  
the  
cell  
lines  
of  
aborted  
fetuses  
were  
used  
in  
the  
vaccine's  
development.  
No  
major  
religious  
denomination  
has  
taken  
an  
opposing  
stance  
to  
vaccination,  
and  
Pope  
Francis  
has  
[encouraged  
vaccination,](#)  
calling  
it  
the  
"moral  
choice."  
The  
defendants  
in  
the  
lawsuit  
have  
until  
September  
22  
to



respond,  
and  
an  
additional  
hearing  
is  
scheduled  
for  
September  
28.

An  
Arkansas  
hospital  
is  
allowing  
religious  
exemptions  
for  
employees,  
but  
it  
is  
also  
asking  
them  
to  
[validate](#)  
[their](#)  
[objections](#)  
to  
show  
it  
is  
a  
“sincerely  
held  
belief.”  
Conway  
Regional  
Hospital  
[requires](#)  
[employees](#)  
to  
[complete](#)  
[a](#)  
[form](#)  
attesting

that  
they  
“do  
not  
use  
or  
will  
not  
use”  
any  
of  
more  
than  
30  
medications  
and  
other  
vaccines  
that  
also  
utilized  
fetal  
cell  
lines  
in  
their  
development  
in  
order  
to  
demonstrate  
their  
conviction.  
Notably,  
some  
of  
the  
medications  
listed  
include  
common  
pain  
killers  
such  
as  
aspirin,  
ibuprofen,  
Tylenol,

and  
Motrin;  
antihistamines  
such  
as  
Claritin  
and  
Benadryl;  
antacids  
such  
as  
Pepto-  
Bismol,  
Maalox,  
and  
Tums;  
and  
the  
MMR  
vaccine.

**LIMITING  
PUBLIC  
HEALTH  
AUTHORITY**

At  
least  
29  
US  
states  
have  
passed  
laws,  
enacted  
other  
initiatives,  
or  
succeeded  
in  
lawsuits  
that  
[permanently  
weaken  
state  
and  
local  
government  
authority](#)

to  
protect  
public  
health,  
and  
similar  
efforts  
are  
pending  
in  
multiple  
other  
states.  
The  
analysis  
was  
published  
by  
*Kaiser  
Health  
News*  
and  
the  
*Associated  
Press*  
as  
part  
of  
their  
ongoing  
series  
“[Underfunded  
and  
Under  
Threat](#),”  
which  
examines  
how  
US  
public  
health  
systems  
were  
unprepared  
to  
confront  
the  
COVID-19

pandemic  
and  
face  
ongoing  
politicization,  
funding  
cuts,  
and  
other  
hindrances.  
Legislators  
in  
at  
least  
16  
states  
have  
limited  
public  
health  
authorities'  
ability  
to  
issue  
mask  
mandates  
or  
quarantines  
or  
isolation  
orders,  
and  
in  
some  
cases,  
legislatures  
gave  
themselves  
that  
authority  
or  
shifted  
it  
to  
other  
elected  
officials.  
In

at  
least  
17  
states,  
lawmakers  
passed  
legislation  
banning  
SARS-  
CoV-2  
vaccine  
mandates  
or  
passports  
or  
facilitated  
opt-  
out  
options.

And  
in  
at  
least  
14  
states,  
new  
laws,  
executive  
orders,  
or  
court  
rulings  
ban  
or  
limit  
mask  
mandates.

Proponents  
of  
the  
new  
measures  
argue  
that  
they  
are  
a

necessary  
check  
on  
executive  
powers,  
particularly  
for  
appointed  
officials,  
and  
give  
lawmakers  
a  
voice  
in  
public  
health  
emergencies.  
Public  
health  
officials  
and  
experts  
have  
expressed  
frustration  
with  
these  
efforts  
and  
warned  
that  
the  
consequences  
of  
these  
actions  
will  
extend  
far  
beyond  
the  
current  
pandemic.  
These  
new  
limits  
could

also  
impact  
public  
health  
officials'  
ability  
to  
prevent  
and  
contain  
future  
outbreaks  
for  
any  
number  
of  
communicable  
diseases.

At  
least  
303  
state  
and  
local  
public  
health  
department  
leaders  
have  
resigned,  
retired,  
or  
been  
fired  
during  
the  
pandemic,  
according  
to  
the  
analysis.

## **US HOSPITALIZATION COSTS**

Preventable  
costs  
for



treating  
hospitalized,  
unvaccinated  
COVID-19  
patients  
in  
the  
US  
reached  
US  
\$5.7  
billion  
between  
June  
and  
August,  
with  
US  
\$3.7  
billion  
of  
that  
spending  
happening  
during  
a  
surge  
in  
hospitalizations  
in  
August  
alone.  
The  
analysis  
was  
conducted  
by  
the  
Kaiser  
Family  
Foundation  
and  
the  
Peterson  
Center  
on  
Healthcare.  
According

to  
the  
report,  
which  
uses  
data  
from  
the  
US  
Department  
of  
Health  
and  
Human  
Services  
(HHS)  
and  
the  
US  
CDC,  
there  
were  
an  
estimated  
287,000  
preventable  
COVID-19-  
related  
hospitalizations  
during  
the  
study  
period  
—  
specifically,  
those  
among  
unvaccinated  
individuals  
—  
which  
cost  
an  
average  
of  
US  
\$20,000  
each

to  
treat.  
The  
authors  
note  
that  
the  
costs  
are  
likely  
an  
underestimate  
of  
the  
overall  
burden,  
if  
publicly  
funded  
programs  
and  
private  
insurance  
premiums  
are  
considered.  
Recent  
US  
CDC  
data  
show  
that  
vaccinated  
people  
are  
10  
times  
less  
likely  
to  
be  
hospitalized  
with  
COVID-19  
than  
unvaccinated  
individuals.

## **GLOBAL VACCINE ACCESS**

Ahead  
of  
a  
global  
COVID-19  
summit,  
many  
researchers  
and  
health  
advocacy  
organizations  
are  
[amplifying  
their  
calls](#)  
to  
increase  
support  
for  
low-  
and  
middle-  
income  
countries  
(LMICs)  
to  
manufacture  
their  
own  
SARS-  
CoV-2  
supplies.  
On  
September  
14,  
WHO  
Director-  
General  
Dr.  
Tedros  
Adhanom  
Ghebreyesus  
and  
a

group  
of  
global  
health  
leaders  
issued  
an  
urgent  
call  
for  
global  
vaccine  
equity,  
with  
a  
focus  
on  
Africa,  
which  
accounts  
for  
approximately  
17%  
of  
the  
global  
population  
but  
only  
2%  
of  
the  
SARS-  
CoV-2  
vaccine  
doses  
administered  
thus  
far.  
Speaking  
at  
a  
press  
conference,  
Dr.  
Tedros  
said  
African

nations  
“have  
been  
left  
behind  
by  
the  
rest  
of  
the  
world,”  
with  
only  
2  
countries  
thus  
far  
surpassing  
40%  
coverage.  
He  
warned  
that  
the  
longer  
the  
virus  
is  
allowed  
to  
persist  
among  
unvaccinated  
populations,  
the  
greater  
the  
risk  
of  
new  
variants  
emerging  
and  
the  
greater  
the  
risk  
of

further  
disruption  
to  
social  
and  
economic  
systems.  
Additionally,  
the  
Gates  
Foundation,  
in  
its  
fifth  
annual  
[Goalkeepers  
report](#),  
urged  
[more  
investment  
in  
health  
infrastructure](#)—  
including  
vaccine  
research,  
development,  
and  
manufacturing  
capacities  
—  
especially  
in  
LMICs,  
where  
such  
investments  
will  
help  
future  
responses  
to  
public  
health  
emergencies.

Meanwhile,  
efforts

to  
develop  
an  
[African](#)  
[base](#)  
[for](#)  
[manufacturing](#)  
[SARS-](#)  
[CoV-2](#)  
[vaccines](#)  
have  
reportedly  
stalled.  
According  
to  
a  
report  
by  
[Reuters](#),  
a  
senior  
WHO  
official  
recently  
indicated  
that  
negotiations  
with  
Moderna  
regarding  
the  
technology  
transfer  
necessary  
to  
manufacture  
mRNA  
vaccines  
in  
Africa  
are  
not  
making  
sufficient  
progress.  
Although  
Moderna  
has



said  
it  
will  
not  
enforce  
patents  
related  
to  
its  
vaccine  
during  
the  
pandemic,  
officials  
from  
a  
WHO-  
supported  
[technology  
transfer  
hub](#)  
in  
South  
Africa  
said  
it  
could  
take  
more  
than  
a  
year  
to  
develop  
the  
capability  
to  
manufacture  
an  
mRNA  
vaccine  
without  
Moderna's  
assistance.  
The  
WHO  
reportedly  
is

in negotiations with Indonesia to establish a second technology transfer and manufacturing hub for mRNA vaccines. And in a potentially more positive development, a source told *Reuters* that India could soon resume exporting SARS-CoV-2 vaccines, including to Africa. Additionally, the EU recently committed to donate an additional

200 million doses of vaccine for Africa and LMICs, on top of previous commitments of 250 million, and reiterated its pledge to invest €1 billion (US \$1.2 billion) to improve vaccine manufacturing capabilities in Africa.

## **VACCINATION FOR YOUNGER CHILDREN**

Many countries have approved vaccinations for children  
12

years  
and  
older,  
and  
expanded  
eligibility  
to  
younger  
children  
may  
be  
on  
the  
horizon.  
Cuba  
has  
reportedly  
started  
vaccinating  
children  
as  
young  
as  
2  
years  
old,  
the  
only  
country  
thus  
far  
to  
vaccinate  
children  
that  
young.  
The  
Cuban  
Ministry  
of  
Health  
has  
not  
yet  
released  
data  
on  
how

many children have been vaccinated, but pediatric vaccination efforts are reportedly ongoing in Cienfuegos, where the healthcare system is strained under the burden of a surge driven by the Delta variant. Two Cuban-made vaccines currently in use have not yet been recognized by the WHO, and clinical

trial  
data  
have  
not  
yet  
been  
published  
publicly  
or  
been  
subjected  
to  
peer  
review;  
however,  
Cuban  
researchers  
say  
the  
vaccines  
are  
safe  
and  
effective,  
and  
they  
will  
eventually  
seek  
an  
[Emergency  
Use  
Listing  
\(EUL\)  
and  
prequalification](#)  
from  
the  
WHO.  
Children  
aged  
2-18  
years  
will  
receive  
the  
Soberana-2  
vaccine,

and  
adults  
will  
receive  
Abdala,  
according  
to  
a  
[state-  
run  
media  
source.](#)

A  
number  
of  
other  
countries  
are  
also  
expanding  
vaccination  
eligibility  
to  
younger  
children.  
El  
Salvador  
will  
begin  
vaccinating  
children  
aged  
6  
years  
and  
older,  
and  
the  
UAE  
approved  
[Sinopharm  
for  
children  
aged  
3  
years  
and](#)

older,  
but  
noted  
that  
vaccination  
will  
be  
optional.[Chile](#)  
authorized  
the  
Sinovac  
vaccine  
for  
children  
aged  
6  
years  
and  
older,  
based  
on  
data  
provided  
by  
China.  
Researchers  
are  
initiating  
[Phase](#)  
[3](#)  
[trials](#)  
[of](#)  
[the](#)  
[Sinovac](#)  
[vaccine](#)  
in  
children  
aged  
6  
months  
to  
17  
years.  
The  
trials  
will  
be  
coordinated



from  
South  
Africa,  
but  
trial  
sites  
include  
Chile,  
the  
Philippines,  
Malaysia,  
Kenya,  
and  
South  
Africa.

## **US SPORTS**

Approximately  
85%  
of  
NBA  
basketball  
players  
have  
received  
the  
SARS-  
CoV-2  
vaccine,  
but  
the  
league  
announced  
that,  
like  
other  
US  
professional  
sports  
leagues,  
it  
[will](#)  
[not](#)  
[mandate](#)  
[vaccinations](#).  
Protocol  
negotiations

for  
the  
2021-22  
are  
ongoing,  
but  
sources  
say  
vaccine  
mandates  
remain  
a  
“non-  
starter.”  
Current  
protocols  
keeping  
vaccinated  
and  
unvaccinated  
players  
separate  
in  
locker  
rooms  
as  
well  
as  
while  
eating  
and  
transporting  
to  
and  
from  
games.  
[NBA](#)  
[referees](#)  
and  
NBA  
staff  
are  
required  
to  
be  
vaccinated.

Spectators  
for  
Buffalo  
Bills  
(NFL)  
and  
Sabres  
(NHL)  
games  
will  
be  
required  
to  
[be](#)  
[vaccinated](#)  
for  
home  
games  
this  
season.  
Starting  
September  
25  
(Sabres)  
and  
26  
(Bills),  
fans  
aged  
12  
years  
and  
older  
attending  
games  
at  
Highmark  
Stadium  
and  
KeyBank  
Center  
must  
have  
received  
at  
least  
1  
dose

of  
a  
SARS-  
CoV-2  
vaccine,  
and  
they  
must  
be  
fully  
vaccinated  
by  
the  
end  
of  
October.  
Notably,  
the  
2  
venues  
will  
not  
offer  
a  
testing  
option  
in  
order  
to  
opt  
out  
of  
vaccination,  
and  
according  
to  
the  
[Buffalo  
Bills](#)  
website,  
no  
exceptions  
will  
be  
made  
to  
the  
vaccination

mandate,  
including  
for  
medical  
or  
religious  
exemptions.  
Spectators  
under  
the  
age  
of  
12  
must  
wear  
a  
mask  
while  
inside  
the  
venues,  
but  
older  
individuals  
are  
not  
subject  
to  
a  
mask  
mandate.  
Unvaccinated  
fans  
were  
allowed  
at  
the  
Bills  
home  
game  
on  
September  
12  
while  
masked,  
but  
county  
health

officials  
reported  
that  
fewer  
than  
half  
of  
stadium  
attendees  
wore  
masks.  
All  
events  
held  
in  
the  
2  
venues  
are  
subject  
to  
the  
new  
rules,  
including  
concerts.

[Weekly Updates on SARS-CoV-2 Vaccines](#)

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Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 9/21/2021 2:20:43 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - September 21, 2021**

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
228.4  
million  
cumulative  
cases  
and  
4.69  
million  
deaths  
worldwide  
as  
of  
September  
21.  
Global  
weekly  
incidence  
decreased  
by  
8.6%  
compared  
to



the  
previous  
week,  
and  
mortality  
fell  
by  
6.6%.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
5.78  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
September  
20.

A  
total  
of  
3.30  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.39  
billion  
are  
fully  
vaccinated.  
Analysis  
from

Our World in Data indicates that the overall trend in [global daily vaccinations](#) continues to decline. After peaking 3 times at more than 42 million doses per day between late June and early September, the average has fallen to 29 million. In mid-July, between the 2 highest

peaks,  
the  
average  
dropped  
as  
low  
as  
20  
million  
before  
rebounding,  
so  
the  
longer-  
term  
trend  
remains  
uncertain\*.  
The  
global  
trend  
continues  
to  
closely  
follow  
Asia.  
Daily  
vaccinations  
in  
Europe  
have  
steadily  
declined  
since  
early  
July,  
and  
if  
the  
continent  
as  
a  
whole  
continues  
on  
this  
trajectory,  
it

could  
soon  
fall  
below  
Africa  
on  
a  
per  
capita  
basis.

On  
the  
opposite  
end  
of  
the  
spectrum,  
Oceania  
is  
currently  
#1  
globally  
in  
terms  
of  
per  
capita  
daily  
vaccinations.

It  
was  
second  
to  
last  
(ahead  
of  
only  
Africa)  
as  
recently  
as  
early  
July,  
but  
its  
trend  
has  
accelerated

over  
the  
past  
several  
months.  
Our  
World  
in  
Data  
estimates  
that  
there  
are  
3.43  
billion  
vaccinated  
individuals  
worldwide  
(1+  
dose;  
43.6%  
of  
the  
global  
population)  
and  
2.51  
billion  
who  
are  
fully  
vaccinated  
(31.9%  
of  
the  
global  
population).

*\*The  
average  
daily  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for*

*the  
most  
recent  
data,  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.*

*In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

*UNITED  
STATES*

*The*

*US  
CDC*

*reports*

*42.0*

*million*

*cumulative*

*COVID-19*

*cases*

*and*

672,738  
deaths.  
The  
US  
appears  
as  
though  
it  
may  
have  
passed  
a  
peak  
in  
terms  
of  
daily  
incidence.  
The  
most  
recent  
high  
was  
159,929  
new  
cases  
per  
day  
on  
September  
1,  
and  
the  
trend  
began  
to  
decline  
slightly  
before  
the  
Labor  
Day  
holiday  
weekend.  
The  
reporting  
has  
largely

recovered following the holiday, but the average daily incidence has not returned to the pre-holiday level. The current average is approximately 141,000 new cases per day and appears to be decreasing. Daily mortality continues to increase slowly, now up to 1,521 deaths per day — the highest



average  
since  
February  
27.  
If  
the  
daily  
incidence  
peaked  
on  
September  
1,  
we  
would  
expect  
mortality  
to  
peak  
in  
the  
next  
week  
or  
so\*.

*\*Changes  
in  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort  
to  
reflect  
the  
longer-*

*term  
trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

At  
more  
than  
1,500  
deaths  
per  
day,  
the  
US  
could  
surpass  
675,000  
cumulative  
deaths  
in  
the  
next  
several  
days,  
which  
would  
make  
the  
COVID-19  
pandemic  
more  
deadly  
in  
the  
US  
than  
the  
[1918](#)

influenza  
pandemic.

Notably,  
the

US  
population  
in

1918

(approximately  
105  
million)

was

less

than

one-

third

of

the

current

population,

so

the

COVID-19

mortality

is

much

lower

on

a

per

capita

basis.

California

is

the

only

US

state

categorized

as

having

Substantial

community

transmission,

having

fallen

below

the  
threshold  
of  
100  
weekly  
new  
cases  
per  
100,000  
population  
that  
corresponds  
to  
the  
High  
category.  
California's  
test  
positivity  
is  
not  
reported  
by  
the  
CDC.  
The  
next  
4  
states  
are  
reporting  
between  
125-150  
weekly  
new  
cases  
per  
100k:  
Connecticut  
(126.5),  
Colorado  
(127.9),  
Maryland  
(141.5),  
and  
Vermont  
(146.3).

US

Vaccination

The

US

has

administered

386

million

[cumulative](#)

[doses](#)

of

SARS-

CoV-2

vaccines.

[Daily](#)

[vaccination](#)

reporting

appears

to

have

recovered

from

the

Labor

Day

holiday

weekend,

and

the

longer-

term

trend

continues

to

decline

from

the

most

recent

peak

on

August

29\*.

There

are

212.0

million

individuals

who  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
63.9%  
of  
the  
entire  
US  
population.

Among  
adults,  
76.5%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
14.4  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
181.7  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
54.7%  
of  
the

total  
population.  
Approximately  
65.9%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
11.5  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5*

*days  
ago.*

**US  
FDA  
PANEL  
BOOSTER  
DOSE  
RECOMMENDATION**

The  
US  
FDA's  
Vaccines  
and  
Related  
Biological  
Products  
Advisory  
Committee  
(VRBPAC)  
on  
September  
17  
voted  
16-2  
against  
authorizing  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
SARS-  
CoV-2  
vaccine  
for  
the  
general  
population,  
but  
it  
unanimously  
recommended  
[third  
doses  
for  
individuals](#)



aged  
65  
years  
and  
older  
and  
those  
who  
are  
at  
elevated  
risk  
for  
severe  
disease.  
The  
panel's  
recommendation  
—  
made  
after  
more  
than  
7  
hours  
of  
deliberation  
—  
is  
a  
surprising  
rebuke  
to  
plans  
previously  
announced  
by  
US  
President  
Joe  
Biden,  
who  
expected  
booster  
doses  
to  
begin  
for

the  
general  
population  
this  
week.  
Although  
the  
FDA  
is  
not  
required  
to  
follow  
VRBPAC  
recommendations,  
it  
generally  
does,  
and  
both  
the  
FDA  
and  
the  
US  
CDC's  
Advisory  
Committee  
on  
Immunization  
Practices  
(ACIP)  
are  
expected  
to  
adopt  
the  
recommendation  
in  
the  
coming  
days  
and  
clarify  
who  
qualifies  
for  
booster

doses.  
VRBPAC  
also  
signaled  
unanimous  
support  
for  
third  
doses  
for  
healthcare  
workers  
and  
others  
at  
high  
occupational  
risk,  
but  
it  
did  
not  
take  
a  
formal  
vote.  
The  
panel  
will  
likely  
discuss  
booster  
doses  
for  
those  
individuals  
and  
individuals  
who  
have  
received  
the  
Moderna  
and  
J&J-  
Janssen  
vaccines  
at

a  
later  
date.

Hours  
before  
the  
VRBPAC  
meeting,  
the  
[CDC](#)  
[released](#)  
[data](#)  
indicating  
the  
level  
of  
protection  
against  
hospitalization  
waned  
significantly  
in  
the  
4  
months  
following  
vaccination.  
The  
[study](#),  
published  
in  
the  
CDC's  
*Morbidity  
and  
Mortality  
Weekly  
Report  
(MMWR)*,  
showed  
vaccine  
effectiveness  
(VE)  
against  
hospitalization  
for  
the

Pfizer-BioNTech vaccine fell from 91% in the first 4 months to 77% beyond 120 days post-vaccination. For the Moderna vaccine, VE against hospitalization remained high, falling only 1 percentage point (pp) after 120 days, from 93% to 92%. Although there were not enough participants to comparatively

evaluate  
the  
J&J-  
Janssen  
vaccine's  
effectiveness  
over  
time,  
the  
study  
said  
the  
single-  
dose  
vaccine  
has  
been  
71%  
effective  
at  
preventing  
hospitalization.

While  
most  
[health](#)  
[experts](#)  
[applauded](#)  
the  
FDA  
panel's  
decision,  
arguing  
that  
it  
was  
evidence-  
based,  
some  
US  
residents  
expressed  
confusion  
over  
the  
recommendation.  
Biden  
administration

officials  
appeared  
to  
[backpedal](#)  
[slightly](#)  
on  
the  
previous  
announcement  
that  
booster  
doses  
could  
be  
made  
available  
to  
the  
general  
public  
beginning  
this  
week,  
with  
several  
saying  
they  
still  
expected  
US  
health  
agencies  
to  
recommend  
the  
extra  
shots  
for  
the  
general  
population  
in  
the  
coming  
weeks  
when  
[more](#)  
[data](#)

become  
available.

There  
remains  
significant  
debate

over  
the  
need  
for  
widespread  
booster  
doses.

Some  
experts  
instead  
advocate  
for  
increased  
focus  
on  
reaching  
unvaccinated  
individuals,

who  
account  
for  
the  
majority  
of  
new  
COVID-19  
cases

in  
the  
US,  
and  
others  
call  
for

equitable  
allocation  
and  
distribution  
of  
available  
doses  
globally.



**J&J-  
JANSSEN  
VACCINE  
SECOND  
DOSE**

On  
September  
21,  
[Johnson](#)  
&  
[Johnson](#)  
(J&J)  
announced  
preliminary  
findings  
from  
a  
Phase  
3  
clinical  
trial  
that  
indicate  
[increased](#)  
[protection](#)  
[following](#)  
[a](#)  
[second](#)  
[dose](#)  
of  
its  
SARS-  
CoV-2  
vaccine,  
developed  
in  
collaboration  
with  
Janssen  
Pharmaceuticals.  
Unlike  
other  
major  
vaccines  
—  
including  
those

from  
Pfizer-  
BioNTech,  
Moderna,  
and  
AstraZeneca-  
Oxford

—

the  
J&J-  
Janssen  
vaccine  
was  
originally  
authorized  
as  
a  
single  
dose.

In  
the  
[Phase](#)  
[3](#)  
[clinical](#)  
[trial](#),  
the  
second  
dose  
was  
administered

[2](#)  
[months](#)  
[after](#)  
[the](#)  
[first](#)  
[dose](#),

and  
the  
control  
group  
was  
made  
up  
of  
individuals  
who  
received  
only

a  
single  
dose.  
The  
press  
release  
does  
not  
indicate  
the  
total  
number  
of  
participants.

According  
to  
the  
press  
release,  
a  
second  
dose  
[increased](#)  
[the](#)  
[vaccine's](#)  
[efficacy](#)  
(compared  
to  
a  
single  
dose)  
by  
an  
estimated  
100%  
against  
severe  
disease\*  
and  
75%  
and  
94%  
against  
symptomatic  
COVID-19  
globally  
and

in  
the  
US,  
respectively.  
Additionally,  
antibody  
levels  
after  
the  
second  
dose  
were  
4-6  
times  
higher  
than  
after  
a  
single  
dose.  
The  
study  
also  
evaluated  
a  
second  
dose  
administered  
6  
months  
after  
the  
first  
dose.  
Following  
a  
booster  
6-  
month  
booster,  
antibody  
levels  
increased  
by  
a  
factor  
of  
12

compared  
to  
a  
single  
dose.  
The  
press  
release  
does  
not  
provide  
overall  
efficacy  
estimates  
(ie,  
compared  
to  
receiving  
no  
vaccine  
at  
all).  
The  
press  
release  
also  
describes  
real-  
world  
data  
that  
indicate  
the  
single-  
dose  
regimen  
provides  
strong,  
lasting  
protection  
against  
COVID-19.  
As  
has  
been  
the  
trend  
throughout

the  
pandemic,  
the  
preliminary  
findings  
were  
presented  
via  
press  
release,  
and  
the  
data  
have  
not  
been  
published  
publicly  
nor  
subjected  
to  
peer  
review;  
however,  
J&J  
committed  
to  
submitting  
the  
full  
dataset  
for  
publication  
“in  
the  
coming  
months.”

*\*The  
efficacy  
against  
severe  
disease  
is  
based  
on  
only  
8  
cases*

*among  
the  
control  
group  
and  
zero  
among  
those  
who  
received  
the  
second  
dose.  
The  
low  
number  
of  
cases  
yields  
a  
large  
confidence  
interval  
(30-100%),  
and  
additional  
data  
would  
provide  
a  
better  
understanding  
of  
the  
protective  
effect.*

**PEDIATRIC  
VACCINATION  
DATA**

Pfizer  
and  
BioNTech  
on  
September  
20  
[announced](#)  
[positive](#)

results  
from  
a  
Phase  
2/3  
trial  
of  
their  
SARS-  
CoV-2  
vaccine  
in  
children  
aged  
5  
to  
11  
years.  
The  
researchers  
found  
that  
a  
2-  
dose  
regimen  
of  
10µg  
doses  
administered  
21  
days  
apart  
demonstrated  
a  
favorable  
safety  
profile  
and  
robust  
neutralizing  
antibody  
response.  
The  
findings  
—  
which  
are



neither  
published  
nor  
peer-  
reviewed

—

are

a

crucial  
step

toward

a

SARS-

CoV-2

vaccine

becoming

available

for

younger

children,

and

the

companies

expect

to

submit

an

application

to

the

US

FDA

for

the

vaccine's

authorization

for

that

age

group

by

the

end

of

September.

US

regulators

have

issued  
warnings

to  
the  
general  
public  
to  
wait  
for  
authorization  
before  
seeking  
vaccination  
for  
younger  
children,  
as  
the  
full  
adult  
dose  
of  
30µg  
may  
put  
children  
at  
a  
higher  
risk  
for  
adverse  
side  
effects,  
including  
myocarditis.

The  
trial  
included  
nearly  
2,300  
children,  
and  
two-  
thirds  
of  
them

in  
the  
vaccine  
group.  
The  
vaccinated  
children  
also  
were  
compared  
with  
a  
separate  
cohort  
of  
16-25-  
year-  
old  
individuals  
who  
received  
the  
full  
adult  
course  
of  
the  
vaccine  
(2  
doses  
of  
30 $\mu$ g).  
The  
trial  
found  
that  
the  
neutralizing  
antibody  
response  
was  
similar  
between  
both  
vaccinated  
groups,  
with  
the

neutralizing  
antibody  
levels  
within  
5%  
of  
each  
other.  
Both  
groups  
also  
experienced  
[similar](#)  
[post-](#)  
[vaccination](#)  
[adverse](#)  
[events](#).

Results  
from  
another  
study  
evaluating  
the  
Sinopharm  
SARS-  
CoV-2  
vaccine  
in  
children  
were  
published  
on  
September  
15  
in  
[The](#)  
[Lancet](#)  
[Infectious](#)  
[Diseases](#).  
The  
Phase  
1/2  
trial  
examined  
the  
safety  
and

immunogenicity  
of  
the  
vaccine  
in  
a  
cohort  
of  
children  
aged  
3-17  
years,  
with  
participants  
broken  
into  
several  
age  
groups  
(3-5,  
6-12,  
and  
13-17  
years)  
and  
dosing  
groups  
(0  
[control],  
2µg,  
4µg,  
and  
8µg).  
Three  
(3)  
doses  
of  
each  
vaccine  
dosage  
or  
placebo  
were  
administered  
28  
days  
apart.  
All

adverse events were categorized as mild or moderate severity, but the article does not report on serious adverse events.

The study concluded that children who received the vaccine had robust immune responses and similar levels of neutralizing antibodies to those observed in older vaccine recipients. The study recommended

a  
2-  
shot  
4µg  
dose  
regimen  
for  
future  
Phase  
3  
trials.  
[Additional  
data  
are  
being  
collected  
through  
a  
Phase  
3  
trial  
currently  
taking  
place  
in  
the  
UAE.](#)

**UN  
GENERAL  
ASSEMBLY  
&  
COVID-19  
SUMMIT**

Beginning  
with  
an  
[address  
to  
the  
UN  
General  
Assembly](#)  
today,  
US  
President  
Joe  
Biden

will  
focus  
his  
attention  
on  
efforts  
to  
end  
the  
COVID-19  
pandemic  
and  
attempt  
to  
rally  
other  
vaccine-  
producing  
nations  
to  
commit  
to  
providing  
additional  
doses  
to  
countries  
in  
need.  
In  
addition  
to  
the  
main  
UN  
General  
Assembly  
meetings,  
the  
US  
will  
participate  
in  
a  
virtual  
COVID-19  
summit  
on



September  
22  
and  
a  
meeting  
of  
the  
Quadrilateral  
Security  
Dialogue  
(Australia,  
India,  
Japan,  
US)  
on  
September  
24.  
The  
effort  
to  
improve  
vaccine  
diplomacy  
is  
being  
watched  
carefully  
by  
public  
health  
experts,  
advocates,  
and  
organizations  
eager  
for  
President  
Biden  
to  
fulfill  
his  
pledge  
that  
the  
US  
will  
serve  
as

an  
“arsenal  
of  
vaccines”  
for  
the  
world.  
The  
US,  
along  
with  
several  
other  
higher-  
income  
nations,  
has  
faced  
criticism  
for  
ignoring  
calls  
from  
the  
WHO  
to  
postpone  
vaccine  
booster  
dose  
programs  
in  
order  
to  
redirect  
those  
shots  
to  
the  
COVAX  
facility,  
which  
is  
behind  
schedule  
on  
its  
goal

to  
vaccinate  
at  
least  
10%  
of  
the  
populations  
in  
low-  
and  
middle-  
income  
countries  
(LMICs).  
At  
the  
COVID-19  
summit,  
the  
US  
is  
expected  
to  
make  
several  
announcements  
regarding  
its  
own  
commitments.  
Reportedly,  
the  
US  
government  
is  
negotiating  
to  
purchase  
an  
additional  
500  
million  
doses  
of  
the  
Pfizer-  
BioNTech

vaccine  
to  
distribute  
globally,  
which  
would  
bring  
the  
total  
US  
donation  
to  
1.15  
billion—  
about  
one-  
tenth  
of  
the  
estimated  
11  
billion  
the  
world  
needs.

US  
officials  
have  
expressed  
concern  
that  
the  
UN  
General  
Assembly  
meetings  
could  
become  
a  
superspreader  
event,  
with  
the  
world  
body  
relying  
only

on  
an  
honor  
system  
to  
ensure  
attendees  
are  
vaccinated  
before  
they  
speak.  
More  
than  
100  
heads  
of  
state  
and  
government  
as  
well  
as  
more  
than  
20  
foreign  
ministers  
have  
registered  
to  
speak  
in  
person  
at  
the  
meeting,  
with  
some  
already  
openly  
defying  
the  
vaccine  
honor  
system.  
Brazil  
President

Jair  
Bolsanaro,  
for  
example,  
said  
he  
will  
decide  
whether  
to  
take  
the  
vaccine  
after  
everyone  
in  
his  
nation  
is  
vaccinated  
—  
only  
36%  
is  
currently  
vaccinated.  
Other  
leaders,  
including  
Vietnamese  
President  
Nguyen  
Xuan  
Phuc,  
have  
not  
disclosed  
their  
vaccination  
status,  
and  
Russia  
complained  
the  
requirement  
infringes  
upon  
nations’

rights  
to  
participate  
at  
the  
UN.  
The  
New  
York  
City  
government,  
which  
requires  
proof  
of  
vaccination  
for  
convention  
centers,  
has  
said  
the  
requirement  
includes  
the  
UN  
assembly  
hall,  
although  
the  
UN  
headquarters  
building  
is  
considered  
international  
territory.  
In  
a  
goodwill  
effort,  
the  
municipal  
government  
has  
set  
up  
a

mobile  
vaccine  
clinic  
outside  
the  
UN  
complex  
to  
offer  
free  
testing  
and  
vaccination.

## **US AIR TRAVEL REQUIREMENTS**

The  
US  
government  
plans  
to  
[ease](#)  
[travel](#)  
[restrictions](#)  
for  
fully  
vaccinated  
foreign  
nationals  
beginning  
in  
November,  
marking  
the  
end  
of  
an  
18-  
month  
interruption  
to  
international  
on  
travel.  
The  
US



currently  
prohibits  
travel  
for  
most  
non-  
US  
citizens  
who  
have  
visited  
Brazil,  
China,  
the  
EU,  
India,  
Iran,  
South  
Africa,  
or  
the  
UK  
within  
the  
past  
14  
days.  
Under  
the  
new  
policy,  
non-  
US  
residents  
traveling  
to  
the  
US  
will  
have  
to  
show  
proof  
of  
vaccination  
and  
proof  
of

a  
negative  
SARS-  
CoV-2  
test  
within  
3  
days  
before  
boarding  
a  
US-  
bound  
aircraft.  
Children  
not  
yet  
eligible  
for  
vaccination  
will  
be  
allowed  
to  
travel  
with  
only  
a  
negative  
test.  
The  
US  
CDC  
is  
expected  
to  
issue  
an  
order  
directing  
airlines  
to  
collect  
travelers'  
phone  
numbers  
and  
email

addresses

for

a

new

contact

tracing

system

that

will

enable

health

officials

to

follow

up

with

travelers

after

they

arrive

in

the

US.

Additionally,

unvaccinated

US

citizens

arriving

in

the

US

will

need

to

show

proof

of

a

negative

SARS-

CoV-2

test

taken

within

1

day

of

traveling

to  
the  
US  
and  
and  
also  
complete  
another  
test  
upon  
arrival  
(reportedly,  
at  
their  
own  
expense).  
This  
week,  
the  
US  
extended  
its  
restrictions  
on  
nonessential  
travel  
to  
Mexico  
and  
Canada,  
but  
there  
is  
no  
indication  
if  
or  
how  
the  
vaccination  
and  
testing  
requirements  
would  
be  
applied  
at

land  
borders.

## **VACCINATION IN AFRICA**

With  
more  
than  
8  
million  
cumulative  
COVID-19  
cases  
recorded  
in  
African  
countries  
and  
rising  
concern  
over  
a  
fourth  
wave,  
WHO  
Regional  
Director  
for  
Africa  
Dr.  
Matshidiso  
Moeti  
on  
September  
19  
called  
on  
wealthy  
nations  
to  
forego  
third  
vaccine  
doses  
for  
healthy  
individuals,

donate  
excess  
doses,  
and  
allow  
COVAX  
and  
the  
African  
Union  
to  
purchase  
the  
vaccine  
needed  
to  
protect  
the  
continent's  
population.  
Writing  
in  
a  
[New  
York  
Times  
opinion  
piece](#),  
Dr.  
Moeti  
warned  
that  
with  
only  
[4%](#)  
[of](#)  
[the](#)  
[African](#)  
[population](#)  
[fully](#)  
[vaccinated](#),  
countries  
with  
low  
vaccination  
coverage  
"could  
act

as  
variant  
incubators,  
increasing  
the  
risk  
that  
more  
dangerous  
variants  
will  
emerge  
and  
enter  
international  
travel  
networks.”

Additionally,  
the  
COVAX  
facility  
recently  
announced  
that

it  
is  
[cutting](#)  
[its](#)  
[planned](#)  
[vaccine](#)  
[deliveries](#)

[to](#)  
[Africa](#)  
by  
150  
million  
doses  
in  
2021,  
leaving  
the  
continent  
500  
million  
doses  
short  
of  
the

year-  
end  
target  
of  
fully  
vaccinating  
40%  
of  
the  
population.

According  
to  
WHO  
Africa,  
the  
470  
million  
doses  
now  
expected  
to  
be  
delivered  
this  
year  
through  
COVAX  
is  
enough  
to  
vaccinate  
only  
17%  
of  
the  
population.

At  
a  
news  
conference  
last  
week,  
Dr.  
Moeti  
[blamed](#)  
[vaccine](#)  
[export](#)  
[bans](#)



and  
vaccine  
hoarding  
for  
the  
shortfall,  
arguing  
that  
higher-  
income  
countries  
are  
causing  
“a  
chokehold  
on  
the  
lifeline  
of  
vaccine  
supplies  
to  
Africa.”  
She  
noted  
that  
African  
nations  
recently  
tripled  
the  
weekly  
doses  
administered  
over  
previous  
weeks,  
but  
the  
continent  
will  
likely  
not  
reach  
the  
40%  
goal  
until

at  
least  
March  
2022,  
based  
on  
the  
current  
pace.

## **INDIA VACCINE EXPORTS**

India  
is  
expected  
to  
[resume](#)  
[exporting](#)  
domestically  
manufactured  
SARS-  
CoV-2  
vaccines  
sometime  
between  
October  
and  
December  
2021.  
Indian  
Minister  
of  
Health  
Mansukh  
Mandaviya  
indicated  
that  
the  
initial  
focus  
will  
be  
on  
supplying  
the  
COVAX  
facility

and neighboring countries. India is the world's largest manufacturer of vaccines, but it prohibited exports of SARS-CoV-2 vaccines in April 2021, when the country was experiencing its largest surge. The announcement comes ahead of Prime Minister Narendra Modi's visit to Washington, DC, for a summit of Quadrilateral

Security Dialogue, which includes Australia, India, Japan, and the US. India's [monthly vaccine output has increased recently](#), and the country expects to produce at least 1 billion doses in the last 3 months of 2021.

#### **CANADA VACCINE APPROVALS**

On September 16, Health Canada [granted full regulatory approval](#)

to  
both  
the  
[Moderna](#)  
and  
[Pfizer-](#)  
[BioNTech](#)  
SARS-  
CoV-2  
vaccines  
for  
use  
in  
individuals  
aged  
12  
years  
and  
older.  
In  
an  
[announcement](#),  
Moderna  
said  
the  
approval  
marks  
“an  
important  
milestone,”  
as  
it  
is  
the  
first  
full  
approval  
for  
its  
SARS-  
CoV-2  
vaccine.  
Notably,  
the  
[Moderna](#)  
[vaccine](#)  
is  
not

yet  
authorized  
in  
the  
US  
for  
children  
under  
the  
age  
of  
18.

**“TEST-  
TO-  
STAY”  
PROTOCOLS**

With  
the  
school  
year  
only  
beginning  
across  
the  
US,  
already  
tens  
of  
thousands  
of  
students  
have  
had  
to  
quarantine  
after  
coming  
in  
close  
contact  
with  
classmates  
or  
teachers  
who  
test  
positive

for  
SARS-  
CoV-2.  
An  
increasing  
number  
of  
school  
districts  
nationwide  
are  
implementing  
testing  
programs  
to  
try  
to  
keep  
more  
children  
in  
classrooms  
instead  
of  
having  
to  
quarantine  
at  
home  
—  
and  
possibly  
disrupting  
their  
parents'  
work  
schedules  
and  
their  
education  
—  
after  
being  
exposed  
to  
a  
known  
COVID-19

case.  
The  
strategy,  
known  
as  
“test  
to  
stay”  
or  
modified  
quarantine,  
allows  
children  
to  
stay  
in  
school  
if  
they  
remain  
asymptomatic,  
participate  
in  
regular  
testing  
(eg,  
daily)  
and  
continue  
to  
test  
negative,  
and  
follow  
other  
preventive  
measures.  
Typically,  
the  
tests  
and  
the  
staff  
to  
conduct  
them  
are  
provided



by  
the  
school  
districts,  
straining  
already-  
tight  
resources.

In  
a  
statement  
to  
*The  
New  
York  
Times*,  
the  
US  
CDC  
said  
it  
does  
not  
recommend  
or  
endorse  
test-  
to-  
stay  
strategies  
at  
this  
time,  
saying  
there  
is  
not  
yet  
enough  
evidence  
to  
support  
them.  
The  
agency  
recommends  
that

any  
unvaccinated  
student  
who  
has  
close  
contact  
with  
a  
known  
COVID-19  
case  
undergo  
[quarantine](#)  
[for](#)  
[14](#)  
[days.](#)

A  
[study](#)  
[conducted](#)  
[by](#)  
[British](#)  
[researchers](#)  
and  
published  
last  
week  
in  
*The*  
*Lancet*  
suggests  
that  
daily  
testing  
of  
school-  
based  
contacts  
could  
be  
effective  
in  
mitigating  
COVID-19  
risk  
while  
to  
helping

more  
students  
stay  
in  
school  
following  
an  
exposure.  
The  
study  
showed  
that  
COVID-19  
incidence  
rates  
were  
not  
significantly  
different  
between  
schools  
with  
"test-  
to-  
stay"  
policies  
compared  
with  
those  
that  
required  
at-  
home  
quarantine.

### **FAKE VACCINATION CARDS**

Both  
the  
price  
of  
fake  
SARS-  
CoV-2  
vaccination  
cards  
and

the  
number  
of  
online  
sellers  
have  
[increased  
dramatically](#)  
in  
recent  
weeks,  
following  
US  
President  
Joe  
Biden's  
[announcement](#)  
extending  
[vaccine  
mandates](#)  
for  
most  
federal  
workers,  
healthcare  
workers,  
and  
employees  
of  
many  
US  
companies,  
[according  
to  
cybersecurity  
company  
Check  
Point  
Software  
Technologies.](#)  
As  
of  
September  
2,  
the  
average  
cost  
of

a  
fake  
vaccination  
card  
bearing  
the  
US  
CDC  
logo  
was  
US  
\$100,  
but  
that  
price  
doubled  
following  
President  
Biden's  
September  
9  
announcement.  
Additionally,  
the  
estimated  
number  
of  
vendors  
increased  
from  
approximately  
1,200  
to  
more  
than  
10,000.  
Many  
of  
the  
cards  
are  
being  
[sold](#)  
[through](#)  
[the](#)  
[instant](#)  
[messaging](#)  
[app](#)

Telegram,  
which  
has  
500  
million  
monthly  
users  
worldwide  
and  
exhibited  
a  
10-  
fold  
increase  
in  
US  
users  
following  
the  
mandates,  
up  
to  
300,000.  
Most  
sellers  
require  
payment  
in  
cryptocurrency  
and  
collect  
personal  
information  
that  
is  
unnecessary  
to  
mail  
a  
blank  
fake  
card.  
Government  
authorities  
have  
cautioned  
against  
providing

such  
information.  
Though  
it  
is  
unclear  
how  
people  
receive  
the  
fake  
cards,  
US  
Customs  
and  
Border  
Protection  
(CBP)  
has  
reportedly  
intercepted  
thousands  
of  
packages  
of  
fake  
vaccination  
cards  
sent  
to  
the  
US  
from  
China  
in  
recent  
months.  
Both  
the  
US  
FBI  
and  
CBP  
have  
warned  
that  
buying,  
creating,

or  
selling  
fake  
vaccination  
cards  
is  
a  
federal  
crime.

**INACTIVATED  
VIRUS  
VACCINE  
&  
EGG-  
BASED  
MANUFACTURING**

Researchers  
in  
Thailand  
and  
the  
US  
published  
([preprint](#))  
results  
from  
a  
Phase  
1/2  
clinical  
trial  
of  
an  
inactivated  
recombinant  
SARS-  
CoV-2  
vaccine.  
The  
NDV-  
HXP-  
S  
vaccine\*  
was  
developed  
in  
Thailand,



Vietnam,  
and  
Brazil,  
[based](#)  
[on](#)  
[components](#)  
developed  
at  
the  
Icahn  
School  
of  
Medicine  
at  
Mount  
Sinai  
(New  
York,  
US),  
the  
University  
of  
Texas  
(US),  
and  
it  
utilizes  
a  
Newcastle  
disease  
virus  
(NDV)  
platform.  
The  
trial  
included  
210  
participants  
aged  
18-59  
years  
who  
were  
randomized  
into  
6  
groups.  
They

received  
2  
injections  
28  
days  
apart  
using  
either  
a  
1µg  
dose  
(with  
or  
without  
an  
adjuvant),  
3µg  
dose  
(with  
or  
without  
an  
adjuvant),  
10µg  
dose  
(without  
adjuvant),  
or  
placebo.  
All  
but  
5  
participants  
received  
both  
doses.  
The  
Phase  
1/2  
trial  
was  
principally  
designed  
to  
evaluate  
safety,  
and  
all

doses were generally well tolerated, with no serious adverse events reported. Additionally, 93.9-100% of vaccinated participants had increases in neutralizing antibodies of at least 4 times over baseline, an encouraging indication of immune response.

There are multiple [other inactivated virus vaccines](#) already available — including those from

Sinopharm  
and  
Sinovac  
in  
China  
and  
Bharat  
Biotech  
in  
India

—  
but  
the  
NDV-  
HXP-  
S  
vaccine  
has  
the  
advantage  
of  
being  
produced  
using  
chicken  
eggs,  
similar  
to  
some  
seasonal  
influenza  
vaccines.  
Facilities  
around  
the  
world  
have  
production  
lines  
that  
can  
manufacture  
seasonal  
influenza  
vaccines  
using  
chicken  
eggs,

and  
a  
SARS-  
CoV-2  
vaccine  
that  
leverages  
this  
manufacturing  
platform  
could  
take  
advantage  
of  
substantial  
and  
geographically  
distributed  
production  
capacity.

As  
we  
have  
covered  
previously,  
production  
capacity  
for  
existing  
SARS-  
CoV-2  
vaccines  
remains  
limited,  
and  
many  
countries,  
particularly  
in  
Africa,  
continue  
to  
struggle  
to  
access  
sufficient  
doses  
to

support  
their  
vaccination  
efforts.

It  
will  
still  
take  
months  
to  
complete  
Phase  
3  
clinical  
trials,  
but  
a  
vaccine  
that  
utilizes  
egg-  
based  
production  
could  
potentially  
increase  
vaccine  
access  
for  
low-  
and  
middle-  
income  
countries  
(LMICs).

*\*Unlike  
previous  
vaccines  
and  
vaccine  
candidates  
that  
were  
principally  
developed  
by  
1  
or*

2  
companies  
or  
organizations,  
the  
NDV-  
HXP-  
S  
vaccine  
does  
not  
have  
a  
clear  
informal  
designation  
(eg,  
Pfizer-  
BioNTech,  
Moderna).  
NDV  
refers  
to  
the  
Newcastle  
disease  
virus  
platform,  
and  
HXP  
refers  
to  
HexaPro,  
a  
modified  
version  
of  
the  
SARS-  
CoV-2  
spike  
protein  
used  
in  
the  
vaccine.

## **ALABAMA**

Alabama  
State  
Health  
Officer  
Dr.  
Scott  
Harris  
on  
September  
17  
said  
that  
the  
state's  
overall  
mortality  
rate  
outpaced  
its  
birth  
rate  
in  
2020  
for  
the  
first  
time  
in  
recorded  
history.  
Alabama  
recorded  
57,641  
live  
births  
and  
64,714  
total  
deaths  
in  
2020.  
[Records](#)  
[from](#)  
[the](#)  
[Alabama](#)  
[Department](#)  
[of](#)



Public Health indicate that 7,128 of those deaths were attributable to COVID-19. Historically, Alabama's birth rate has remained higher than the death rate, even during high-casualty tragedies such as World War I, World War II, and the 1918 influenza pandemic. This unfortunate statistic highlights the devastating toll

the current pandemic has inflicted on vulnerable areas of the nation. Currently, 41.4% of Alabama's population is fully vaccinated, well below the national average of 54.7%. Experts project that Alabama could again experience a higher rate of deaths than births in 2021, if the state continues down its

current  
path.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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**Date : 9/24/2021 1:15:50 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - September 24, 2021**

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
229.9  
million  
cumulative  
cases  
and  
4.71  
million  
deaths  
worldwide  
as  
of  
September  
23.  
Global  
weekly  
incidence  
decreased  
by  
5.9%  
compared  
to

the  
previous  
week,  
and  
mortality  
fell  
by  
3.1%.

*Global  
Vaccination*

The  
[WHO](#)  
[reported](#)  
5.87  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
September  
23.

A  
total  
of  
3.36  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.43  
billion  
are  
fully  
vaccinated.  
Analysis  
from

Our World in Data indicates that the overall trend in [global daily vaccinations](#) continues to decline, down to fewer than 28 million doses per day\*. The global trend continues to closely follow Asia. Our World in Data estimates that there are 3.46 billion [vaccinated individuals](#) worldwide (1+ dose;

44.13%  
of  
the  
global  
population)  
and  
2.54  
billion  
who  
are  
fully  
vaccinated  
(32.24%  
of  
the  
global  
population).

*\*The  
average  
daily  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data,  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the*

*longer-term trends, the numbers reported here may not correspond to the most recent data.*

#### *UNITED STATES*

The [US CDC](#) reports 42.5 million cumulative COVID-19 cases and 680,688 deaths. The US has passed a peak in terms of daily incidence. The most recent high was 160,200 new



cases  
per  
day  
on  
September  
1,  
and  
the  
trend  
began  
to  
decline  
slightly  
before  
the  
Labor  
Day  
holiday  
weekend.  
The  
current  
average  
is  
approximately  
121,532  
new  
cases  
per  
day  
and  
appears  
to  
be  
decreasing.  
Daily  
mortality  
continues  
to  
increase  
slowly,  
now  
up  
to  
1,556  
deaths  
per  
day  
—

the  
highest  
average  
since  
February  
27.  
If  
the  
daily  
incidence  
peaked  
on  
September  
1,  
mortality  
could  
peak  
in  
the  
next  
week  
or  
so\*.

*\*Changes  
in  
state-  
level  
reporting  
may  
affect  
the  
accuracy  
of  
recently  
reported  
data,  
particularly  
over  
the  
weekend.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term*

*trends,  
the  
numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
dates.*

The  
US  
surpassed  
675,000  
cumulative  
deaths  
on  
September  
20,  
which  
makes  
the  
COVID-19  
pandemic  
more  
deadly  
than  
the  
[1918  
influenza  
pandemic](#)  
in  
the  
US.  
Notably,  
the  
[US  
population  
in  
1918](#)  
was  
less  
than  
one-

third  
of  
the  
current  
population  
(approximately  
105  
million),  
so  
the  
COVID-19  
mortality  
is  
much  
lower  
on  
a  
per  
capita  
basis.

### US Vaccination

The  
US  
has  
administered  
388  
million  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines.  
The  
daily  
vaccination  
trend  
continues  
to  
decline  
from  
the  
most  
recent  
peak  
on

August  
29\*,  
worrying  
some  
officials  
as  
flu  
season  
approaches.  
There  
are  
212.6  
million  
individuals  
who  
have  
received  
at  
least  
1  
dose,  
equivalent  
to  
64.0%  
of  
the  
entire  
US  
population.  
Among  
adults,  
76.7%  
have  
received  
at  
least  
1  
dose,  
as  
well  
as  
14.4  
million  
adolescents  
aged  
12-17  
years.  
A

total  
of  
182.6  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds  
to  
55%  
of  
the  
total  
population.  
Approximately  
66.2%  
of  
adults  
are  
fully  
vaccinated,  
as  
well  
as  
11.6  
million  
adolescents  
aged  
12-17  
years.

*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for*

*the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**US  
BOOSTER  
DOSES**

Third  
doses  
of  
the  
Pfizer-  
BioNTech  
SARS-  
CoV-2  
vaccine  
are  
[now  
recommended  
for  
certain  
US  
populations](#)  
at  
least  
6  
months  
after  
their  
primary  
2-  
dose  
series.  
Following  
the

US  
FDA's  
authorization  
of  
third  
doses  
of  
the  
Pfizer-  
BioNTech  
vaccine  
on  
September  
22,  
the  
US  
CDC's  
Advisory  
Committee  
for  
Immunization  
Practices  
(ACIP)  
on  
September  
23  
voted  
to  
recommend  
booster  
doses  
be  
offered  
to  
people  
aged  
65  
years  
and  
older,  
residents  
in  
long-  
term  
care  
facilities,  
people  
aged



50-64  
years  
with  
underlying  
medical  
conditions,  
and  
individuals  
aged  
18-49  
who  
have  
underlying  
medical  
conditions.  
The  
ACIP  
rejected  
a  
proposal  
to  
offer  
the  
shots  
to  
people  
aged  
18-64  
who  
are  
at  
an  
increased  
risk  
of  
COVID-19  
because  
they  
live  
or  
work  
in  
high-  
risk  
occupational  
and  
institutional  
settings,

including  
healthcare  
workers  
and  
teachers.  
Later  
the  
same  
day,  
[in](#)  
[an](#)  
[unusual](#)  
[move](#),  
CDC  
Director  
Dr.  
Rochelle  
Walensky  
[aligned](#)  
[her](#)  
[recommendation](#)  
with  
the  
FDA's  
authorization  
instead  
of  
the  
CDC  
committee's  
recommendations,  
to  
include  
those  
who  
work  
in  
high-  
risk  
settings  
to  
be  
eligible  
for  
booster  
shots.  
Several  
ACIP

members  
expressed  
surprise  
over  
Dr.  
Walensky's  
decision,  
which  
highlights  
ongoing  
divisions  
and  
confusion  
among  
federal  
regulators,  
Biden  
administration  
officials,  
and  
outside  
advisers  
about  
efforts  
to  
bring  
the  
pandemic  
under  
control.

While  
the  
new  
CDC  
recommendations  
authorize  
millions  
of  
US  
residents  
to  
receive  
a  
third  
dose,  
the  
plan

still  
falls  
short  
of  
US  
President  
Joe  
Biden's  
original  
announcement  
that  
booster  
shots  
would  
be  
available  
to  
all  
US  
residents.  
Biden  
administration  
officials  
are  
expected  
to  
announce  
a  
plan  
for  
rolling  
out  
booster  
shots  
as  
soon  
as  
today.  
The  
current  
recommendations  
only  
apply  
to  
the  
Pfizer-  
BioNTech  
vaccine,

but  
a  
decision  
on  
boosters  
for  
the  
Moderna  
and  
J&J-  
Janssen  
vaccines  
could  
come  
within  
weeks.

**VIRTUAL  
COVID-19  
SUMMIT**

One  
day  
after  
UN  
Secretary-  
General  
António  
Guterres  
scolded  
the  
world  
for  
its  
inequitable  
distribution  
of  
SARS-  
CoV-2  
vaccines  
on  
September  
21,  
US  
President  
Joe  
Biden  
hosted  
a

virtual  
COVID-19  
summit—  
bringing  
together  
world  
leaders,  
advocacy  
groups,  
nonprofit  
organizations,  
and  
business  
leaders  
—  
in  
an  
effort  
to  
end  
the  
COVID-19  
pandemic  
in  
2022  
and  
bolster  
support  
for  
a  
list  
of  
targets  
that  
includes  
vaccinating  
70%  
of  
the  
world's  
population  
by  
September  
2022  
and  
alleviating  
a  
global

oxygen  
shortage.  
Calling  
the  
COVID-19  
pandemic  
an  
“all-  
hands-  
on-  
deck  
crisis,”  
President  
Biden  
confirmed  
the  
US  
will  
donate  
another  
500  
million  
Pfizer-  
BioNTech  
vaccine  
doses  
by  
mid-2022,  
announced  
a  
partnership  
with  
the  
European  
Union  
(EU)  
to  
improve  
access  
to  
vaccines  
and  
therapeutics,  
and  
called  
on  
other  
wealthy

nations  
to  
increase  
their  
pledges  
to  
countries  
in  
need.

To  
facilitate  
several  
nations'  
purchasing  
of  
vaccines  
through  
Gavi,  
the  
Vaccine  
Alliance,  
and  
the  
COVAX  
facility,  
the  
US  
International  
Development  
Finance  
Corporation  
announced  
it  
will  
provide  
US  
\$383  
million  
in  
political  
risk  
insurance,  
one  
of  
the  
conditions  
for  
self-



financing  
countries  
to  
obtain  
doses  
through  
the  
initiative.

Questions  
remain  
over  
whether  
the  
new  
vaccine-  
related  
commitments  
will  
help,  
as  
many  
rich  
countries'  
donation  
pledges  
have  
yet  
to  
materialize  
and  
the  
Pfizer-  
BioNTech  
vaccine  
requires  
specialized  
infrastructure  
to  
store  
and  
ship  
the  
shots,  
unavailable  
in  
most  
low-

income  
nations.  
Advocates  
said  
the  
virtual  
summit,  
which  
was  
held  
behind  
closed  
doors  
and  
involved  
many  
pre-  
recorded  
speeches,  
was  
a  
[missed  
opportunity](#)  
to  
end  
the  
piecemeal  
international  
approach,  
increase  
the  
urgency  
for  
actually  
delivering  
vaccines,  
and  
[coalesce  
global  
leadership  
and  
coordination](#)  
to  
end  
the  
pandemic.  
With  
[growing](#)

pressure  
on  
US  
pharmaceutical  
companies  
to  
share  
vaccine  
technology,  
some  
experts  
regretted  
that  
the  
summit's  
lack  
of  
interactive  
conversation  
did  
not  
permit  
discussion  
over  
the  
potential  
for  
international  
property  
rights  
waivers,  
which  
the  
US  
has  
said  
it  
supports  
but  
has  
not  
taken  
steps  
to  
finalize.  
Additionally,  
the  
US

government  
continues  
to  
face  
criticism  
over  
its  
plan  
to  
soon  
begin  
administering  
vaccine  
booster  
doses  
for  
some  
adults,  
but  
officials  
continue  
to  
claim  
they  
can  
[vaccinate](#)  
[both](#)  
[US](#)  
[residents](#)  
[and](#)  
[people](#)  
[around](#)  
[the](#)  
[world](#).

Looking  
toward  
the  
future,  
US  
Vice  
President  
Kamala  
Harris  
announced  
the  
US  
will

contribute  
US  
\$250  
million  
in  
startup  
funding  
for  
a  
new  
global  
health  
security  
fund,  
with  
the  
goal  
of  
raising  
US  
\$10  
billion  
to  
help  
confront  
future  
pandemics.  
The  
Biden  
administration  
has  
asked  
the  
US  
Congress  
to  
allocate  
an  
additional  
US  
\$850  
million  
for  
the  
new  
financial  
intermediary  
fund

(FIF),  
according  
to  
Vice  
President  
Harris.  
Both  
she  
and  
President  
Biden,  
in  
his  
[address](#)  
[to](#)  
[the](#)  
[UN](#)  
[General](#)  
[Assembly](#)  
on  
September  
21,  
called  
for  
the  
creation  
of  
a  
Global  
Health  
Threats  
Council  
that  
could  
elevate  
health  
threats  
to  
heads  
of  
state,  
as  
well  
as  
ensure  
nations'  
transparency

and  
accountability.

## **ECONOMIC RECOVERY**

Global  
vaccine  
inequity  
will  
directly  
impact  
economic  
recovery  
from  
the  
COVID-19  
pandemic,  
and  
many  
of  
those  
same  
countries  
struggling  
for  
vaccine  
access  
likely  
will  
face  
difficulties  
financing  
their  
healthcare  
systems  
as  
governments  
cut  
overall  
spending,  
several  
new  
reports  
warn.  
The  
global  
economy  
has

managed  
to  
bounce  
back  
this  
year,  
and  
likely  
will  
be  
able  
to  
rebound  
close  
to  
its  
pre-  
crisis  
trend,  
driven  
by  
growth  
in  
wealthy  
nations  
that  
have  
vaccinated  
large  
portions  
of  
their  
populations,  
a  
[new  
report  
from  
Organisation  
for  
Economic  
Cooperation  
and  
Development  
\(OECD\)](#)  
shows.  
But  
the  
gap



between  
rich  
countries  
and  
the  
developing  
world  
is  
expanding  
due  
to  
continuing  
unequal  
access  
to  
vaccines.

In  
its  
report,  
the  
[OECD](#)  
[urged](#)  
[wealthy](#)  
[nations](#)  
[to](#)  
[share](#)  
[excess](#)  
[vaccine](#)  
[doses](#)  
with  
countries  
in  
need,  
invest  
in  
resources  
to  
facilitate  
administration  
of  
the  
shots,  
and  
not  
be  
too  
quick  
to

withdraw  
the  
“extraordinary  
support”  
they  
provided  
to  
their  
own  
economies  
during  
the  
pandemic.  
The  
OECD  
warned  
that  
the  
outlook  
remains  
uncertain,  
as  
employment  
levels  
in  
many  
countries  
have  
been  
severely  
impacted  
and  
not  
yet  
recovered.

In  
a  
separate  
report,  
the  
World  
Bank  
cautioned  
that  
at  
least  
52

low-  
and  
middle-  
income  
countries  
(LMICs)  
that  
are  
experiencing  
declines  
in  
overall  
per  
capita  
government  
spending  
will  
be  
unable  
to  
adequately  
fund  
their  
healthcare  
systems,  
further  
threatening  
COVID-19  
recovery  
and  
health  
security.  
Some  
nations  
will  
struggle  
to  
finance  
SARS-  
CoV-2  
vaccine  
purchases  
and  
administration,  
or  
prepare  
for  
future

disease outbreaks, the report noted, calling on wealthier nations to “recognize their interests” in a stable global recovery and commit the necessary resources. [Another report](#), from Pathfinders for Peaceful, Just and Inclusive Societies, based at New York University’s Center on International Cooperation, warns that more than 100 countries

are  
facing  
cuts  
to  
public  
spending  
on  
health,  
education,  
and  
social  
programs  
while  
simultaneously  
confronting  
problems  
paying  
down  
debt  
amid  
the  
pandemic,  
leading  
to  
growing  
inequality.  
The  
report  
cautions  
that  
cuts  
to  
government  
spending  
for  
vital  
services  
could  
lead  
to  
a  
reversal  
in  
development  
gains  
and  
unrest  
in

some  
of  
these  
countries.

## **ENGLAND TRAVEL RULES**

England's  
new  
"simplified"  
international  
travel  
rules—  
which  
come  
into  
effect  
on  
October  
4  
—

are  
igniting  
outrage  
and  
frustration

across  
Africa,  
South  
Asia,  
and  
Latin  
America,  
with  
some  
calling  
the  
government's  
decision  
to  
recognize  
only  
vaccinations  
in  
certain  
countries  
discriminatory

and  
racist.  
Under  
the  
new  
rules,  
people  
who  
received  
the  
AstraZeneca-  
Oxford,  
Pfizer-  
BioNTech,  
Moderna,  
or  
J&J-  
Janssen  
vaccines  
in  
countries  
with  
approved  
health  
bodies  
—  
including  
the  
US,  
Australia,  
New  
Zealand,  
South  
Korea,  
an  
EU  
country,  
and  
several  
other  
nations  
—  
will  
be  
considered  
“fully  
vaccinated”  
and

exempt  
from  
a  
10-  
day  
quarantine  
upon  
arrival  
in  
England  
from  
an  
[Amber  
list  
country](#),  
while  
people  
vaccinated  
with  
the  
same  
vaccines  
in  
African  
or  
Latin  
American  
countries  
or  
India  
will  
be  
considered  
“not  
fully  
vaccinated”  
and  
subject  
to  
quarantine  
when  
arriving  
from  
an  
Amber  
list  
country.  
The



African  
Union's  
lead  
health  
official  
said  
the  
policy  
is  
confusing  
and  
regrettable  
and  
asked  
why  
England  
would  
not  
recognize  
vaccination  
with  
shots  
it  
sent  
to  
the  
continent.  
England  
claims  
its  
policy  
is  
based  
on  
concerns  
over  
vaccine  
certification,  
but  
other  
European  
nations  
have  
found  
ways  
to  
alleviate  
concerns

by  
allowing  
anyone  
vaccinated  
with  
a  
shot  
authorized  
by  
the  
European  
Medicines  
Agency  
to  
apply  
for  
a  
vaccine  
certificate  
before  
visiting.  
While  
the  
initial  
guidelines  
excluded  
India's  
Covishield  
vaccine,  
which  
has  
been  
distributed  
in  
the  
UK,  
the  
vaccine  
was  
added  
to  
the  
travel  
list  
this  
week,  
even  
though

it  
has  
not  
yet  
been  
formally  
authorized  
by  
UK  
regulators.

A  
UK  
government  
spokesperson  
said  
additional  
changes  
to  
the  
policy  
would  
be  
considered  
during  
regular  
reviews  
every  
3  
weeks.

## **REMDESIVIR EFFECTIVENESS**

Gilead  
Sciences'  
antiviral  
COVID-19  
treatment  
Veklury,  
also  
known  
as  
remdesivir,  
appeared  
to  
reduce  
hospitalization  
among  
non-

hospitalized  
patients

at  
high  
risk  
of  
disease  
progression  
when  
given  
early  
in  
the  
disease,  
according  
to  
Phase  
3  
clinical  
trial  
results  
released  
in  
a  
September  
22  
press  
release.

The  
results  
have  
not  
yet  
been  
published  
or  
peer-  
reviewed.

The  
randomized,  
double-  
blind  
study  
evaluated  
the  
efficacy  
and  
safety

of  
a  
3-  
day  
regimen  
of  
remdesivir,  
which  
is  
delivered  
intravenously.  
Among  
the  
562  
patients  
assigned  
1:1  
to  
receive  
remdesivir  
or  
placebo,  
the  
remdesivir  
group  
experienced  
a  
statistically  
significant  
87%  
reduction  
in  
risk  
of  
COVID-19-  
related  
hospitalization  
or  
all-  
cause  
death  
by  
Day  
28  
when  
compared  
with  
the

placebo group. The treatment group also had an 81% reduction in risk for medical visits due to COVID-19 when compared with the placebo group. No deaths occurred in the study by Day 28. The safety profile between remdesivir and placebo were similar, with the most common adverse events

in  
the  
remdesivir  
group  
being  
headache  
and  
nausea.  
Veklury  
was  
the  
first  
COVID-19  
treatment  
to  
receive  
full  
FDA  
approval,  
for  
use  
among  
adult  
and  
pediatric  
patients  
requiring  
hospitalization.  
However,  
there  
remains  
controversy  
over  
its  
effectiveness,  
with  
clinical  
trials  
showing  
varying  
success  
of  
the  
drug.  
Although  
antivirals  
tend  
to

work  
better  
early  
in  
the  
course  
of  
disease,  
the  
drug's  
intravenous  
administration  
presents  
logistical  
challenges  
for  
its  
use  
in  
non-  
hospitalized  
COVID-19  
patients.

### **RONAPREVE/REGEN- COV**

The  
WHO  
today  
[added](#)  
[the](#)  
[combination](#)  
[monoclonal](#)  
[antibody](#)  
[treatment](#)  
known  
as  
Ronapreve,  
or  
REGEN-  
COV  
in  
the  
US,  
to  
its  
list  
of



recommended  
COVID-19  
therapeutics  
and  
called  
for  
producing  
companies  
and  
governments  
to

address  
the  
high  
price  
and  
limited  
production  
of  
the  
drug,  
which  
contains  
casirivimab  
and  
imdevimab.

The  
WHO  
urged  
US-  
based  
Regeneron  
Pharmaceuticals,  
which  
holds  
the  
patent  
on  
the  
combination  
drug,  
to  
share  
technology  
to  
allow  
for  
more

widespread  
manufacturing,  
and  
said  
UN  
agencies  
are  
negotiating  
with  
Roche,  
which  
is  
currently  
manufacturing  
the  
drug  
for  
distribution  
at  
lower  
costs  
with  
a  
focus  
on  
low-  
and  
middle-  
income  
countries  
(LMICs).  
The  
WHO  
made  
[conditional  
recommendations](#)  
for  
the  
combination  
therapy  
—  
which  
is  
[authorized  
for  
use  
in  
the](#)

US  
and  
the  
UK—  
to  
be  
used  
in  
patients  
with  
non-  
severe  
COVID-19  
who  
are  
at  
high  
risk  
of  
hospitalization  
and  
individuals  
with  
severe  
cases  
but  
no  
existing  
antibodies.

## **US HOSPITAL CAPACITY**

Alaska  
is  
the  
latest  
US  
state  
to  
impose  
crisis  
standards  
of  
care  
this  
week,  
as

hospitals  
nationwide  
are  
facing  
a  
continuing  
surge  
in  
severe  
cases.  
Alaska  
has  
set  
new  
single-  
day  
case  
records  
over  
the  
past  
several  
days  
due  
to  
the  
spread  
of  
the  
Delta  
variant,  
which  
is  
"crippling  
the  
health  
system,"  
according  
to  
Alaska  
Chief  
Medical  
Officer  
Dr.  
Anne  
Zink.  
In  
Idaho,

which  
has  
seen  
a  
surge  
in  
COVID-19  
cases  
and  
related  
deaths,  
health  
officials  
expanded  
to  
the  
entire  
state  
crisis  
standards  
of  
care  
already  
in  
place  
for  
health  
districts  
in  
the  
northern  
part  
of  
the  
state.  
Idaho  
currently  
has  
the  
lowest  
vaccination  
rate  
of  
any  
state,  
according  
to  
CDC

data.  
Echoing  
the  
early  
days  
of  
the  
pandemic,  
[elective  
surgeries  
again  
are  
being  
postponed](#)  
across  
many  
states

—  
including  
Idaho,  
Alaska,  
Montana,  
Nevada,  
and  
Oregon

—  
in  
an  
effort  
to  
ration  
care  
in  
areas  
where  
hospital  
bed  
availability  
is  
limited.

According  
to  
the  
[US  
HHS  
Protect  
Public  
Health](#)

Data  
Hub,  
78.6%  
inpatient  
beds  
across  
the  
nation  
are  
currently  
occupied.

**SOUTHERN  
US  
BLACK  
COMMUNITIES**

Rural  
communities  
in  
the  
US  
South  
are  
disproportionately  
impacted  
by  
the  
COVID-19  
pandemic,  
most  
likely  
due  
to  
disparities  
in  
social  
determinants  
of  
health  
such  
as  
employment  
and  
access  
to  
healthcare.  
In  
the

region's  
predominantly  
Black  
communities,  
the  
pandemic  
has  
exacerbated  
ongoing  
medical  
and  
financial  
inequities.

In  
a  
photojournalism  
report,  
titled

"Distanced:  
Pandemic  
stories

of  
Black  
life

in  
the  
rural  
South,"

*STAT*  
*News*

examines  
the  
challenges  
these  
communities

face  
and  
how  
they  
have  
found  
strength

in  
the  
midst  
of  
this  
unprecedented



public health emergency. Although the racial gap in COVID-19-related deaths seems to have shrunk in recent months, data can obscure the nuances in disparities; for example, Black people are less likely to live into older age, when COVID-19 is most lethal. Even when controlling for individual factors

such  
as  
economic  
status,  
housing,  
education  
levels,  
preexisting  
health  
conditions,  
and  
occupation,  
researchers  
warn  
that  
[structural  
racism  
contributes  
to  
demographic  
disparities  
in  
COVID-19  
deaths,](#)  
and  
the  
recent  
wave  
of  
cases  
due  
to  
the  
Delta  
variant  
have  
worsened  
these  
imbalances.

[Weekly Updates on SARS-CoV-2 Vaccines](#)

[Support our work](#)

Twit

|

You]

|

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**Date : 9/28/2021 1:10:23 PM**

**From : "Johns Hopkins Center for Health Security"  
centerhealthsecurity@mail301.jh.edu**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : COVID-19 Updates - September 28, 2021**

## **EPI UPDATE**

The  
[WHO](#)  
[COVID-19](#)  
[Dashboard](#)  
reports  
231.7  
million  
cumulative  
cases  
and  
4.75  
million  
deaths  
worldwide  
as  
of  
September  
27.  
Global  
weekly  
incidence  
and  
mortality  
continue  
to  
decrease

for  
the  
third  
consecutive  
week.

Global  
Vaccination

The  
[WHO](#)  
[reported](#)  
5.92  
billion  
cumulative  
doses  
of  
SARS-  
CoV-2  
vaccines  
administered  
globally  
as  
of  
September  
27.

A  
total  
of  
3.38  
billion  
individuals  
have  
received  
at  
least  
1  
dose,  
and  
2.46  
billion  
are  
fully  
vaccinated.

Analysis  
from  
Our  
World  
in

Data indicates that the overall trend in [global daily vaccinations](#) continues to decline, down to approximately 30 million doses per day\*. The global trend continues to closely follow Asia. Our World in Data estimates that there are 3.52 billion [vaccinated individuals](#) worldwide (1+ dose; [44.7%](#) of the [global](#)

population)  
and  
2.59  
billion  
who  
are  
fully  
vaccinated  
(32.9%  
of  
the  
global  
population).

*\*The  
average  
daily  
doses  
administered  
may  
exhibit  
a  
sharp  
decrease  
for  
the  
most  
recent  
data,  
particularly  
over  
the  
weekend,  
which  
indicates  
effects  
of  
reporting  
delays.  
In  
an  
effort  
to  
reflect  
the  
longer-  
term  
trends,  
the*

*numbers  
reported  
here  
may  
not  
correspond  
to  
the  
most  
recent  
data.*

As  
we  
observed  
previously  
with  
1+  
dose  
coverage,  
Oceania's  
full  
vaccination  
coverage  
(30.8%)  
is  
quickly  
approaching  
the  
global  
average  
(32.9%).  
Oceania  
could  
surpass  
this  
benchmark  
in  
the  
next  
several  
days,  
which  
would  
leave  
Africa  
(4.2%)  
as



the  
only  
continent  
below  
the  
global  
average.  
Oceania  
and  
Africa  
were  
reporting  
similar  
full  
vaccination  
coverage  
as  
recently  
as  
late  
May,  
but  
vaccination  
efforts  
in  
Oceania  
have  
progressed  
rapidly  
over  
the  
past  
several  
months.

*UNITED  
STATES*

The

[US](#)

[CDC](#)

reports

42.9

million

cumulative

COVID-19

cases

and

686,639

deaths.  
Daily  
incidence  
continues  
to  
decline  
at  
the  
national  
level,  
down  
to  
approximately  
115,000  
new  
cases  
per  
day,  
which  
would  
be  
the  
lowest  
average  
since  
early  
August.  
Daily  
mortality  
appears  
to  
have  
leveled  
off  
at  
approximately  
1,500  
deaths  
per  
day.

It  
appears  
that  
daily  
mortality  
in  
Florida

has continued to increase since late August, when the state [changed its COVID-19 mortality reporting](#) policy.

The Florida Department of Health shifted from assigning dates to COVID-19 deaths corresponding to the date they were reported to the date of death. This results in lower reports for recent days

due  
to  
the  
inherent  
reporting  
lag,  
which  
can  
give  
a  
false  
impression  
of  
rapidly  
declining  
daily  
mortality.  
Deaths  
are  
then  
filled  
in  
retrospectively  
on  
the  
date  
of  
death  
as  
they  
are  
reported  
to  
the  
state,  
which  
can  
take  
days  
or  
weeks  
after  
the  
death  
occurs.

At  
the  
time

of  
the  
change,  
we  
estimated  
that  
Florida's  
daily  
mortality  
was  
likely  
greater  
than  
200  
deaths  
per  
day.  
Since  
then,  
the  
average  
increased  
to  
at  
least  
363  
(September  
1),  
and  
it  
has  
remained  
greater  
than  
200  
from  
at  
least  
August  
7  
through  
September  
15.  
Florida's  
daily  
incidence  
plateaued  
from

approximately  
August  
10-30  
before  
decreasing.  
If  
historical  
trends  
continue,  
we  
can  
expect  
to  
observe  
a  
corresponding  
decrease  
in  
daily  
mortality  
around  
this  
time;  
however,  
it  
could  
be  
another  
several  
weeks  
before  
Florida's  
mortality  
reporting  
fills  
in  
enough  
for  
that  
trend  
to  
be  
evident.

US  
Vaccination  
The  
US

has  
administered  
391  
million  
[cumulative](#)  
[doses](#)  
of  
SARS-  
CoV-2  
vaccines.  
The  
[daily](#)  
[vaccination](#)  
trend  
continues  
to  
decline  
from  
the  
most  
recent  
peak  
on  
August  
29\*  
(approximately  
850,000),  
down  
to  
fewer  
than  
600,000  
doses  
per  
day.  
There  
are  
213.7  
million  
individuals  
who  
have  
received  
at  
least  
1  
dose,  
equivalent

to  
64.4%  
of  
the  
entire  
US  
population.

Among  
adults,  
77.1%  
have  
received  
at  
least

1  
dose,  
as  
well  
as  
14.6  
million  
adolescents  
aged  
12-17  
years.

A  
total  
of  
183.9  
million  
individuals  
are  
fully  
vaccinated,  
which  
corresponds

to  
55.4%

of  
the  
total  
population.

Approximately  
66.6%  
of  
adults  
are  
fully



vaccinated,  
as  
well  
as  
11.8  
million  
adolescents  
aged  
12-17  
years.  
*\*Due  
to  
delays  
in  
reporting,  
estimates  
for  
the  
average  
daily  
doses  
administered  
are  
less  
accurate  
for  
the  
most  
recent  
5  
days.  
The  
most  
current  
average  
provided  
here  
corresponds  
to  
5  
days  
ago.*

**NOVAVAX  
WHO  
EMERGENCY  
USE  
LISTING**

## **APPLICATION**

On September 23, Novavax [announced](#) its submission to the WHO for [Emergency Use Listing](#) (EUL) for its SARS-CoV-2 vaccine candidate. This submission was made in partnership with the Serum Institute of India, which will manufacture the vaccine. Novavax is prioritizing access to low- and middle-income

countries  
(LMICs),  
and  
it  
has  
already  
submitted  
regulatory  
documents  
to  
several  
individual  
countries  
including  
India,  
the  
Philippines,  
and  
Indonesia.  
Novavax  
and  
the  
Serum  
Institute  
have  
jointly  
pledged  
to  
provide  
more  
than  
1.1  
billion  
doses  
to  
the  
COVAX  
facility,  
which  
also  
targets  
LMICs.  
Phase  
3  
clinical  
trials  
are  
still

ongoing  
in  
several  
countries,  
including  
Mexico,  
the  
UK,  
and  
the  
US,  
and  
preliminary  
analysis  
estimates  
strong  
efficacy  
against  
the  
original  
strain  
of  
the  
virus  
as  
well  
as  
multiple  
variants  
of  
concern  
(VOCs).

**PFIZER-  
BIONTECH  
SUBMIT  
PEDIATRIC  
PHASE  
2/3  
DATA**

Pfizer  
and  
BioNTech  
announced  
today  
that  
they  
submitted

preliminary  
data  
from  
Phase  
2/3  
clinical  
trials  
on  
pediatric  
use  
of  
their  
SARS-  
CoV-2  
vaccine  
to  
the  
US  
FDA.  
The  
submission  
includes  
data  
from  
nearly  
2,300  
participants  
ranging  
from  
age  
5  
years  
to  
less  
than  
12  
years,  
and  
the  
trial  
tested  
a  
regimen  
of  
2  
doses  
of  
10µg

each—  
compared  
to  
30µg  
for  
the  
adult  
formulation.  
According  
to  
a  
press  
release  
from  
Pfizer,  
“the  
vaccine  
demonstrated  
a  
favorable  
safety  
profile  
and  
elicited  
robust  
neutralizing  
antibody  
responses”  
that  
were  
comparable  
to  
individuals  
aged  
16-25  
years.  
The  
companies  
intend  
to  
apply  
for  
Emergency  
Use  
Authorization  
(EUA)  
—  
as

and submit applications to the European Medicines Agency and other national regulatory agencies — for this age group in the coming weeks. White House Chief Medical Advisor Dr. Anthony Fauci indicated that vaccinations for this age group could potentially begin before the end of October. The full trial

data  
have  
not  
yet  
been  
published  
publicly  
or  
subjected  
to  
peer  
review.

Phase  
2/3  
clinical  
trials  
are  
ongoing  
for  
younger  
children

—  
2  
years  
to  
less  
than  
5  
years  
and  
6  
months  
to  
less  
than  
2  
years

—  
who  
received  
2  
doses  
of  
3µg  
each.

**PRIOR  
INFECTION**



## **& IMMUNE PROTECTION**

As we have discussed previously, protection conferred by vaccination has been demonstrated to be better than protection conferred via natural SARS-CoV-2 infection. Two recent studies, however, provide further analysis of the immune response during and following SARS-CoV-2 infection, including possible protection against re-

infection.

A study from Japan, published in the *Journal of Medical Virology*, analyzed the IgG and IgM responses against 2 SARS-CoV-2 proteins (N and S1) in 231 COVID-19 patients. The researchers found that mild cases exhibited stronger immune responses (IgM and IgG) against both proteins early after

symptom  
onset  
than  
severe  
or  
critical  
cases.

As  
the  
disease  
progressed,  
the  
IgM  
and  
IgG  
responses  
increased  
in  
severe  
and  
critical  
cases  
higher  
and  
more  
rapidly  
than  
for  
mild  
cases.

Additionally,  
the  
immune  
responses  
remained  
elevated  
for  
longer  
periods  
of  
time  
in  
patients  
with  
severe  
or  
critical  
disease,

while they declined more rapidly for patients with mild disease. ELISA analysis demonstrated that a significantly higher proportion of severe and critical patients remained seropositive at 22 days after symptom onset than for mild patients for the S1 protein but not the N protein. The researchers note that

lower  
immune  
response  
among  
mild  
cases  
could  
potentially  
signal  
lower  
levels  
of  
neutralizing  
antibodies  
and  
a  
shorter  
period  
of  
conferred  
immune  
protection  
against  
re-  
infection.  
Further  
analysis  
is  
needed  
to  
better  
characterize  
the  
duration  
and  
strength  
of  
protection,  
including  
the  
role  
of  
the  
innate  
immune  
response  
and  
memory

B  
and  
T  
cells,  
and  
any  
association  
with  
disease  
severity  
during  
the  
initial  
infection.

A  
study  
in  
rhesus  
macaques,  
published  
in  
[\*Science  
Translational  
Medicine\*](#),  
evaluated  
the  
immune  
response  
to  
re-  
infection  
with  
the  
Alpha  
and  
Beta  
variants  
of  
concern  
(VOCs)  
following  
infection  
with  
the  
original  
strain  
of

SARS-CoV-2. Researchers infected 18 rhesus macaques with the original strain of the virus (WA1/2020) and then exposed them to either the original strain (control), the Alpha variant, or the Beta variant 35 days later. The animals re-infected with the Alpha variant did not exhibit a notable

difference  
in  
the  
concentration  
of  
breakthrough  
virus  
compared  
to  
the  
control  
group,  
whereas  
the  
animals  
re-  
infected  
with  
the  
Beta  
variant  
exhibited  
much  
higher  
concentrations  
of  
breakthrough  
virus.  
Three  
(3)  
additional  
naïve  
animals  
were  
exposed  
a  
single  
time  
to  
the  
Beta  
variant  
in  
order  
to  
compare  
the  
immune



responses  
to  
an  
original  
infection  
and  
a  
re-  
infection.  
Notably,  
the  
animals  
that  
were  
re-  
infected  
exhibited  
lower  
concentrations  
of  
virus,  
and  
the  
re-  
infected  
animals  
exhibited  
increased  
neutralizing  
antibody  
levels  
after  
the  
second  
infection,  
compared  
to  
the  
first.  
These  
results  
suggest  
a  
boosted  
immune  
response  
conferred  
by

the  
initial  
infection.  
Interestingly,  
the  
animals  
re-  
infected  
with  
the  
original  
strain  
or  
the  
Alpha  
variant  
exhibited  
lower  
neutralizing  
antibody  
responses  
against  
the  
Beta  
variant,  
whereas  
the  
animals  
re-  
infected  
with  
the  
Beta  
variant  
generated  
similar  
neutralizing  
antibody  
responses  
for  
all  
3  
variants.  
This  
illustrates  
that  
natural  
infection

with  
one  
variant  
can  
provide  
some,  
although  
not  
complete,  
protection  
against  
re-  
infection  
with  
other  
variants,  
including  
VOCs;  
however,  
the  
degree  
of  
protection  
could  
be  
dependent  
on  
the  
strain  
or  
variant.  
The  
Delta  
variant,  
which  
has  
become  
the  
dominant  
strain  
in  
many  
countries,  
was  
not  
evaluated  
in  
this

study,  
and  
as  
we  
have  
covered  
previously,  
animal  
models  
do  
not  
always  
accurately  
reflect  
the  
immune  
response  
in  
humans.

## **PANDEMIC ORIGINS**

Origins  
of  
the  
SARS-  
CoV-2  
virus  
have  
been  
at  
the  
forefront  
of  
international  
debate  
since  
the  
onset  
of  
the  
COVID-19  
pandemic.  
The  
WHO's  
Scientific  
Advisory  
Group

on  
the  
Origins  
of  
Novel  
Pathogens  
([SAGO](#))  
was  
created  
in  
May  
2020  
to  
identify  
novel  
pathogens  
and  
advise  
the  
WHO  
on  
technical  
and  
scientific  
considerations  
regarding  
their  
emergence  
and  
re-  
emergence.  
SAGO  
[recently](#)  
[released](#)  
a  
call  
for  
international  
experts  
to  
join  
the  
group,  
with  
an  
emphasis  
on  
increasing

global representation and coordination in the effort to identify the origins of SARS-CoV-2. Some studies have linked SARS-CoV-2 virus to other [endemic human coronaviruses](#) and identified [genetic similarities](#) between SARS-CoV-2 and other coronaviruses. International debate around the origins of SARS-CoV-2 continues, however, with some

experts  
advocating  
for  
a  
revival  
of  
scientific  
investigations  
in  
China  
and  
elsewhere,  
to  
provide  
additional  
information  
regarding  
various  
origin  
scenarios,  
including  
zoonotic  
transmission  
or  
laboratory  
research.  
Leading  
WHO  
infectious  
disease  
epidemiologist  
Dr.  
Maria  
Van  
Kerkhove  
emphasized  
that  
SAGO  
is  
not  
a  
new  
fact-  
finding  
mission  
to  
China.  
Rather,

SAGO  
advises  
the  
WHO  
on  
a  
framework  
of  
study  
to  
understand  
the  
origins  
of  
emerging  
and  
re-  
emerging  
pathogens,  
and  
any  
future  
missions,  
to  
China  
or  
elsewhere,  
will  
be  
coordinated  
directly  
between  
the  
WHO  
and  
national  
governments.

**JAPAN  
EASING  
COVID-19  
RESTRICTIONS**

Japanese  
Prime  
Minister  
Yoshihide  
Suga  
announced



yesterday  
that  
Japan  
will  
lift  
its  
nationwide  
COVID-19  
state  
of  
emergency  
on  
September  
30  
and  
begin  
relax  
associated  
restrictions.

While  
Japan  
will  
lift  
many  
COVID-19  
protective  
measures,  
it  
will  
reportedly  
implement  
testing  
and  
vaccine  
passport  
programs  
to  
mitigate  
risk  
while  
facilitating  
increased  
social  
and  
economic  
activity.  
Local  
governments

may  
continue  
to  
recommend  
voluntary  
restrictions  
on  
businesses,  
such  
as  
reduced  
hours  
of  
operation  
and  
alcohol  
sales  
at  
bars  
and  
restaurants,  
after  
the  
emergency  
is  
lifted.

Japan  
faced

a  
surge  
in

COVID-19  
incidence  
that  
coincided  
with  
the  
2020  
Summer  
Olympic  
and  
Paralympic  
Games,  
but  
it  
has  
receded  
rapidly

in  
recent  
weeks.

## **AFRICA VACCINE HESITANCY**

In  
addition  
to  
barriers  
to  
accessing  
[sufficient  
SARS-  
CoV-2  
vaccine  
supply](#),  
African  
countries  
are  
also  
facing  
challenges  
with  
vaccine  
hesitancy.

[Dr.  
John  
Nkengasong,  
Director  
of  
the  
Africa  
CDC](#),  
recently  
commented  
on  
a  
potential  
link  
between  
international  
travel  
restrictions  
in  
the  
UK

and  
hesitancy  
among  
African  
populations.

The  
concern  
stems  
from  
the  
limited  
list  
of  
countries  
for  
which  
travelers  
arriving  
in  
the  
UK  
can  
“qualify  
as  
fully  
vaccinated.”

Travelers  
vaccinated  
under  
a  
UK,  
EU,  
or  
US  
vaccination  
program  
or  
individuals  
arriving  
from  
a  
list  
of  
18  
countries  
who  
can  
show

proof  
of  
full  
vaccination  
can  
enter  
the  
UK  
as  
“fully  
vaccinated”  
travelers,  
with  
limited  
restrictions  
or  
quarantine  
or  
testing  
requirements.  
Notably,  
the  
list  
does  
not  
include  
any  
countries  
from  
Africa,  
which  
Dr.  
Nkengasong  
argues  
could  
serve  
as  
a  
disincentive  
to  
get  
vaccinated.  
If  
travelers  
from  
African  
countries  
cannot

qualify  
as  
fully  
vaccinated,  
even  
with  
documentation  
of  
full  
vaccination,  
some  
individuals  
may  
not  
see  
value  
in  
the  
vaccination.  
Similar  
opposition  
has  
been  
reported  
in  
India  
and  
other  
parts  
of  
Asia  
as  
well  
as  
Latin  
America.  
Dr  
Richard  
Mihigo,  
an  
official  
from  
the  
WHO's  
Africa  
region,  
called  
on

countries  
to  
develop  
a  
cohesive  
global  
system  
for  
demonstrating  
vaccination  
status  
and  
lift  
travel  
restrictions  
for  
vaccinated  
travelers  
that  
are  
dependent  
on  
country.

### **SOUTHEAST ASIA ECONOMIC IMPACT**

The  
COVID-19  
pandemic  
and  
associated  
restrictions  
continue  
to  
have  
long-  
term  
negative  
effects  
on  
local,  
national,  
and  
global  
economies.  
In

Southeast Asia, several major economic forecasts have downgraded their previous projections and warn of slower economic growth in 2021. The Asian Development Bank lowered its previous regional projection from 4.4% to 3.1% growth over the course of 2021, which signals slower economic recovery from the pandemic. Additionally, the



bank lowered its growth projections for all national-level economies, with the exception of the Philippines and Singapore, and Singapore is now the only country in Southeast Asia projected to grow its economy by more than 5% in 2021.

Similarly, the [World Bank](#) downgraded its [economic growth](#)

projections  
for  
“developing  
countries  
in  
East  
Asia.”

The  
new  
2021  
projection  
for  
these  
countries  
falls  
from  
4.4%  
growth  
to  
just  
2.5%,  
which  
stands  
in  
stark  
contrast  
to  
the  
projected  
8.5%  
growth  
in  
China.  
Even  
in  
countries  
that  
are  
currently  
exhibiting  
stronger  
economic  
growth,  
the  
trend  
is  
slowing  
as

COVID-19  
surges  
continue,  
driven  
largely  
by  
the  
Delta  
variant.

The  
report  
emphasizes  
that  
the  
pandemic  
is  
compounding  
growing  
inequality  
in  
the  
region,  
which  
will  
have  
negative  
impacts  
on  
future  
economic  
growth.

Following  
COVID-19  
surges  
tied  
to  
Delta  
variant,  
some  
Southeast  
Asian  
countries  
are  
once  
again  
opening  
borders

to  
allow  
travel  
and  
tourism,  
including  
to  
some  
population  
island  
destinations  
in  
the  
region.  
Countries  
are  
implementing  
combinations  
of  
vaccine  
mandates  
and  
testing  
requirements  
in  
order  
to  
allow  
international  
travelers  
to  
arrive  
without  
lengthy  
quarantines.  
Some  
national  
and  
local  
economies  
rely  
heavily  
on  
tourism  
to  
drive  
their  
economies,

and they have been severely impacted by travel restrictions during the pandemic. Some countries are moving slowly, with initial limits on traveler volume for specific destinations (including some local areas with high vaccination coverage), before expanding. Some countries that limited domestic travel during the pandemic (eg, to remote

islands)  
are  
also  
resuming  
some  
domestic  
travel  
and  
tourism  
opportunities.

## **NEW YORK HEALTHCARE WORKERS**

The  
New  
York  
Governor  
Kathy  
Hochul,  
signed  
an  
executive  
order  
on  
September  
27  
to  
[address  
potential  
worker  
shortages  
as  
the  
state's  
vaccine  
mandate  
goes  
into  
effect.](#)  
The  
executive  
order  
allows  
the  
Governor  
to

activate  
the  
National  
Guard  
or  
bring  
in  
healthcare  
workers  
from  
other  
states  
to  
fill  
critical  
personnel  
shortages.  
Early  
evidence  
indicates  
that  
thousands  
of  
previously  
unvaccinated  
healthcare  
workers  
showed  
up  
to  
vaccination  
sites  
to  
receive  
their  
first  
dose  
in  
the  
hours  
before  
the  
mandate  
went  
into  
effect.  
Approximately  
5,000

employees remain unvaccinated, which is a sharp decline from 8,000 a week ago. The statewide vaccination coverage for hospital employees is now reported as 92% with at least 1 dose, and the vaccination also increased among nursing home employees, up from 84% to 92%. Despite these encouraging signs, [some](#)



hospital  
employees  
are  
still  
threatening  
to  
accept  
being  
fired  
rather  
than  
get  
vaccinated.

Some  
of  
these  
individuals  
indicated  
that  
they  
feel  
betrayed  
by  
the  
hospital  
system  
and  
government,  
and  
they  
do  
not  
trust  
the  
vaccine,  
despite  
widespread  
evidence  
of  
safety  
and  
efficacy.  
Employees  
who  
remain  
unvaccinated  
could  
be

put  
on  
unpaid  
leave  
and  
eventually  
fired.  
The  
CEO  
of  
the  
New  
York  
City  
Health  
+Hospitals  
health  
system  
reported  
that  
all  
facilities  
are  
currently  
functional  
and  
that  
there  
are  
no  
serious  
reports  
of  
staffing  
shortages.

## **US**

### **SCHOOL TESTING**

Inconsistent  
SARS-  
CoV-2  
testing  
procedures  
and  
requirements  
at  
schools

across  
the  
US  
are  
raising  
concerns  
with  
parents  
and  
stressing  
the  
capacity  
of  
the  
school  
systems  
trying  
to  
implement  
them.  
Even  
school  
districts  
in  
the  
same  
city  
can  
have  
very  
different  
testing  
and  
isolation  
standards.  
In  
Texas,  
for  
example,  
the  
San  
Antonio  
Independent  
School  
District  
offers  
weekly  
testing

for  
all  
students  
and  
staff,  
which  
consumes  
a  
lot  
of  
time  
and  
resources,  
even  
though  
only  
30%  
of  
students  
are  
participating  
in  
the  
program.  
Conversely,  
nearby  
Boerne  
Independent  
School  
District  
offers  
testing  
only  
by  
appointment,  
and  
symptomatic  
students  
and  
staff  
are  
not  
referred  
for  
testing  
or  
sent  
home

unless  
they  
can  
no  
longer  
participate  
in  
classroom  
instruction.

While  
some  
school  
districts  
are  
foregoing  
robust  
testing  
programs  
based  
on  
the  
belief  
that  
they  
are  
unnecessary,  
others  
are  
unable  
to  
implement  
them  
due  
to  
a  
lack  
of  
resources,  
including  
access  
to  
test  
kits  
and  
personnel  
to  
conduct

large  
numbers  
of  
regular  
tests.  
In  
Illinois,  
the  
state  
reported  
surge  
of  
enrollments  
in  
its  
statewide  
school-  
based  
testing  
program  
as  
daily  
incidence  
increased  
across  
the  
state  
and  
the  
new  
school  
year  
approached.  
But  
because  
schools  
enrolled  
late  
in  
the  
process,  
most  
do  
not  
yet  
have  
the  
logistics

and  
operational  
systems  
in  
place  
to  
implement  
the  
testing  
programs.

It  
can  
take  
3-6  
weeks  
to  
establish  
these  
systems,  
which  
has  
delayed  
testing  
in  
some  
schools,  
even  
after  
classes  
have  
already  
resumed.

The  
Berkeley  
(California)  
Unified  
School  
District  
used  
state  
COVID-19  
funding  
as  
well  
as  
its  
own  
budget

to  
hire  
21  
personnel,  
just  
to  
implement  
its  
testing  
program;  
however,  
most  
school  
districts  
do  
not  
have  
the  
funding  
available  
to  
hire  
new,  
dedicated  
staff  
for  
testing  
programs.

## **US RAPID TEST SHORTAGE**

A  
nationwide  
shortage  
of  
SARS-  
CoV-2  
rapid  
antigen  
tests  
has  
been  
reported  
in  
the  
US,



while capacity for PCR-based tests remains high. PCR tests must be processed by a lab, however, and results can often take between 1-3 days (or longer). Rapid tests and at-home tests may have a slightly lower accuracy than PCR tests, but they can still identify nearly

98%  
of  
infectious  
cases  
and  
provide  
convenient  
results  
within  
15-20  
minutes.  
The  
shortage  
of  
rapid  
testing  
kits  
means  
that  
schools,  
nursing  
homes,  
shelters,  
and  
workers  
that  
rely  
on  
fast  
testing  
results  
to  
go  
to  
work  
each  
day  
or  
prevent  
outbreaks  
among  
at-  
risk  
populations  
are  
struggling  
to  
access

adequate  
resources.

Increased  
wait  
times  
for  
testing  
results

mean  
that  
shelters,  
clinics,  
and  
schools  
are  
at  
increased  
risk  
for  
outbreaks,  
and  
workers  
who  
require  
daily  
testing  
could  
be  
forced  
to  
miss  
work  
and  
lose  
income.

The  
nationwide  
shortage  
of  
rapid  
tests  
may  
be  
a  
function  
of  
decreased

testing demands and increasing vaccination coverage over the summer. The Delta variant surge and slowing vaccination progress are driving increased demand for rapid tests, and manufacturers have not yet increased production capacity to catch up. Insufficient supply of rapid and at-home tests is driving up testing demand

at  
other  
locations,  
including  
[urgent  
care  
centers](#).

The  
increased  
demand  
and  
supply  
limitations  
for  
rapid  
tests  
is  
[driving  
up  
the  
prices  
of  
some  
other  
testing  
products](#).

The  
CARES  
Act  
passed  
in  
2020  
requires  
that  
insurers  
pay  
the  
cost  
of  
SARS-  
CoV-2  
testing  
conducted  
at  
out-  
of-  
network

laboratories.

One company, GS Labs, is routinely charging US \$380 per test, and insurers argue that the high cost is “price-gouging,” and in some instances, they are refusing the pay. The elevated cost of these tests could result in higher insurance premiums. GS Labs argues that it

approached  
insurers  
about  
becoming  
an  
in-  
network  
provider  
for  
reduced  
costs,  
but  
it  
was  
generally  
rejected.  
The  
company  
also  
cites  
its  
excellent  
service  
and  
a  
high  
start-  
up  
cost  
as  
justification  
for  
the  
elevated  
price  
for  
its  
tests.  
A  
representative  
for  
the  
company  
emphasizes  
that  
customers  
can  
schedule

an  
appointment  
for  
immediate  
testing  
and  
receive  
results  
within  
15-20  
minutes,  
while  
many  
drugstores  
and  
pharmacies  
have  
no  
rapid  
tests  
available.  
There  
are  
currently  
several  
ongoing  
lawsuits  
that  
aim  
to  
determine  
how  
much  
insurers  
have  
to  
pay.  
Increasing  
the  
availability  
of  
rapid  
and  
at-  
home  
tests,  
which  
typically



cost  
on  
the  
order  
of  
US  
\$20,  
would  
help  
increase  
testing  
access  
and  
reduce  
the  
need  
for  
higher-  
cost  
testing  
options.

**Weekly Updates on SARS-CoV-2 Vaccines**

**Support our work**

Twit

|

You]

|

Johns Hopkins Center for Health Security | 621 E. Pratt Street, Suite 210, Baltimore, MD 21202

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Date : 9/16/2021 4:07:38 PM

From : "Consortium of Universities for Global Health" executivedirector  
+cugh.org@ccsend.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : CUGH September Bulletin - Global Health News, Opportunities, & Events!

# **Bulletin**

## **September**

## **2021**

**A**

**MESSAGE**

**FROM**

**THE**

**EXECUTIVE**

**DIRECTOR**

September  
16th,  
2021

Dear  
colleague,

This  
bulletin  
contains  
a  
few  
important  
changes  
that  
we

have  
made  
at  
CUGH.  
We  
have  
extended  
the  
deadline  
for  
submissions  
for  
both  
panels  
and  
abstracts  
for  
CUGH2022  
to  
Oct.  
15th. Satellite  
submissions  
are  
also  
open and  
anyone  
can  
submit  
a  
proposal at  
[www.cugh2022.org](http://www.cugh2022.org). Also,  
panelists  
and  
abstract  
presenters  
are  
not  
required  
to  
attend  
the  
conference  
in  
person,  
which  
means  
they  
can

present  
virtually.  
Panels  
must  
be  
submitted  
by  
a  
CUGH  
member,  
however  
panelists  
and  
abstract  
presenters  
can  
be  
nonmembers.

Registration  
is  
open  
for  
our  
virtual  
symposium  
on  
Climate  
and  
Health  
Through  
Three  
Lenses  
which  
will  
held  
October  
15th.  
The  
symposium  
is  
free  
to  
attend  
and  
open  
to  
all.

It  
was  
created  
in  
advance  
of  
the  
Conference  
of  
the  
Parties  
meeting  
(COP26)  
to  
identify  
and  
share  
solutions  
that  
will  
address  
climate  
change  
and  
health  
and  
to  
engage  
African  
experts  
in  
advance  
of  
the COP27  
meeting,  
which  
will  
take  
place  
in 2022  
somewhere  
in  
Africa.  
We  
will  
release  
a  
white

paper  
and  
aggregate  
solutions  
to  
address  
these  
twin  
challenges  
which  
will  
be  
shared  
at  
the  
COP26  
in  
Glasgow.  
For  
the  
event  
we  
have  
secured  
a  
stellar  
list  
of  
speakers.

Stay  
tuned  
for  
upcoming  
webinars  
on  
oral  
health  
on  
Oct.  
28th.

Best  
wishes,

Keith  
Martin,  
MD,  
PC  
Executive  
Director  
Consortium  
of  
Universities  
for  
Global  
Health

## **CUGH Events & Updates**

**CUGH  
2022:  
Submit  
Abstracts,  
Panel  
Proposals,  
Satellite  
Sessions  
Now**

**CUGH  
2022,  
'Healthy  
People,  
Healthy  
Planet,  
Social  
Justice'** See  
[www.cugh2022.org](http://www.cugh2022.org)  
to  
register  
for  
the

conference,  
submit  
abstracts,  
satellite  
session  
proposals,  
and,  
for  
members,  
submit  
panel  
proposals. **THE  
NEW  
DEADLINE  
FOR  
PANEL  
AND  
ABSTRACT  
SUBMISSIONS  
IS  
OCTOBER  
15TH.**

**REGISTER  
NOW  
CUGH  
PRE-  
COP26  
SYMPOSIUM,  
OCT.  
15TH  
11AM  
-  
3PM  
EST:  
THE  
ROAD  
TO  
COP27:  
CLIMATE  
AND  
HEALTH  
THROUGH**



## **THREE LENSES**

Hear  
and  
engage  
global  
leaders  
on  
this  
free,  
CUGH  
online  
symposium,  
on  
what  
we  
can  
do  
to  
improve  
both  
climate  
change  
and  
health  
outcomes  
and  
pave  
the  
path  
for  
an  
impactful  
COP27  
program  
led  
by  
African  
scientists.

**Read  
more  
and  
register  
here.**

## TRAINEE ADVISORY COMMITTEE CALL FOR APPLICATIONS

The  
Trainee  
Advisory  
Committee  
is  
now  
accepting  
applications  
from  
trainees  
across  
biomedical  
and  
non-  
biomedical  
disciplines  
from  
around  
the  
world  
for  
the  
2022-2024  
cohort  
of  
committee  
members.  
25  
students  
sit  
on  
this  
committee.  
Members  
serve  
for  
two  
years  
and  
encounter

many  
leadership,  
networking,  
and  
skills-  
building  
opportunities  
throughout  
their  
tenure.

The  
application  
is  
open  
until

**September  
30th  
at  
11:59  
PM  
EST.**

If  
you  
have  
any  
questions  
regarding  
the  
application  
or  
TAC  
membership  
contact  
the  
current  
TAC  
chair,  
Deepika  
Khanna  
([dkhanna4@uic.edu](mailto:dkhanna4@uic.edu)).

Application  
link:  
<https://forms.gle/gDQDkC3a8jrzd3C6>

**EXTENDED  
DEADLINE**

FOR  
ADVISEES:  
CUGH  
2022  
ABSTRACT  
ADVISING  
PROGRAM

The  
CUGH  
2022  
Abstract  
Advising  
Program  
has  
EXTENDED  
its  
deadline  
for  
mentees  
to

**September  
24th!**

This  
program  
connects  
early-  
career  
CUGH  
and  
AFREhealth  
members  
(advisees)  
with  
more  
experienced  
CUGH  
and  
AFREhealth  
members  
(advisors)  
for  
assistance  
with  
the  
quality  
of

their  
abstract  
prior  
to  
submission  
for  
CUGH2022  
(deadline  
October  
15th,  
2021).

Sign  
up  
to  
be  
an  
advisee  
by  
September  
24th.

INTRODUCING  
NOTES  
FROM  
THE  
FIELD:  
A  
NEW  
FEATURE

**Attention  
colleagues  
from  
LMICs**

If  
you  
are  
a  
scientist,  
researcher  
or  
implementer  
from  
a

low  
or  
middle-  
income  
country,  
send  
us  
your  
commentaries  
that  
describe  
innovations,  
challenges  
and  
opportunities  
in  
global  
health.  
Submissions  
should  
be  
between  
500  
to  
800  
words.  
Submitters  
may  
also  
include  
videos  
that  
describe  
the issue.  
Some  
will  
be  
published  
in  
our  
bulletin  
and  
on  
[www.cugh.org](http://www.cugh.org).  
We  
hope  
this  
platform

will  
draw  
attention  
to  
these issues.

Submit using  
the  
following  
form:

<https://www.cugh.org/resources/newsletter/notes-from-the-field/>

## **Notes from the Field**

(see  
[all  
Notes  
from  
the  
Field  
publications](#))

### **LESSON LEARNED FROM EBOLA OUTBREAK BY AARON SONAH**

Ebola  
met  
us  
unaware  
in  
Liberia  
in

2014.  
Less  
information  
about  
the  
disease,  
and  
misinformation  
made  
it  
difficult  
to  
manage  
the  
disease  
initially.  
But  
with  
better  
knowledge  
about  
the  
disease,  
change  
in  
the  
attitude  
of  
the  
citizens,  
and  
early  
seeking  
of  
treatment  
increased  
the  
survival  
rate.  
The  
lesson  
learned  
from  
Ebola  
can  
be  
compared  
with



the  
onset  
and  
management  
of  
COVID-19.

[Read  
more  
here.](#)

## **CUGH Events & Updates (cont.)**

[NORTH-  
SOUTH  
AND  
SOUTH-  
SOUTH  
COLLABORATIONS  
BETWEEN  
AFREHEALTH  
AND  
CUGH  
DURING  
THE  
COVID-19  
PANDEMIC](#)

The  
COVID-19  
pandemic  
led  
to  
global  
lockdowns  
that  
disrupted  
international

travel  
and  
severely  
challenged  
partnerships  
between  
the  
Global  
North  
and  
Global  
South.  
This  
article  
reports  
on  
a  
recent  
Satellite  
meeting  
of  
the  
AFREhealth-  
CUGH  
Working  
Group  
at  
the  
CUGH  
2021  
conference  
which  
provided  
insights  
on  
North-  
South  
and  
South-  
South  
global  
health  
partnerships,  
against  
the  
backdrop  
of  
the

COVID-19  
pandemic.

[Read  
the  
article  
here.](#)

[\*\*DOES  
YOUR  
INSTITUTION  
NEED  
TRAINERS  
OR  
CURRICULA?  
USE  
CUGH'S  
FREE  
CAPACITY  
BUILDING  
DATABASE\*\*](#)

Health  
human  
resources  
deficits  
in  
low-  
income  
countries  
are  
significant.  
Colleagues  
in  
these  
nations  
have  
said  
that  
building  
their  
capacity  
to  
train  
their

workers  
is  
a  
top  
priority.  
To  
help  
address  
this,  
we  
created  
an  
online  
capacity  
building  
database  
so  
that  
institutions,  
especially  
in  
low  
resource  
settings,  
could  
share  
their  
training  
needs  
(trainers  
and  
curricula)  
across  
biomedical  
and  
non-  
biomedical  
disciplines.  
Those  
who  
have  
these  
assets  
and  
are  
willing  
to  
share

them  
can  
post  
on  
the  
site  
too.  
Please  
use  
the  
following  
site  
to  
connect  
training  
needs  
with  
educational  
assets  
and  
help  
our  
colleagues  
to  
strengthen  
their  
training  
capabilities.

**Database**

**link:**

[www.CUGHCapacityBuilding.org](http://www.CUGHCapacityBuilding.org)

**RESOURCES**  
**FROM**  
**CUGH'S**  
**SUBCOMMITTEE**  
**ON**  
**MASTER'S**  
**AND**  
**UNDERGRADUATE**  
**DEGREES**  
**IN**  
**GLOBAL**  
**HEALTH**

CUGH's  
Subcommittee  
on  
Master's  
and  
Undergraduate  
Degrees  
in  
Global  
Health  
(SMUDGH)  
has  
created  
and  
approved  
four  
one-  
page  
information  
sheets  
on  
advising,  
experiential  
learning,  
learning  
objectives,  
and  
curricula  
in  
global  
health.

[View  
the  
resources  
under  
the  
"Resource"  
tab  
on  
SMUDGH's  
page  
at  
cugh.org.](#)

## News & External Events

### SAVE THE DATE: CLIMATE CHANGE AND HEALTH IN SMALL ISLAND DEVELOPING STATES

Join  
the  
Caribbean  
community  
and  
international  
partners  
October  
5-8,  
2021  
for  
4  
days  
of  
immersion  
in  
the  
science  
of  
climate  
change  
and  
health  
in  
the

Caribbean.  
Identifying  
knowledge  
gaps,  
posing  
solutions,  
resource  
sharing,  
networking,  
and  
empowerment  
will  
take  
place  
as  
we  
work  
together  
to  
address  
the  
critical  
public  
health  
issue  
of  
climate  
change,  
and  
find  
a  
sustainable  
way  
to  
live  
healthy  
lives.

Speakers,  
registration,  
and  
calls-  
for-  
papers  
to  
be  
announced  
soon.



[View  
the  
English  
flyer  
here.](#)

[View  
the  
French  
flyer  
here.](#)

[View  
the  
Spanish  
flyer  
here.](#)

**[INVITATION  
TO  
SIGN  
THE  
SAO  
PAULO  
DECLARATION  
ON  
PLANETARY  
HEALTH](#)**

This  
Declaration  
is  
the  
first  
document  
of  
its  
kind  
from  
the  
global  
planetary  
health  
community  
outlining  
what  
actions

are  
necessary  
to  
achieve  
the  
Great  
Transition:  
a  
just  
transformation  
to  
a  
world  
that  
optimizes  
the  
health  
and  
well-  
being  
of  
all  
people  
and  
the  
planet.

As  
you  
know,  
The  
Great  
Transition  
requires  
rapid  
and  
deep  
structural  
changes  
across  
most  
dimensions  
of  
human  
activity. Every  
person  
needs  
to

safeguard  
the  
health  
of  
the  
planet. This  
is  
why  
we  
are  
calling  
upon  
all  
stakeholders  
to  
take  
urgent  
and  
decisive  
action.  
These  
recommendations  
are  
not  
exhaustive;  
rather,  
they  
are  
a  
compass  
guiding  
us  
towards  
the  
most  
promising  
pathways  
to  
support  
a  
more  
equitable  
and  
resilient  
post-  
pandemic  
world.

Sign  
the  
São  
Paulo  
Declaration  
on  
Planetary  
Health: [bit.ly/sign-SPD](https://bit.ly/sign-SPD)  
Read  
the  
Declaration (embargoed): [bit.ly/sao-paulo-declaration](https://bit.ly/sao-paulo-declaration)

**UPCOMING  
WEBINARS  
FROM  
THE  
PEGASUS  
INSTITUTE**

Join  
the  
PEGASUS  
Institute  
for  
several  
upcoming  
virtual  
events:

Peace  
and  
Health  
for  
Afghan  
Populations  
in  
Canada  
and  
Afghanistan  
September  
24th  
2

pm  
EST  
[Register  
here.](#)

ROUNDTABLE:  
Sustainability  
in  
Health  
Care  
and  
Other  
Sectors  
September  
29th,  
6

pm  
EST  
[Register  
here.](#)

COVID  
Vaccine  
Equity  
October  
19th,  
2

pm  
EST  
[Register  
here.](#)

[NIH  
REQUEST  
FOR  
INFORMATION  
ON  
RESEARCH  
NEEDS  
FOR  
CLIMATE  
CHANGE  
AND  
HEALTH](#)

The  
Steering  
Committee  
of  
the  
National  
Institutes  
of  
Health  
(NIH)  
Climate  
Change  
and  
Human  
Health  
Working  
Group  
invites  
feedback  
on  
the  
approaches  
NIH  
Institutes,  
Centers,  
and  
Offices  
can  
take  
to  
enhance  
research  
on  
the  
health  
implications  
of  
climate  
change  
in  
the  
United  
States  
and  
globally.

**BRIDGING**  
**MEDICAL**  
**GAPS**  
**FIRST**  
**EVER**  
**ANNUAL**  
**CONFERENCE**

Bridging  
Medical  
Gaps  
Collaboration  
is  
virtually  
hosting  
their  
very  
FIRST  
annual  
conference  
on September  
18,  
2021!

The  
conference  
will  
be  
centered  
on  
health  
communication:  
how  
we,  
as  
health  
trainees  
and  
professionals  
communicate  
to  
the  
public,  
to  
our  
patients,  
to

each  
other  
(both  
intra-  
and  
inter-  
professionally),  
and  
to  
our  
policymakers.

Join  
BMGC  
in  
learning  
from  
our  
exciting  
speakers  
and  
submit  
an  
abstract  
for  
our  
poster  
competition!

Register  
for  
the  
conference [HERE](#).

**DHSA**  
**2021**  
**RESEARCH**  
**COMPETITION**  
**CALL**  
**FOR**  
**ABSTRACTS**

DHSA  
is  
seeking  
population



health  
research  
proposals  
from  
students,  
faculty,  
or  
staff  
affiliated  
with  
any  
of  
DHSA's  
member  
institutions. This  
is  
a  
'shark  
tank'  
type  
event  
with  
real-  
time  
presentations,  
judging  
and  
awards!

This  
year, proposals  
are  
requested  
to  
have  
a  
focus  
on  
health  
disparities. Proposals  
may  
address  
any  
area  
of  
population  
health  
related

to  
or  
impacting  
health  
disparities,  
including  
but  
not  
limited  
to:

- Social  
determinants  
of  
health,
- Environmental  
health,
- Behavioral  
and  
mental  
health,  
and
- COVID-19.

All  
proposals  
must  
be  
submitted  
no  
later  
than **11:59  
pm on October  
13,  
2021.**

Proposals  
submitted  
after  
the  
deadline  
will  
not  
be  
considered.

[Read  
more  
and](#)

[submit  
here.](#)

**2021-2022**  
**NIH**  
**INTRODUCTION**  
**TO**  
**THE**  
**PRINCIPLES**  
**AND**  
**PRACTICE**  
**OF**  
**CLINICAL**  
**RESEARCH**  
**COURSE**

Registration  
for  
the  
2021-2022  
NIH  
Introduction  
to  
the  
Principles  
and  
Practice  
of  
Clinical  
Research  
(IPPCR)  
course  
is  
now  
open!

This  
free,  
self-  
paced,  
online  
course  
runs  
from  
September

1,  
2021  
to  
August  
1,  
2022.  
Graduate  
students,  
post-  
doctoral  
scholars,  
medical,  
dental,  
and  
pharmacy  
students,  
scientists,  
nurses,  
and  
other  
health  
professionals  
are  
encouraged  
to  
enroll  
now.

The  
IPPCR  
course  
is  
a  
lecture  
series  
from  
thought-  
leaders  
around  
the  
world  
covering:  
• Study  
Designs,  
Measurement  
and  
Statistics

- Ethical,  
Legal,  
Monitoring,  
and  
Regulatory  
Considerations
- Preparing  
and  
Implementing  
Clinical  
Studies
- Communicating  
research  
findings  
and  
other  
topics

To  
register,  
please  
visit  
the  
IPPCR  
website  
at <https://ocr.od.nih.gov/courses/ipPCR.html> or  
contact  
the  
course  
coordinator  
at [ipPCR2@mail.nih.gov](mailto:ipPCR2@mail.nih.gov).

Please  
feel  
free  
to  
share  
the  
course  
information  
website  
link  
with  
any  
internal  
or  
external  
colleagues.

We  
aim  
to  
continue  
to  
make  
this  
course  
a  
national  
and  
international  
success!

**CALL**  
**FOR**  
**PANEL**  
**SUBMISSIONS:**  
**MIDWESTERN**  
**UNIVERSITIES**  
**FOR**  
**GLOBAL**  
**HEALTH**  
**CONFERENCE:**  
**OCT.**  
**7**

As  
the  
host  
of  
this  
year's  
virtual [Midwest](#)  
[CUGH](#)  
[Conference](#) on  
Oct.  
7, [Indiana](#)  
[University](#)  
[Center](#)  
[for](#)  
[Global](#)  
[Health](#) is  
seeking  
panel

and/or  
30-  
minute  
session  
submissions  
from  
Midwest  
CUGH  
member  
institutions  
that  
are  
related  
to  
the  
theme  
of  
this  
year's  
conference,  
which  
is  
Healthcare  
System  
Resiliency  
with  
an  
emphasis  
on  
global  
health  
partnerships,  
collaboration  
and  
equity.

The  
conference  
brings  
together  
faculty  
and  
students  
from  
more  
than  
30  
academic

institutions  
across  
the  
US  
Midwest  
and  
their  
global  
partners  
to  
discuss  
global  
health  
issues,  
share  
best  
practices  
and  
network  
with  
colleagues.  
The  
conference  
will  
be  
held  
virtually  
on  
Thursday,  
October  
7,  
9  
am-  
noon  
EST  
with  
the  
poster  
presentations  
opening  
the  
day  
before.

If  
you  
have  
questions,



please  
reply  
directly  
to  
Stacy  
Robinson  
at [starrobi@iu.edu](mailto:starrobi@iu.edu).

**NEW**  
**PUBLICATION:**  
**ETHICAL**  
**CHALLENGES**  
**IN**  
**GLOBAL**  
**PUBLIC**  
**HEALTH:**  
**CLIMATE**  
**CHANGE,**  
**POLLUTION,**  
**AND**  
**THE**  
**HEALTH**  
**OF**  
**THE**  
**POOR**

The book, *Ethical*  
*Challenges*  
*in*  
*Global*  
*Public*  
*Health:*  
*Climate*  
*Change,*  
*Pollution,*  
*and*  
*the*  
*Health*  
*of*  
*the*  
*Poor,*  
is  
now  
available  
online.

The  
printed  
book  
will  
be  
available  
from  
Wipf  
&  
Stock  
for  
purchase.

The  
book  
is  
the  
first  
volume  
of  
the [Global  
Theological  
Ethics  
Series](#) published  
by  
the *Journal  
of  
Moral  
Theology*. The  
volume  
is  
edited  
by  
Philip  
Landrigan  
and  
Andrea  
Vicini,  
SJ. Some  
essays  
in  
the  
collection  
are:

- Andrea  
Vicini,  
SJ  
- "[Introduction:](#)

Global  
Public  
Health  
and  
the  
Promotion  
of  
the  
Common  
Good"

- Walter Ricciardi and Laura Mancini - "Health and Climate Change"
- Kurt Straif - "The Vital Contribution of Independent, Ethically Grounded Research to the Global Health Agenda"
- Keith Martin - "Challenges Confronting Global Public Health"
- Philip Landrigan - "Pollution, Climate Change, and Global

Public  
Health"

**TRIANGLE  
GLOBAL  
HEALTH  
CONSORTIUM  
2021  
VIRTUAL  
ANNUAL  
CONFERENCE**

The  
Triangle  
Global  
Health  
conference

explore  
innovative  
and  
adaptive  
approaches  
that  
have  
emerged  
in  
response  
to  
these  
inequities  
and  
challenges.

How  
can  
we  
leverage  
the  
lessons  
learned  
throughout  
the  
pandemic,  
to  
prevent  
and  
better

prepare  
for  
future  
pandemics,  
and  
tackle  
ongoing  
critical  
health  
needs  
and  
inequities?  
How  
can  
we  
reframe  
our  
global  
health  
guidelines,  
practices  
and  
policies  
in  
a  
changing  
world?

[Register  
here.](#)

**OCCUPATIONAL  
EPIDEMIOLOGY:  
MODERN  
METHODS  
AND  
HARMONISED  
APPROACHES:  
A  
TRAINING  
SCHOOL  
COORDINATED  
BY  
COST**

## **ACTION** **CA16216**

Online  
training  
course  
21  
September  
-  
7  
October  
2021

### **Course coordinators:**

Dr.  
Neil  
Pearce,  
LSHTM  
and  
Dr.  
Michelle  
Turner,  
ISGlobal

[Full  
course  
information  
and  
registration](#)

CourseThe  
will  
cover  
topics

byon:

**design  
in  
occupational  
epidemiology,  
riskassessment,  
assessment,  
types  
of  
bias**

including

**and  
the**

**use  
of  
Directed  
Acyclic  
Graphs  
(DAGs),  
current  
on  
causality.**

**CALL  
FOR  
APPLICANTS:  
DAAD  
NETWORKING  
TOUR  
IN  
AI  
9/2021**

The  
call  
for Postdoc-  
NeT-  
AI  
9/2021 is  
out!  
The  
focus  
is  
on AI  
in  
Medicine.  
Twice  
a  
year,  
the  
DAAD  
selects  
a  
group  
of  
outstanding  
postdoctoral  
researchers  
and

experienced  
PhD  
candidates  
worldwide  
to  
participate  
in  
the  
Postdoctoral  
Networking  
Tour  
in  
Artificial  
Intelligence  
(Postdoc-  
NeT-  
AI, [daad.de/ainet](https://daad.de/ainet)).  
The  
fellowship includes  
a Virtual  
Networking  
Week and  
a  
one-  
week travel  
stipend with  
plenty  
of  
opportunities  
to  
personally  
connect  
with  
leading  
researchers  
and  
research  
institutions  
from  
all  
over  
Germany.  
Fellows  
will  
also  
become  
part  
of



the DAAD  
AInet  
Fellows  
and  
Alumni  
Network,  
thus  
expanding  
and  
strengthening  
the  
cooperation  
within  
the  
group  
and  
with  
the  
German  
research  
community.

For  
more  
information  
and  
to  
apply  
go  
to [daad.de/ainet/apply](https://daad.de/ainet/apply).  
Click [here](#) for  
the  
PDF-  
call.  
If  
you  
have  
any  
question,  
contact  
us  
at [ainet@daad.de](mailto:ainet@daad.de).

**ISSOP**  
**CLIMATE**  
**CHANGE**

## WEBINAR SERIES

Save  
the  
date  
for  
these  
two  
hour  
monthly  
sessions  
from  
February  
to  
September  
on  
Thursdays  
at  
5  
pm  
GMT  
and  
Fridays  
at  
3:30  
AM  
GMT.  
These  
webinar  
sessions  
will  
feature  
international  
experts,  
breakout  
sessions,  
and  
a  
global  
strategy  
developed  
to  
address  
the  
challenges  
of

climate  
change.

Topics  
will  
be  
as  
follows:

**September**

**23/24:**

COP

26

(UN

Climate

Change

Summit)

and

the

Child

Health

Community:

ensuring

that

equitable

policies

are

adopted

for

children

and

youth

**Job**

**&**

**Funding**

**Opportunities**

(see

our

new

[Jobs](#)

[Board](#)

to

see

the

latest  
listings)

**ACADEMIC**  
**PUBLIC**  
**HEALTH**  
**LEADERSHIP**  
**POSITIONS**

The  
Association  
of  
Schools  
and  
Programs  
of  
Public  
Health  
(ASPPH)  
has  
posted  
three  
senior  
level  
job  
announcements: [Chief](#)  
[External](#)  
[Relations](#)  
[And](#)  
[Advocacy](#)  
[Officer; Director,](#)  
[Advocacy](#)  
[and](#)  
[Federal](#)  
[Affairs;](#)  
[and Chief](#)  
[Academic](#)  
[Officer.](#) All  
three  
positions  
are  
based  
in  
ASPPH's  
Washington,  
DC

office. Applications  
will  
be  
accepted  
through  
October  
15,  
2021.

ASSOCIATE  
OR  
FULL  
PROFESSOR  
OF  
EPIDEMIOLOGY  
AND  
BIostatISTICS  
AT  
THE  
UNIVERSITY  
OF  
CALIFORNIA,  
SAN  
FRANCISCO

The  
Department  
of  
Epidemiology  
and  
Biostatistics  
in  
partnership  
with  
the  
Institute  
for  
Global  
Health  
Sciences,  
University  
of  
California,  
San  
Francisco

(UCSF)  
invites  
applications  
for  
a  
full-  
time  
ladder  
rank  
faculty  
position  
at  
the  
Associate  
or  
Full  
Professor  
rank.  
The  
UCSF  
Department  
of  
Epidemiology  
and  
Biostatistics  
(DEB)  
is  
the  
largest  
department  
of  
epidemiology  
in  
the  
University  
of  
California  
system  
and  
has  
a  
strong  
mission  
in  
education,  
research,  
and  
clinical

activities.  
The  
Department  
provides  
a  
supportive  
academic  
environment  
for  
original  
research,  
including  
opportunities  
for  
collaboration  
with  
researchers  
from  
other  
departments  
and  
UCSF  
Schools,  
as  
well  
as  
teaching  
and  
mentoring  
as  
part  
of  
our  
Master's  
Degree  
in  
Clinical  
Research,  
our  
doctoral  
program  
in  
Epidemiology  
and  
Translational  
Science,  
and  
other

training  
programs.

[Read  
more  
and  
apply  
to  
the  
position  
here.](#)

**[MENTAL  
HEALTH  
RESEARCH  
AWARDS  
FOR  
INVESTIGATORS  
EARLY  
IN  
THEIR  
CAREER  
IN  
LOW  
AND  
MIDDLE  
INCOME  
COUNTRIES](#)**

Investigators  
from  
low-  
and  
middle-  
income  
countries  
(LMICs, [World  
Bank  
designated](#) low-  
and  
middle-  
income  
countries  
(LMICs)  
and



previously  
designated  
LMICs  
re-  
categorized  
as  
high  
income  
on  
or  
after  
January  
1,  
2021)  
are  
currently  
underrepresented  
in  
mental  
health  
research,  
curtailing their ability  
to  
partner  
and  
learn  
with  
other  
countries  
in  
conducting  
research  
on  
shared  
priorities.

The  
goal  
of  
of this initiative  
to  
support  
the  
scientific  
work  
and  
research  
career

development  
of  
exceptionally  
talented  
scientists  
who  
are  
in  
the  
early,  
formative  
stages  
of  
their  
careers  
and  
who  
plan  
to  
make  
a  
long-  
term  
career  
commitment  
to  
mental  
health  
research.  
This  
initiative  
seeks  
to  
assist  
these  
researchers  
in  
launching  
an  
innovative  
basic,  
translational,  
clinical,  
or  
services  
research  
program  
that

holds  
the  
potential  
to  
transform  
the  
understanding,  
prevention,  
diagnosis,  
or  
treatment  
of  
mental  
illnesses  
in  
low-  
resource  
international  
settings.

[GLOBAL  
HEALTH  
FUNDING  
RESOURCES  
FROM  
FOGARTY](#)

The  
Fogarty  
International  
Center  
at  
NIH  
ingoffers  
to  
support  
global  
health  
research.  
Fogarty  
also  
offers  
a  
variety  
of  
resources

for  
those  
seeking  
global  
health  
research  
funding  
across  
NIH,  
and  
from  
other  
organizations.

## REPOSITORY OF FUNDING OPPORTUNITIES

The  
following  
three  
resources  
from  
Johns  
Hopkins  
University  
are  
continuously  
updated  
repositories  
of  
federal  
and  
private  
funding  
opportunities  
for  
individuals  
in  
various  
stages  
of  
their  
career.

- [Early  
Career  
Funding  
Opportunities](#)
- [Graduate  
Student  
Funding  
Opportunities](#)
- [Postdoctoral  
Funding  
Opportunities](#)

## **Featured Reading & Listening**

**How  
abortion  
restrictions  
like  
Texas'  
push  
pregnant  
people  
into  
poverty**  
A  
study  
of  
hundreds  
of  
pregnant  
women  
over  
a  
decade  
found  
that  
72  
percent  
of  
those  
who  
were

denied  
care  
ended  
up  
living  
in  
poverty.  
[Read  
more.](#)

**FDA  
official  
hopeful  
younger  
kids  
can  
get  
shots  
this  
year**

FDA  
vaccine  
chief Peter  
Marks  
is  
“very,  
very  
hopeful”  
that  
US  
5-  
11-  
year-  
olds  
will  
be  
receiving  
vaccines  
by  
the  
end  
of  
the  
year  
—  
if  
not  
sooner;

Pfizer's study results are expected end-of-month and could be reviewed by the agency just weeks later.

[Read more.](#)

## Global Health Journals & Newsletters

AAICSA Health & Medicine Newsletters

AAICSA Health & Medicine Newsletters

AAICSA Health & Medicine Newsletters

AAICSA Health & Medicine Newsletters

AAICSA Health & Medicine Newsletters

AAICSA Health & Medicine Newsletters

[Global Health Opportunities Practice](#)

[PGS Medical Health Website](#)

[NIH Global Health Research Health Newsletter](#)

[WiredaDev@Global Health](#)

Consortium  
of  
Universities  
for  
Global  
Health  
202-974-6363  
|  
[info@CUGH.org](mailto:info@CUGH.org)  
|  
[www.CUGH.org](http://www.CUGH.org)

[Facel](#)

[Twit](#)

Consortium of Universities for Global Health | 1608 Rhode Island Ave. NW, Washington, DC  
20036

[Unsubscribe iceg@ohio.edu](#)

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Try email marketing for free today!



Date : 9/24/2021 2:32:31 PM

From : "Consortium of Universities for Global Health" executivedirector  
+cugh.org@ccsend.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : CUGH September Bulletin - Global Health News, Opportunities, & Events!

# **Bulletin** **(Updated)** **September** **2021**

**A**

**MESSAGE**

**FROM**

**THE**

**EXECUTIVE**

**DIRECTOR**

September  
24th,  
2021

Dear  
colleague,

This  
bulletin  
contains  
a  
few  
important  
announcements.

Due  
to  
obstacles  
that  
will  
remain  
for  
many  
colleagues  
outside  
the  
US  
to  
travel  
to  
the  
conference,  
the  
persistent  
threat  
the  
SARs-  
CoV-2  
pandemic  
poses  
and  
our  
commitment  
to  
public  
safety  
and  
equity,  
CUGH  
2022  
will  
be  
an  
entirely  
virtual  
event  
and  
will  
be  
run  
from  
March  
28th-

April  
1st,  
2022.  
There  
will  
not  
be  
an  
in-  
person  
event  
in  
Los  
Angeles.  
Information  
regarding  
full  
refunds  
to  
those  
who  
have  
registered  
will  
be  
sent  
out  
later  
this  
month.  
We  
have  
extended  
the  
deadline  
for  
submissions  
for  
both  
panels  
and  
abstracts  
for  
CUGH2022  
to  
Oct.  
15th. Registration  
will

reopen  
later  
this  
month.  
Satellite  
submissions  
are  
also  
open and  
anyone  
can  
submit  
a  
proposal at  
[www.cugh2022.org](http://www.cugh2022.org). Panelists  
and  
abstract  
presenters  
will  
now  
present  
virtually.  
Panels  
must  
be  
submitted  
by  
a  
CUGH  
member  
however  
panelists  
and  
abstract  
presenters  
can  
be  
nonmembers.

Registration  
is  
open  
for  
our  
[virtual  
symposium  
on  
Climate](#)

[and](#)  
[Health](#)  
[Through](#)  
[Three](#)  
[Lenses](#)

which  
will  
be  
held  
October  
15th.  
The  
symposium  
is  
free  
and  
open  
to  
all.  
It  
was  
created  
in  
advance  
of  
the  
Conference  
of  
the  
Parties  
meeting  
(COP26)  
to  
identify  
and  
share  
solutions  
that  
will  
address  
climate  
change  
and  
improve  
health  
outcomes  
and  
to

set  
the  
stage  
for  
the COP27  
meeting,  
which  
will  
take  
place  
in 2022  
somewhere  
in  
Africa.  
We  
will  
release  
a  
white  
paper  
and  
aggregate  
solutions  
from  
the  
symposium  
to  
address  
these  
twin  
challenges.  
Both  
products  
will  
be  
shared  
at  
the  
COP26  
in  
Glasgow.  
For  
the  
event  
we  
have  
secured  
a

stellar  
list  
of  
speakers.

Also  
join  
us  
for  
our  
upcoming  
webinar  
on  
oral  
health  
on  
Oct.  
28th  
and  
the  
Oct.  
5th-8th  
conference  
on  
climate  
change  
in  
small  
island  
states  
(info  
below).

Best  
wishes,

Keith  
Martin,  
MD,  
PC  
Executive  
Director  
Consortium  
of

Universities  
for  
Global  
Health

## **CUGH Events & Updates**

[CUGH  
2022:  
Submit  
Abstracts,  
Panel  
Proposals,  
Satellite  
Sessions  
Now](#)

**CUGH  
2022,  
'Healthy  
People,  
Healthy  
Planet,  
Social  
Justice'** See  
[www.cugh2022.org](http://www.cugh2022.org)  
to  
register  
for  
the  
conference,  
submit  
abstracts,  
satellite  
session  
proposals,  
and,  
for  
members,



submit  
panel  
proposals. **THE  
NEW  
DEADLINE  
FOR  
PANEL  
AND  
ABSTRACT  
SUBMISSIONS  
IS  
OCTOBER  
15TH.**

[REGISTER  
NOW  
CUGH  
PRE-  
COP26  
SYMPOSIUM,  
OCT.  
15TH  
11AM  
-  
3PM  
EST:  
THE  
ROAD  
TO  
COP27:  
CLIMATE  
AND  
HEALTH  
THROUGH  
THREE  
LENSES](#)

Hear  
and  
engage  
global  
leaders  
on  
this

free,  
CUGH  
online  
symposium,  
on  
what  
we  
can  
do  
to  
improve  
both  
climate  
change  
and  
health  
outcomes  
and  
pave  
the  
path  
for  
an  
impactful  
COP27  
program  
led  
by  
African  
scientists.

[Read  
more  
and  
register  
here.](#)

[TRAINEE  
ADVISORY  
COMMITTEE  
CALL  
FOR  
APPLICATIONS](#)

The  
Trainee

Advisory  
Committee  
is  
now  
accepting  
applications  
from  
trainees  
across  
biomedical  
and  
non-  
biomedical  
disciplines  
from  
around  
the  
world  
for  
the  
2022-2024  
cohort  
of  
committee  
members.  
25  
students  
sit  
on  
this  
committee.  
Members  
serve  
for  
two  
years  
and  
encounter  
many  
leadership,  
networking,  
and  
skills-  
building  
opportunities  
throughout  
their  
tenure.

The  
application  
is  
open  
until  
**September  
30th  
at  
11:59  
PM  
EST.**

If  
you  
have  
any  
questions  
regarding  
the  
application  
or  
TAC  
membership  
contact  
the  
current  
TAC  
chair,  
Deepika  
Khanna  
([dkhanna4@uic.edu](mailto:dkhanna4@uic.edu)).

Application  
link:  
<https://forms.gle/gDQDkC3a8jjrzd3C6>

**EXTENDED**  
**DEADLINE**  
**FOR**  
**ADVISEES:**  
**CUGH**  
**2022**  
**ABSTRACT**  
**ADVISING**  
**PROGRAM**

The  
CUGH  
2022  
Abstract  
Advising  
Program  
has  
EXTENDED  
its  
deadline  
for  
mentees  
to  
**September  
24th!**

This  
program  
connects  
early-  
career  
CUGH  
and  
AFREhealth  
members  
(advisees)  
with  
more  
experienced  
CUGH  
and  
AFREhealth  
members  
(advisors)  
for  
assistance  
with  
the  
quality  
of  
their  
abstract  
prior  
to  
submission  
for  
CUGH2022  
(deadline  
October

15th,  
2021).

Sign  
up  
to  
be  
an  
advisee  
by  
September  
24th.

INTRODUCING  
NOTES  
FROM  
THE  
FIELD:  
A  
NEW  
FEATURE

**Attention  
colleagues  
from  
LMICs**

If  
you  
are  
a  
scientist,  
researcher  
or  
implementer  
from  
a  
low  
or  
middle-  
income  
country,  
send  
us  
your  
commentaries

that  
describe  
innovations,  
challenges  
and  
opportunities  
in  
global  
health.  
Submissions  
should  
be  
between  
500  
to  
800  
words.  
Submitters  
may  
also  
include  
videos  
that  
describe  
the issue.  
Some  
will  
be  
published  
in  
our  
bulletin  
and  
on  
[www.cugh.org](http://www.cugh.org).  
We  
hope  
this  
platform  
will  
draw  
attention  
to  
these issues.

Submit using  
the

following  
form:  
<https://www.cugh.org/resources/newsletter/notes-from-the-field/>

## **Notes from the Field**

([see  
all  
Notes  
from  
the  
Field  
publications](#))

### **LESSON LEARNED FROM EBOLA OUTBREAK BY AARON SONAH**

Ebola  
met  
us  
unaware  
in  
Liberia  
in  
2014.  
Less  
information  
about  
the  
disease,  
and  
misinformation



made  
it  
difficult  
to  
manage  
the  
disease  
initially.  
But  
with  
better  
knowledge  
about  
the  
disease,  
change  
in  
the  
attitude  
of  
the  
citizens,  
and  
early  
seeking  
of  
treatment  
increased  
the  
survival  
rate.  
The  
lesson  
learned  
from  
Ebola  
can  
be  
compared  
with  
the  
onset  
and  
management  
of  
COVID-19.

[Read  
more  
here.](#)

## **CUGH Events & Updates (cont.)**

[SAVE  
THE  
DATE:  
CLIMATE  
CHANGE  
AND  
HEALTH  
IN  
SMALL  
ISLAND  
DEVELOPING  
STATES](#)

Join  
the  
Caribbean  
community  
and  
international  
partners  
October  
5-8,  
2021  
for  
4  
days  
of  
immersion  
in  
the  
science  
of

climate  
change  
and  
health  
in  
the  
Caribbean.  
Identifying  
knowledge  
gaps,  
posing  
solutions,  
resource  
sharing,  
networking,  
and  
empowerment  
will  
take  
place  
as  
we  
work  
together  
to  
address  
the  
critical  
public  
health  
issue  
of  
climate  
change,  
and  
find  
a  
sustainable  
way  
to  
live  
healthy  
lives.

Speakers,  
registration,  
and  
calls-

for-  
papers  
to  
be  
announced  
soon.

[View  
the  
English  
flyer  
here.](#)

[View  
the  
French  
flyer  
here.](#)

[View  
the  
Spanish  
flyer  
here.](#)

[\*\*#AskProfAgnes  
EQUITY  
WEBINAR  
SERIES:  
SOUTH-  
SOUTH  
COOPERATION  
IN  
EDUCATION  
TO  
STRENGTHEN  
DEVELOPMENT\*\*](#)

The  
South-  
South  
Cooperation  
in  
Education  
represents  
the  
exchange

of  
knowledge  
and  
resources  
among  
learning  
institutions,  
organizations,  
and  
Experts  
in  
education  
in  
developing  
countries.  
As  
an  
indicator  
of  
solidarity  
with  
the  
nations  
of  
the  
South,  
the  
cooperation  
contributes  
to  
strengthen  
education  
sectors,  
national  
well-  
being,  
national  
and  
collective  
self-  
reliance,  
and  
the  
attainment  
of  
internationally  
agreed  
development

goals  
in  
Low  
and  
Mid  
Income  
countries.  
The  
session  
seeks  
to  
assess  
the  
contribution  
of  
South-  
South  
Cooperation  
in  
education  
in  
strengthening  
countries'  
development  
and  
how  
the  
global  
community  
could  
support  
it.  
Join  
the  
University  
of  
Global  
Health  
Equity  
in  
this  
important  
discussion.

[Register  
here.](#)

DOES  
YOUR  
INSTITUTION  
NEED  
TRAINERS  
OR  
CURRICULA?  
USE  
CUGH'S  
FREE  
CAPACITY  
BUILDING  
DATABASE

Health  
human  
resources  
deficits  
in  
low-  
income  
countries  
are  
significant.  
Colleagues  
in  
these  
nations  
have  
said  
that  
building  
their  
capacity  
to  
train  
their  
workers  
is  
a  
top  
priority.  
To  
help  
address  
this,

we  
created  
an  
online  
capacity  
building  
database  
so  
that  
institutions,  
especially  
in  
low  
resource  
settings,  
could  
share  
their  
training  
needs  
(trainers  
and  
curricula)  
across  
biomedical  
and  
non-  
biomedical  
disciplines.  
Those  
who  
have  
these  
assets  
and  
are  
willing  
to  
share  
them  
can  
post  
on  
the  
site  
too.  
Please  
use



the  
following  
site  
to  
connect  
training  
needs  
with  
educational  
assets  
and  
help  
our  
colleagues  
to  
strengthen  
their  
training  
capabilities.

**Database  
link:**

[www.CUGHCapacityBuilding.org](http://www.CUGHCapacityBuilding.org)

**RESOURCES**  
**FROM**  
**CUGH'S**  
**SUBCOMMITTEE**  
**ON**  
**MASTER'S**  
**AND**  
**UNDERGRADUATE**  
**DEGREES**  
**IN**  
**GLOBAL**  
**HEALTH**

CUGH's  
Subcommittee  
on  
Master's  
and  
Undergraduate  
Degrees  
in

Global  
Health  
(SMUDGH)  
has  
created  
and  
approved  
four  
one-  
page  
information  
sheets  
on  
advising,  
experiential  
learning,  
learning  
objectives,  
and  
curricula  
in  
global  
health.

[View](#)  
[the](#)  
[resources](#)  
[under](#)  
[the](#)  
["Resource"](#)  
[tab](#)  
[on](#)  
[SMUDGH's](#)  
[page](#)  
[at](#)  
[cugh.org.](#)

**[THE](#)**  
**[LANCET](#)**  
**[VOICE:](#)**  
**[HUMANITARIAN](#)**  
**[NEEDS](#)**  
**[IN](#)**  
**[AFGHANISTAN,](#)**  
**[AND](#)**

## REFUGEE HEALTH

What  
are  
the  
most  
pressing  
humanitarian  
needs  
in  
Afghanistan?  
How  
can  
the  
country  
preserve  
its  
health  
system?  
Former  
Afghanistan  
government  
public  
health  
director  
Dr.  
Mohammad  
Haqmal  
and  
Dr.  
Ayesha  
Ahmad  
highlight  
the  
main  
issues,  
and  
Prof.  
Muhammad  
Zaman  
discusses  
the  
changing  
needs  
of  
refugees  
worldwide

as  
a  
result  
of  
the  
COVID-19  
pandemic.

Further  
reading:  
Urgent  
health  
and  
humanitarian  
needs  
of  
the  
Afghan  
population  
under  
the  
Taliban:

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01963-2/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01963-2/fulltext)

**NORTH-  
SOUTH  
AND  
SOUTH-  
SOUTH  
COLLABORATIONS  
BETWEEN  
AFREHEALTH  
AND  
CUGH  
DURING  
THE  
COVID-19  
PANDEMIC**

The  
COVID-19  
pandemic  
led  
to  
global

lockdowns  
that  
disrupted  
international  
travel  
and  
severely  
challenged  
partnerships  
between  
the  
Global  
North  
and  
Global  
South.  
This  
article  
reports  
on  
a  
recent  
Satellite  
meeting  
of  
the  
AFREhealth-  
CUGH  
Working  
Group  
at  
the  
CUGH  
2021  
conference  
which  
provided  
insights  
on  
North-  
South  
and  
South-  
South  
global  
health  
partnerships,  
against

the  
backdrop  
of  
the  
COVID-19  
pandemic.

[Read  
the  
article  
here.](#)

## **News & External Events**

[CLIMATE  
AND  
HEALTH  
RAPID  
RESPONSE  
WEBINAR:  
WILDFIRES  
IN  
THE  
MEDITERRANEAN](#)

The  
Mediterranean  
has  
become  
a  
“climate  
hotspot,”  
with  
record  
heat  
and  
drought  
driving  
some  
of

the  
most  
intense  
blazes  
on  
record  
for  
the  
region.  
These  
highly  
interconnected  
climate  
risks  
have  
resulted  
in  
compounding  
environmental  
health  
exposures  
for  
the  
region's  
inhabitants.

From  
the  
Columbia  
Mailman  
School  
of  
Public  
Health,  
this  
webinar  
seeks  
to  
elevate  
the  
health  
voice  
by  
bringing  
together  
clinical,  
public  
health

and  
emergency  
response  
experts  
to  
assess  
emerging  
health  
impacts  
and  
explore  
opportunities  
for  
bolstering  
health  
system  
responses  
to  
safeguard  
human  
health.

[View  
the  
flyer  
here.](#)

**INVITATION  
TO  
SIGN  
THE  
SAO  
PAULO  
DECLARATION  
ON  
PLANETARY  
HEALTH**

This  
Declaration  
is  
the  
first  
document  
of  
its



kind  
from  
the  
global  
planetary  
health  
community  
outlining  
what  
actions  
are  
necessary  
to  
achieve  
the  
Great  
Transition:  
a  
just  
transformation  
to  
a  
world  
that  
optimizes  
the  
health  
and  
well-  
being  
of  
all  
people  
and  
the  
planet.

As  
you  
know,  
The  
Great  
Transition  
requires  
rapid  
and  
deep  
structural

changes  
across  
most  
dimensions  
of  
human  
activity. Every  
person  
needs  
to  
safeguard  
the  
health  
of  
the  
planet. This  
is  
why  
we  
are  
calling  
upon  
all  
stakeholders  
to  
take  
urgent  
and  
decisive  
action.  
These  
recommendations  
are  
not  
exhaustive;  
rather,  
they  
are  
a  
compass  
guiding  
us  
towards  
the  
most  
promising  
pathways  
to

support  
a  
more  
equitable  
and  
resilient  
post-  
pandemic  
world.

Sign  
the  
São  
Paulo  
Declaration  
on  
Planetary  
Health: [bit.ly/sign-SPD](https://bit.ly/sign-SPD)  
Read  
the  
Declaration (embargoed): [bit.ly/sao-paulo-declaration](https://bit.ly/sao-paulo-declaration)

**UPCOMING  
WEBINARS  
FROM  
THE  
PEGASUS  
INSTITUTE**

Join  
the  
PEGASUS  
Institute  
for  
several  
upcoming  
virtual  
events:

Peace  
and  
Health  
for

Afghan  
Populations  
in  
Canada  
and  
Afghanistan  
September  
24th  
2  
pm  
EST  
[Register  
here.](#)

ROUNDTABLE:  
Sustainability  
in  
Health  
Care  
and  
Other  
Sectors  
September  
29th,  
6  
pm  
EST  
[Register  
here.](#)

COVID  
Vaccine  
Equity  
October  
19th,  
2  
pm  
EST  
[Register  
here.](#)

[NIH  
REQUEST  
FOR  
INFORMATION  
ON](#)

## RESEARCH NEEDS FOR CLIMATE CHANGE AND HEALTH

The  
Steering  
Committee  
of  
the  
National  
Institutes  
of  
Health  
(NIH)  
Climate  
Change  
and  
Human  
Health  
Working  
Group  
invites  
feedback  
on  
the  
approaches  
NIH  
Institutes,  
Centers,  
and  
Offices  
can  
take  
to  
enhance  
research  
on  
the  
health  
implications  
of  
climate  
change

in  
the  
United  
States  
and  
globally.

**BRIDGING**  
**MEDICAL**  
**GAPS**  
**FIRST**  
**EVER**  
**ANNUAL**  
**CONFERENCE**

Bridging  
Medical  
Gaps  
Collaboration  
is  
virtually  
hosting  
their  
very  
FIRST  
annual  
conference  
on September  
18,  
2021!

The  
conference  
will  
be  
centered  
on  
health  
communication:  
how  
we,  
as  
health  
trainees  
and  
professionals

communicate  
to  
the  
public,  
to  
our  
patients,  
to  
each  
other  
(both  
intra-  
and  
inter-  
professionally),  
and  
to  
our  
policymakers.

Join  
BMGC  
in  
learning  
from  
our  
exciting  
speakers  
and  
submit  
an  
abstract  
for  
our  
poster  
competition!

Register  
for  
the  
conference [HERE](#).

**[DHSA](#)**  
**[2021](#)**  
**[RESEARCH](#)**  
**[COMPETITION](#)**

## CALL FOR ABSTRACTS

DHSA  
is  
seeking  
population  
health  
research  
proposals  
from  
students,  
faculty,  
or  
staff  
affiliated  
with  
any  
of  
DHSA's  
member  
institutions. This  
is  
a  
'shark  
tank'  
type  
event  
with  
real-  
time  
presentations,  
judging  
and  
awards!

This  
year, proposals  
are  
requested  
to  
have  
a  
focus  
on  
health  
disparities. Proposals



may  
address  
any  
area  
of  
population  
health  
related  
to  
or  
impacting  
health  
disparities,  
including  
but  
not  
limited  
to:

- Social  
determinants  
of  
health,
- Environmental  
health,
- Behavioral  
and  
mental  
health,  
and
- COVID-19.

All  
proposals  
must  
be  
submitted  
no  
later  
than **11:59  
pm on October  
13,  
2021.**  
Proposals  
submitted  
after  
the  
deadline  
will

not  
be  
considered.

[Read  
more  
and  
submit  
here.](#)

**[2021-2022  
NIH  
INTRODUCTION  
TO  
THE  
PRINCIPLES  
AND  
PRACTICE  
OF  
CLINICAL  
RESEARCH  
COURSE](#)**

Registration  
for  
the  
2021-2022  
NIH  
Introduction  
to  
the  
Principles  
and  
Practice  
of  
Clinical  
Research  
(IPPCR)  
course  
is  
now  
open!

This  
free,

self-  
paced,  
online  
course  
runs  
from  
September  
1,  
2021  
to  
August  
1,  
2022.

Graduate  
students,  
post-  
doctoral  
scholars,  
medical,  
dental,  
and  
pharmacy  
students,  
scientists,  
nurses,  
and  
other  
health  
professionals  
are  
encouraged  
to  
enroll  
now.

The  
IPPCR  
course  
is  
a  
lecture  
series  
from  
thought-  
leaders  
around  
the

world  
covering:  
• Study  
Designs,  
Measurement  
and  
Statistics  
• Ethical,  
Legal,  
Monitoring,  
and  
Regulatory  
Considerations  
• Preparing  
and  
Implementing  
Clinical  
Studies  
• Communicating  
research  
findings  
and  
other  
topics

To  
register,  
please  
visit  
the  
IPPCR  
website  
at <https://ocr.od.nih.gov/courses/ipPCR.html> or  
contact  
the  
course  
coordinator  
at [ipPCR2@mail.nih.gov](mailto:ipPCR2@mail.nih.gov).

Please  
feel  
free  
to  
share  
the  
course  
information  
website

link  
with  
any  
internal  
or  
external  
colleagues.  
We  
aim  
to  
continue  
to  
make  
this  
course  
a  
national  
and  
international  
success!

**CALL  
FOR  
PANEL  
SUBMISSIONS:  
MIDWESTERN  
UNIVERSITIES  
FOR  
GLOBAL  
HEALTH  
CONFERENCE:  
OCT.  
7**

As  
the  
host  
of  
this  
year's  
virtual [Midwest  
CUGH  
Conference](#) on  
Oct.  
7, [Indiana](#)

[University](#)  
[Center](#)  
[for](#)  
[Global](#)  
[Health](#) is  
seeking  
panel  
and/or  
30-  
minute  
session  
submissions  
from  
Midwest  
CUGH  
member  
institutions  
that  
are  
related  
to  
the  
theme  
of  
this  
year's  
conference,  
which  
is  
Healthcare  
System  
Resiliency  
with  
an  
emphasis  
on  
global  
health  
partnerships,  
collaboration  
and  
equity.

The  
conference  
brings  
together  
faculty

and  
students  
from  
more  
than  
30  
academic  
institutions  
across  
the  
US  
Midwest  
and  
their  
global  
partners  
to  
discuss  
global  
health  
issues,  
share  
best  
practices  
and  
network  
with  
colleagues.  
The  
conference  
will  
be  
held  
virtually  
on  
Thursday,  
October  
7,  
9  
am-  
noon  
EST  
with  
the  
poster  
presentations  
opening  
the

day  
before.

If  
you  
have  
questions,  
please  
reply  
directly  
to  
Stacy  
Robinson  
at [starrobi@iu.edu](mailto:starrobi@iu.edu).

**NEW**  
**PUBLICATION:**  
**ETHICAL**  
**CHALLENGES**  
**IN**  
**GLOBAL**  
**PUBLIC**  
**HEALTH:**  
**CLIMATE**  
**CHANGE,**  
**POLLUTION,**  
**AND**  
**THE**  
**HEALTH**  
**OF**  
**THE**  
**POOR**

The book, *Ethical*  
*Challenges*  
*in*  
*Global*  
*Public*  
*Health:*  
*Climate*  
*Change,*  
*Pollution,*  
*and*  
*the*  
*Health*



of  
the  
Poor,

is  
now  
available  
online.  
The  
printed  
book  
will  
be  
available  
from  
Wipf  
&  
Stock  
for  
purchase.

The  
book  
is  
the  
first  
volume  
of  
the [Global](#)  
[Theological](#)  
[Ethics](#)  
[Series](#) published  
by  
the *Journal*  
*of*  
*Moral*  
*Theology*. The  
volume  
is  
edited  
by  
Philip  
Landrigan  
and  
Andrea  
Vicini,  
SJ. Some  
essays  
in

the  
collection  
are:

- Andrea  
Vicini,  
SJ  
- "[Introduction:  
Global  
Public  
Health  
and  
the  
Promotion  
of  
the  
Common  
Good](#)"
- Walter  
Ricciardi  
and  
Laura  
Mancini  
- "[Health  
and  
Climate  
Change](#)"
- Kurt  
Straif  
- "[The  
Vital  
Contribution  
of  
Independent,  
Ethically  
Grounded  
Research  
to  
the  
Global  
Health  
Agenda](#)"
- Keith  
Martin  
- "[Challenges  
Confronting  
Global  
Public  
Health](#)"

- Philip Landrigan - "[Pollution, Climate Change, and Global Public Health](#)"

[TRIANGLE  
GLOBAL  
HEALTH  
CONSORTIUM  
2021  
VIRTUAL  
ANNUAL  
CONFERENCE](#)

[The  
Triangle  
Global  
Health  
conference](#)

will explore innovative and adaptive approaches that have emerged in response to these inequities and challenges. How can we leverage the lessons learned

throughout  
the  
pandemic,  
to  
prevent  
and  
better  
prepare  
for  
future  
pandemics,  
and  
tackle  
ongoing  
critical  
health  
needs  
and  
inequities?  
How  
can  
we  
reframe  
our  
global  
health  
guidelines,  
practices  
and  
policies  
in  
a  
changing  
world?

[Register  
here.](#)

**OCCUPATIONAL  
EPIDEMIOLOGY:  
MODERN  
METHODS  
AND  
HARMONISED  
APPROACHES:  
A**

**TRAINING**  
**SCHOOL**  
**COORDINATED**  
**BY**  
**COST**  
**ACTION**  
**CA16216**

Online  
training  
course  
21  
September  
-  
7  
October  
2021

**Course  
coordinators:**

Dr.  
Neil  
Pearce,  
LSHTM  
and  
Dr.  
Michelle  
Turner,  
ISGlobal

[Full  
course  
information  
and  
registration](#)

courseThe  
will  
cover  
topics

**studyon:**

**design  
in**

**occupational**

**posuurepidemiology,**

**riskassessment,**

**assessment,**

**types**

of  
bias  
including  
and  
the  
use  
of  
Directed  
Acyclic  
Graphs  
(DAGs),  
and current  
debates on  
causality.

[CALL  
FOR  
APPLICANTS:  
DAAD  
NETWORKING  
TOUR  
IN  
AI  
9/2021](#)

The  
call  
for Postdoc-  
NeT-  
AI  
9/2021 is  
out!  
The  
focus  
is  
on AI  
in  
Medicine.  
Twice  
a  
year,  
the  
DAAD  
selects  
a  
group

of  
outstanding  
postdoctoral  
researchers  
and  
experienced  
PhD  
candidates  
worldwide  
to  
participate  
in  
the  
Postdoctoral  
Networking  
Tour  
in  
Artificial  
Intelligence  
(Postdoc-  
NeT-  
AI, [daad.de/ainet](https://daad.de/ainet)).  
The  
fellowship includes  
a Virtual  
Networking  
Week and  
a  
one-  
week travel  
stipend with  
plenty  
of  
opportunities  
to  
personally  
connect  
with  
leading  
researchers  
and  
research  
institutions  
from  
all  
over  
Germany.  
Fellows

will  
also  
become  
part  
of  
the DAAD  
AInet  
Fellows  
and  
Alumni  
Network,  
thus  
expanding  
and  
strengthening  
the  
cooperation  
within  
the  
group  
and  
with  
the  
German  
research  
community.

For  
more  
information  
and  
to  
apply  
go  
to [daad.de/ainet/apply](https://daad.de/ainet/apply).  
Click [here](#) for  
the  
PDF-  
call.  
If  
you  
have  
any  
question,  
contact  
us  
at [ainet@daad.de](mailto:ainet@daad.de).



## ISSOP CLIMATE CHANGE WEBINAR SERIES

Save  
the  
date  
for  
these  
two  
hour  
monthly  
sessions  
from  
February  
to  
September  
on  
Thursdays  
at  
5  
pm  
GMT  
and  
Fridays  
at  
3:30  
AM  
GMT.  
These  
webinar  
sessions  
will  
feature  
international  
experts,  
breakout  
sessions,  
and  
a  
global  
strategy  
developed  
to

address  
the  
challenges  
of  
climate  
change.

Topics  
will  
be  
as  
follows:

**September**

**23/24:**

COP

26

(UN  
Climate  
Change  
Summit)

and  
the  
Child  
Health  
Community:  
ensuring  
that  
equitable  
policies  
are  
adopted  
for  
children  
and  
youth

**Job  
&  
Funding  
Opportunities**

(see  
our  
new  
[Jobs  
Board](#))

to  
see  
the  
latest  
listings)

**ACADEMIC**  
**PUBLIC**  
**HEALTH**  
**LEADERSHIP**  
**POSITIONS**

The  
Association  
of  
Schools  
and  
Programs  
of  
Public  
Health  
(ASPPH)  
has  
posted  
three  
senior  
level  
job  
announcements: [Chief](#)  
[External](#)  
[Relations](#)  
[And](#)  
[Advocacy](#)  
[Officer; Director,](#)  
[Advocacy](#)  
[and](#)  
[Federal](#)  
[Affairs;](#)  
[and Chief](#)  
[Academic](#)  
[Officer.](#) All  
three  
positions  
are  
based  
in

ASPPH's  
Washington,  
DC  
office. Applications  
will  
be  
accepted  
through  
October  
15,  
2021.

ASSOCIATE  
OR  
FULL  
PROFESSOR  
OF  
EPIDEMIOLOGY  
AND  
BIostatISTICS  
AT  
THE  
UNIVERSITY  
OF  
CALIFORNIA,  
SAN  
FRANCISCO

The  
Department  
of  
Epidemiology  
and  
Biostatistics  
in  
partnership  
with  
the  
Institute  
for  
Global  
Health  
Sciences,  
University  
of

California,  
San  
Francisco  
(UCSF)  
invites  
applications  
for  
a  
full-  
time  
ladder  
rank  
faculty  
position  
at  
the  
Associate  
or  
Full  
Professor  
rank.  
The  
UCSF  
Department  
of  
Epidemiology  
and  
Biostatistics  
(DEB)  
is  
the  
largest  
department  
of  
epidemiology  
in  
the  
University  
of  
California  
system  
and  
has  
a  
strong  
mission  
in  
education,

research,  
and  
clinical  
activities.  
The  
Department  
provides  
a  
supportive  
academic  
environment  
for  
original  
research,  
including  
opportunities  
for  
collaboration  
with  
researchers  
from  
other  
departments  
and  
UCSF  
Schools,  
as  
well  
as  
teaching  
and  
mentoring  
as  
part  
of  
our  
Master's  
Degree  
in  
Clinical  
Research,  
our  
doctoral  
program  
in  
Epidemiology  
and  
Translational

Science,  
and  
other  
training  
programs.

[Read  
more  
and  
apply  
to  
the  
position  
here.](#)

[\*\*MENTAL  
HEALTH  
RESEARCH  
AWARDS  
FOR  
INVESTIGATORS  
EARLY  
IN  
THEIR  
CAREER  
IN  
LOW  
AND  
MIDDLE  
INCOME  
COUNTRIES\*\*](#)

Investigators  
from  
low-  
and  
middle-  
income  
countries  
(LMICs, [World  
Bank  
designated](#) low-  
and  
middle-  
income

countries  
(LMICs)  
and  
previously  
designated  
LMICs  
re-  
categorized  
as  
high  
income  
on  
or  
after  
January  
1,  
2021)  
are  
currently  
underrepresented  
in  
mental  
health  
research,  
curtailing their ability  
to  
partner  
and  
learn  
with  
other  
countries  
in  
conducting  
research  
on  
shared  
priorities.

The  
goal  
of  
[this initiative](#)  
to  
support  
the  
scientific  
work



and  
research  
career  
development  
of  
exceptionally  
talented  
scientists  
who  
are  
in  
the  
early,  
formative  
stages  
of  
their  
careers  
and  
who  
plan  
to  
make  
a  
long-  
term  
career  
commitment  
to  
mental  
health  
research.  
This  
initiative  
seeks  
to  
assist  
these  
researchers  
in  
launching  
an  
innovative  
basic,  
translational,  
clinical,  
or  
services

research  
program  
that  
holds  
the  
potential  
to  
transform  
the  
understanding,  
prevention,  
diagnosis,  
or  
treatment  
of  
mental  
illnesses  
in  
low-  
resource  
international  
settings.

**GLOBAL**  
**HEALTH**  
**FUNDING**  
**RESOURCES**  
**FROM**  
**FOGARTY**

The  
Fogarty  
International  
Center  
at  
NIH  
funding offers  
to  
support  
global  
health  
research.  
Fogarty  
also  
offers  
a

variety  
of  
resources  
for  
those  
seeking  
global  
health  
research  
funding  
across  
NIH,  
and  
from  
other  
organizations.

## REPOSITORY OF FUNDING OPPORTUNITIES

The  
following  
three  
resources  
from  
Johns  
Hopkins  
University  
are  
continuously  
updated  
repositories  
of  
federal  
and  
private  
funding  
opportunities  
for  
individuals  
in  
various  
stages  
of

their  
career.

- [Early  
Career  
Funding  
Opportunities](#)
- [Graduate  
Student  
Funding  
Opportunities](#)
- [Postdoctoral  
Funding  
Opportunities](#)

## Featured Reading & Listening

How  
abortion  
restrictions  
like  
Texas'  
push  
pregnant  
people  
into  
poverty  
A  
study  
of  
hundreds  
of  
pregnant  
women  
over  
a  
decade  
found  
that  
72  
percent  
of  
those

who  
were  
denied  
care  
ended  
up  
living  
in  
poverty.  
[Read  
more.](#)

**FDA  
official  
hopeful  
younger  
kids  
can  
get  
shots  
this  
year**  
FDA  
vaccine  
chief Peter  
Marks  
is  
“very,  
very  
hopeful”  
that  
US  
5-  
11-  
year-  
olds  
will  
be  
receiving  
vaccines  
by  
the  
end  
of  
the  
year  
—  
if

not  
sooner;  
Pfizer's  
study  
results  
are  
expected  
end-  
of-  
month  
and  
could  
be  
reviewed  
by  
the  
agency  
just  
weeks  
later.  
[Read  
more.](#)

## Global Health Journals & Newsletters

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From : "GenomeWeb" newsletters@genomeweb.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : Daily News: 23andMe Q1 Revenues Rise 23 Percent

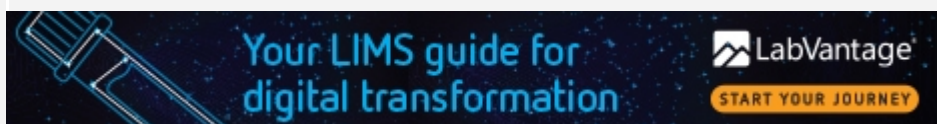
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**23andMe Q1 Revenues Rise 23 Percent**

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**Amazon, Cleveland Clinic Get FDA Emergency Use  
Authorizations for SARS-CoV-2 Tests**

Published on Aug 13, 2021

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**Seer Q2 Revenues Skyrocket; Firm Inks Chinese  
Distribution Deal**

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**Lucira Health Posts \$12.4M in Revenues, Beats Wall Street  
Estimate**



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### **ProPhase Labs Posts 153 Revenue Jump in Q2**

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### **Co-Diagnostics Q2 Revenues up 14 Percent on SARS-CoV-2 Test Sales**

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### **Applied DNA Sciences Fiscal Q3 Revenues Nearly Triple**

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### **HTG Molecular Diagnostics Q2 Revenues up 5 Percent as Pandemic Pressures Ease**

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### **OpGen Q2 Revenues Fall 32 Percent**

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### **PerkinElmer Enters \$500M Credit Facility**

Published on Aug 12, 2021

*Sponsored by: Swift Biosciences*

## **Wastewater Monitoring of SARS-CoV-2 Variants Highlights Importance of Complete Genomic Coverage**

Because SARS-CoV-2 appears at low viral titers in collected wastewater, and the material may be degraded or contaminated, it can be difficult to achieve full genomic coverage from such samples to discern if a certain strain has taken hold in an area or to identify new strains. [Read more.](#)

Featured in Depth

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**Norway's Genetic Analysis Hopes HumGut Database Will  
Spawn New Diagnostics, Therapies**

Published on Aug 12, 2021

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**Despite MDx Product Delays, Talis Biomedical Expecting  
'Meaningful Revenue Ramp in 2022'**

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**Berkeley Lights Ramps up Partnerships With Thermo Fisher  
Scientific, Bayer Deals**

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**Oncocyte Updates Plans for Chronix Transplant Tech; Will  
Develop and Market Kits in Europe**

Published on Aug 11, 2021

**Tech Note: RNAscope LS Multiplex Fluorescent Assay Combined with  
Immunofluorescence**

This technical note from ACD provides guidelines for performing automated fluorescent co-detection of RNA and protein by combining in situ hybridization and immunofluorescence on the Leica BOND RX System.

Download it from GenomeWeb's [White Paper Channel](#)

**Recommended for You**

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**Clonal Mosaic Variants in Sperm Are Stable Over Time, Play  
Role in Hereditary Disease Transmission**

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## Population Study Points to Pronounced Denisovan Ancestry in Philippine Population

Published on Aug 12, 2021

### Advances in Immunology With Single-Cell and Spatial Multiomics

This eBook from 10x Genomics examines how immunologists are using single-cell and spatial multiomics to study infectious diseases, vaccine and therapeutic development, immuno-oncology, autoimmunity, allergies and inflammation, and transplantation autoimmunity to build a more detailed map of the cellular and molecular signatures of immune cells in health and disease.

Download it from GenomeWeb's [White Paper Channel](#).

### Job listings

#### Lab Aide, Animal

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spg Hbr NY](#)

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#### Senior Manager, Bioinformatics

Company: [Asuragen](#)

Location: [austin TX](#)

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#### Firmware Engineer

Company: [Agilent](#)

Location: [Ankeny IA](#)

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#### Clinical Lab Scientist

Company: [Veracyte](#)

Location: [South San Francisco CA](#)

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### **Assessing Liquid Transfer Performance for PCR, qPCR, and NGS**

This white paper from Artel demonstrates the ability of PCRMix QualAssure to replicate the liquid transfer behavior of commercially available master mixes, enabling fast and reliable evaluation of pipetting steps with the Multichannel Verification System.

Download it from GenomeWeb's [White Paper Channel](#).

### **RNAscope in COVID-19 Research**

This resource from ACD includes more than 25 publications that show the adoption of RNAscope technology in COVID-19 research ranging from detection of both the viral and replicating strand of the virus, visualizing the host-receptor interaction and the histopathology post infection.

Download it from GenomeWeb's [White Paper Channel](#).

### **Is Your Clinical Diagnostics Manufacturer Able to Weather Supply Chain Challenges?**

In this whitepaper from Millipore Sigma learn how Covid-19-driven regional manufacturing shutdowns, surge demands, and logistics disruptions have placed significant pressure on clinical diagnostic supply chains, resulting in raw material shortages and delays.

Download it from GenomeWeb's [White Paper Channel](#)

### **Comparison of Splice Site Finder Algorithms**

This whitepaper presents a performance comparison of Congenica Splice Site Finder (CSSF), an algorithm that determines the splicing functionality of a given DNA sequence, against an older algorithm, SSFL.

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Date : 8/9/2021 4:17:25 PM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: Ambry Genetics, Lightbeam Health Solutions Form Genetic Testing Data Partnership

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## FROM THE SPONSOR:

### Powering genomic data analysis with AWS for faster insights

Global pharmaceutical company AstraZeneca used AWS to build a cloud-based solution for processing petabytes of genomic sequencing data for drug research & development. Their pipeline is now powered to run over 51 billion statistical tests daily and is on track to analyze 2 million genomes by 2026.

[Learn more about how AstraZeneca made it possible with AWS.](#)

## Breaking News

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### Ambry Genetics, Lightbeam Health Solutions Form Genetic Testing Data Partnership

Published on Aug 09, 2021

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### Single Metastatic Cancer Genome Analysis Appears Sufficient to ID Biomarkers, Treatment Options

Published on Aug 09, 2021

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**Cell-Free DNA Analysis Outperforms Cytology for  
Leptomeningeal Disease Detection**

Published on Aug 09, 2021

**Webinar: Developing a High-Throughput NGS Assay for Clonal  
Hematopoiesis in a Large Cohort Study**

Clonal hematopoiesis of indeterminate potential (CHIP) describes the development of somatic mutations associated with leukemogenesis in otherwise normal, healthy people and is associated with increased risk of cardiovascular disease and cancer. Nicholas Wong, a senior research fellow at Monash University, will discuss the development of a high-throughput NGS assay to measure CHIP in ASPREE. [Register Here.](#)

**Featured in Depth**

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**Guardant Health Laying Path for Future in Cancer  
Screening, Updates Launch Plans for CRC Assay**

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**Illumina Sequencing Instrument Sales, COVID-19  
Surveillance Continue to Boost Business**

Published on Aug 06, 2021

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**Karius Cell-Free DNA Method to Detect Infection Validated  
in Study**

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**NYU Langone Health, Philips Integrate Informatics for FDA-  
Cleared Cancer Sequencing Panel**

Published on Aug 05, 2021

## Immunotherapy Challenges and Solutions

This infographic from Thermo Fisher Scientific outlines the applications and benefits of immunotherapy treatments as well as challenges and solutions in developing immunotherapies.

Download it from GenomeWeb's [White Paper Channel](#).

### Recommended for You

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#### **Top Five Articles on GenomeWeb Last Week: Guardant Health, Illumina, Pacific Biosciences, and More**

Published on Aug 09, 2021

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#### **Dovetail Genomics Partners With Wildlife Conservation Group Revive & Restore on Sequencing Effort**

Published on Aug 09, 2021

## The Advantages, and Applications, and Challenges of Digital PCR

This on-demand webinar from Stilla explains the principles and advantages of digital PCR (dPCR), the major dPCR platforms, and the array of possible applications for the technology, including a three-color target multiplex HIV quantification assay using the Naica System.

Download it from GenomeWeb's [Webinar Library](#).

### Job listings

#### **R&D Researcher, Immunology**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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#### **Staff Bioinformatics Scientist - Multi-omics**

Company: [Resilience](#)

Location: [La Jolla CA](#)

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## **Associate Scientist/Scientist, Functional Genomics**

Company: [New York Stem Cell Foundation](#)

Location: [New York NY](#)

[Apply now](#)

## **Research Associate**

Company: [Pacific Biosciences](#), [Circulomics](#)

Location: [Baltimore MD](#)

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## **Advancing Personalized Oncology with Transcriptomic Profiling and Mechanistic Modeling**

In this on-demand GenomeWebinar sponsored by Qiagen, Moritz Schütte, head of next-generation sequencing data analysis at Alacris, explores the advantages of RNA sequencing alone or in combination with whole-exome sequencing as part of a precision oncology workflow and how mathematical modeling of molecular data can predict drug sensitivity. Download it from GenomeWeb's [Webinar Library](#).

## **RNAscope for COVID-19 Research**

This presentation deck from ACD Bio-technique reviews RNAscope technology, COVID-19 offerings, and RNAscope in COVID-19 literature. Download it from GenomeWeb's [White Paper Channel](#)

## **A Novel Assay for the Robust Detection of MicroRNAs with Spatial Resolution**

This application note from ACD describes the new miRNAscope Assay, an in situ hybridization assay enabling highly robust detection of miRNAs, siRNAs, ASOs, and other small RNAs in tissues with spatial and morphological context at single-cell resolution. Download it from GenomeWeb's [White Paper Channel](#)

## **Next-Generation Proteomics Reagents for Increased Sample Multiplexing**

In this application note from Thermo Fisher Scientific, learn how tandem mass tag reagents enable high-throughput, quantitative proteomic analyses to identify changes in protein abundance and post-translational modification states. Download it from GenomeWeb's [White Paper Channel](#).

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From : "GenomeWeb" newsletters@genomeweb.com

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Subject : Daily News: Association for Molecular Pathology Issues Guidelines to Promote Genetic Variant Data Sharing

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Contact [adsales@genomeweb.com](mailto:adsales@genomeweb.com) for our 2021 media kit.

## Breaking News

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**Association for Molecular Pathology Issues Guidelines to Promote Genetic Variant Data Sharing**

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**Genomes of Advanced Neuroendocrine Neoplasms Unveil Subtypes, Treatment Clues**

Published on Jul 29, 2021

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**Secondary Genetic Findings Often Requested if Given Second Chance, Study Finds**

Published on Jul 29, 2021

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**Immunai Acquires Swiss Bioinformatics Firm Nebion**

Published on Jul 29, 2021

**Five-Minute Diagnosis of a Previously Unsolved Case**

This whitepaper describes how Congenica's annotation and filtering features identified the causal variant in a developmental disorder case that previous whole-genome sequencing analysis was unable to solve. Download it from GenomeWeb's [White Paper Channel](#).

Featured in Depth

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**Quadrant Biosciences Eyes 2022 Launch for Molecular Traumatic Brain Injury Test**

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**Akoya Demonstrates Reproducibility of Protein Imaging System as Part of Clinical Push**

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**Sequencing Firm Phosphorus Tests Limits of Comprehensive Consumer Genomics With GeneCompass**

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**ETH Zurich, U Toronto Team Develops Tool for Bottom-Up Proteomics Proteoform Analysis**

Published on Jul 28, 2021

**Next-Generation Proteomics Reagents for Increased Sample Multiplexing**

In this application note from Thermo Fisher Scientific, learn how tandem mass tag reagents enable high-throughput, quantitative proteomic

analyses to identify changes in protein abundance and post-translational modification states.

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### **Genetron Health Partners with Guizhou Local Government for Liver Cancer Early Screening Project**

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### **NYU Langone Health Gets FDA Clearance for Solid Tumor Gene Sequencing Test**

Published on Jul 29, 2021

## **From Data to Diagnosis: Delivering Results on a National Scale with Genomics England**

This whitepaper highlights how the Congenica platform has allowed Genomics England to process 2,700 whole genomes per week and improved diagnostic yield for the 100,000 Genomes Project by 50 percent. Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Assistant/Associate Scientist, Automated Systems**

Company: [New York Stem Cell Foundation](#)

Location: [New York NY](#)

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### **Lab Informatics Data Scientist**

Company: [Agilent](#)

Location: [Wilmington DE](#)

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## **Director Biospecimen Repository and Protocol Support, Miami Cancer Institute**

Company: [Miami Cancer Institute at Baptist Health](#)

Location: [Miami FL](#)

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## **Sr. Scientist - Transgenics**

Company: [InVivo Biosystems](#)

Location: [Eugene OR](#)

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## **Best Practices for Using Microspheres in the Development of Fluorescent Lateral Flow Immunoassays**

In this technical presentation, Millipore Sigma provides an introduction to AnteoBind nanocoating technology and the use of AnteoBind activated Estapor europium microspheres in lateral flow immunoassays.

Download it from GenomeWeb's [Webinar Library](#)

## **Considerations When Ordering Non-Invasive Prenatal Screening**

This white paper from Illumina is based on a webinar presentation by Katie Ellis, senior genetic counselor at Genea in Australia, who discussed important issues to consider when ordering non-invasive prenatal screening, including patient preferences, technology platforms, test limitations, and the implications of inconclusive results.

Download it from GenomeWeb's [White Paper Channel](#).

## **Identifying Rare Cancer Mutations with Clinical Decision Support Software**

This application note from Qiagen presents an example workflow for detecting rare cancer mutations from large next-generation sequencing panels using QCI Interpret One clinical decision support software and interpretation service.

Download it from GenomeWeb's [White Paper Channel](#).

## **Saliva Samples for COVID-19 Testing**

This whitepaper from DNA Genotek presents use cases of the Omnigene Oral saliva collection and stabilization kits for COVID-19 diagnostic testing, including adoption in the UK for the country's Test to Release for International Travel program.

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From : "GenomeWeb" newsletters@genomeweb.com

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Subject : Daily News: At NSGC, Genetic Counselors Address Race-Based Medicine, Ways to Change

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## Breaking News

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**At NSGC, Genetic Counselors Address Race-Based Medicine, Ways to Change**

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**FDA Grants Emergency Use Authorization for Northeastern University SARS-CoV-2 Test**

Published on Sep 24, 2021

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**New Products Posted to GenomeWeb: Becton Dickinson, Cosmos-ID, OncoDNA, More**

Published on Sep 24, 2021





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### **Machine Learning Method Allows Highly Multiplexed Cell Surface Protein Analysis via Flow Cytometry**

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### **ESMO Oncologists Debate Optimal Timing for Broad NGS, Align on Key Barriers to Precision Oncology**

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### **ID Genomics Developing COVID Variant Test Using Handheld System, Dipstick Detection**

Published on Sep 23, 2021

### **Determining Plasma Protein Binding with a Micro-Sample Prep Device**

This white paper from Millipore Sigma demonstrates use of the Supel BioSPME 96-Pin device to measure drug-protein binding to understand the amount of free drug available in blood, finding the technique to save significant time as compared with rapid equilibrium dialysis techniques. Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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## Genetic Counselors Address Race-Based Medicine, Ways to Change

Published on Sep 24, 2021

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## FDA Revises SARS-CoV-2 Test Emergency Use Authorization Requirements to Account for Variants

Published on Sep 23, 2021

### Spatial Proteomic Signatures of Breast Cancer of Progression

This whitepaper from Ionpath presents a case study in which researchers used multiplexed ion beam imaging (MIBI) to analyze spatial proteomic signatures of surgical resections covering the spectrum of breast cancer progression to understand how the tumor microenvironment changes with transition from ductal carcinoma *in situ* to invasive breast cancer.

Download it from GenomeWeb's [White Paper Channel](#).

### Job listings

#### Intellectual Property Manager

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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#### Sr Clinical Research Associate

Company: [Natera](#)

Location: [San Carlos CA](#)

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#### Genomics Scientist

Company: [ActX, Inc.](#)

Location: [Seattle WA](#)

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## Research Technician I

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)

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### Assessing Liquid Transfer Performance for PCR, qPCR, and NGS

This white paper from Artel demonstrates the ability of PCRMix QualAssure to replicate the liquid transfer behavior of commercially available master mixes, enabling fast and reliable evaluation of pipetting steps with the Multichannel Verification System.

Download it from GenomeWeb's [White Paper Channel](#).

### Fast Gene Expression Profiling with an Integrated Web-Based Analysis Pipeline

This whitepaper compares the performance of the HTG EdgeSeq Oncology Biomarker and Precision Immuno-Oncology gene expression profiling panels to RNA-seq, finding that it requires less sample input than RNA-seq and has a faster workflow.

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### From Data to Diagnosis: Delivering Results on a National Scale with Genomics England

This whitepaper highlights how the Congenica platform has allowed Genomics England to process 2,700 whole genomes per week and improved diagnostic yield for the 100,000 Genomes Project by 50 percent.

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This eBook from 10x Genomics examines how immunologists are using single-cell and spatial multiomics to study infectious diseases, vaccine and therapeutic development, immuno-oncology, autoimmunity, allergies and inflammation, and transplantation autoimmunity to build a more detailed map of the cellular and molecular signatures of immune cells in health and disease.

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Date : 8/5/2021 11:02:27 AM  
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To : "Ice, Gillian" iceg@ohio.edu  
Subject : Daily News: Berry Oncology Raises \$99.2M in Series B1 Round

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### [Icon to click to save item to your GenomeWeb reading list.](#) **NanoString Technologies Q2 Revenues Increase 50 Percent**

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[Icon to click to save item to your GenomeWeb reading list.](#) **Promega, Henlius to Develop Microsatellite Instability CDx for Cancer Drug**

Published on Aug 05, 2021

### **Employing the Specificity of CRISPR-Cas9 to Refine NGS Libraries**

This on-demand webinar from Jumpcode discusses how CRISPRclean technology employs the specificity of CRISPR-Cas9 to degrade selected abundant or biologically uninformative sequences such as ribosomal RNA in prepared next-generation sequencing libraries.

Download it from GenomeWeb's [Webinar Library](#).

### **Featured in Depth**

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Published on Aug 03, 2021

**eCase Study Transcript: Optimized Protocol for Sequencing the SARS-CoV-2 Genome**

This transcript is from a GenomeWeb eCase Study that outlined an optimized workflow for sequencing the SARS-CoV-2 genome, demonstrating the coverage and variant detection achieved.

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## Recommended for You

[Icon to click to save item to your GenomeWeb reading list.](#) **Menopause Timing Influenced by Hundreds of Genetic Loci, New GWAS Finds**

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Published on Aug 04, 2021

**miRNAscope: Detect Small Regulatory RNAs with Spatial and Morphological Context**

This poster from ACD, describes the miRNAscope in situ hybridization assay, which detects small RNA species with unparalleled detection sensitivity and specificity, enabling morphological information with single-cell resolution.

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## Job listings

**Research Technician II-III**

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### **SAP CRM Architect**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Director, Hardware**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Genetic Diagnostic Laboratory Assistant Director**

Company: [Genetic Diagnostic Laboratory \(GDL\), Department of Genetics, Perelman School of Medicine, University of Pennsylvania](#)

Location: [Philadelphia PA](#)

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### **From Synthetic Gene to Vaccine: Confidence with Gene Synthesis Services**

This eCase Study from Thermo Fisher Scientific describes a range of de novo gene synthesis options for rapid vaccine development.

Download it from GenomeWeb's [eCase Study Videos](#)

### **Automated Single-Cell RNA Sequencing Using the Drop-seq Protocol**

This application note from Dolomite Bio describes results obtained from the encapsulation of single cells with barcoded mRNA capture beads for fully automated single-cell RNA sequencing using the Drop-seq protocol on the Dolomite Bio Nadia Instrument.

Download it from GenomeWeb's [White Paper Channel](#).

### **High-yield Extraction and Purification of DNA and RNA from FFPE Samples**

In this on-demand webinar, Purigen Biosystems reviews an innovative approach to automated nucleic acid purification using isotachopheresis.

Download it from GenomeWeb's [Webinar Library](#)

### **Methods and Challenges of Variant Annotation in Hereditary Cancer**

In this whitepaper from Qiagen learn how identification of mutation carriers is critical, as it enables the administration of interventions that are proven to confer significant survival benefits, particularly for highly penetrant genetic mutations.



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Date : 8/30/2021 4:18:50 PM

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Published on Aug 30, 2021

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**NHGRI Awards Coriell Institute \$4.6M to Manage Biobank**

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## Single-Cell Biology Research with the RNAscope Technology

In this on-demand webinar from ACD, watch scientists describe the power of in situ transcriptomics and discuss the application of this technology to large-scale tissue mapping in the mouse brain.

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### **SARS-CoV-2 Delta Variant PCR Could Help Surveillance Efforts, Developers Say**

Published on Aug 30, 2021

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### **Delfi Diagnostics Tags Lung Cancer as First Target for Fragmentation-Based Liquid Biopsy Tech**

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### **Oncocyte Launches Prospective Registry to Drive DetermaRx Adoption, Improve Coverage**

Published on Aug 27, 2021

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### **Studies Show Benefits of Long-Read Sequencing in Toughest Rare Disease Cases**

Published on Aug 27, 2021

## **Coronavirus Pathogenesis Pathway**

Download this resource from Qiagen to view genes and biological mechanisms involved in the coronavirus pathogenesis pathway.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### **Visby Medical Obtains FDA 510(k), CLIA Waiver for Multiplex STI Test Using Handheld PCR Device**

Published on Aug 30, 2021

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## Jury Awards ArcherDx, MGH \$4.7M in Qiagen Patent Infringement Lawsuit

Published on Aug 30, 2021

### A Curated Omics Data Portal for Accessing and Analyzing Datasets

This eBook describes the how Qiagen's OmicSoft Lands portal can reduce the time spent finding, downloading, processing and annotating omics datasets from public repositories.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### Senior Software Engineer, Build and Release

Company: [Pacific Biosciences](#)

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### Manufacturing Associate (Molecular Techniques)

Company: [Codex DNA](#)

Location: [San Diego CA](#)

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### Sales Representative

Company: [Golden Helix Inc](#)

Location: [Bozeman MT](#)

[Apply now](#)

### Field Service Engineer

Company: [Agilent](#)

Location: [Cedar Creek TX](#)

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### **Variant Interpretation in Oncology: Results from an End-User Benchmarking Survey**

This report by Qiagen summarizes the results of a benchmarking survey that sought to identify pain points and opportunities in next-generation sequencing variant interpretation workflows within the field of oncology. Download it from GenomeWeb's [White Paper Channel](#).

### **Electrochemical Detection of Nucleic Acids**

Download this note from Glen Research for an overview of electrochemical probes, which can be used for the detection of single-base mismatches, DNA methylation, important analytes, abasic sites, and DNA damage.

Download it from GenomeWeb's [White Paper Channel](#)

### **Combining NGS Technologies for Biomarker Identification and Confirmation Research**

This application note from IDT describes two high-performing targeted NGS approaches to maximize the ability to identify and confirm germline and somatic mutations.

Download it from GenomeWeb's [White Paper Channel](#).

### **Rapid Implementation of SARS-CoV-2 Testing**

In this eCase Study video from SeraCare, hear how Dr. Joel Lefferts and his team at the Dartmouth-Hitchcock Medical Center were able to rapidly increase, through automation, their SARS-CoV-2 assay on the Abbott m2000.

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### Industry-First Seraseq ctDNA MRD Reference Materials

LGC SeraCare is excited to announce the first-to-market ctDNA MRD reference material – designed and manufactured for the development and validation of cfDNA MRD NGS assays. Confirm your MRD assay at LOD between 0.5% to 0.005% tumor fraction sensitivity using the Seraseq ctDNA MRD Panel mutation mix.

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### Breast Cancer Genetic Risk Modified by Corticosteroid Use

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### Brief This Week: Agilent Technologies, Cytex Biosciences, Veracyte, and More

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**People in the News: New Appointments at Guardant Health, Foundation Medicine, PGDx, GenapSys, More**

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**New Products Posted to GenomeWeb: HTG Molecular, Myriad Genetics, Eclipse Bioinnovations, More**

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### **Vetting a Contract Manufacturing Partner for Your Clinical Diagnostics Kit**

In this whitepaper from Millipore Sigma, learn how to choose a contract manufacturing partner for your clinical diagnostics kit.

Download it from GenomeWeb's [White Paper Channel](#).

## **Featured in Depth**

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**Illumina Sequencing Instrument Sales, COVID-19 Surveillance Continue to Boost Business**

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**Guardant Health Laying Path for Future in Cancer Screening, Updates Launch Plans for CRC Assay**

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**Karius Cell-Free DNA Method to Detect Infection Validated in Study**

Published on Aug 05, 2021

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**NYU Langone Health, Philips Integrate Informatics for FDA-Cleared Cancer Sequencing Panel**

Published on Aug 05, 2021

## How to Handle Incidental Findings in Clinical Genomics

This paper from Qiagen explores the issues around defining and managing incidental findings in clinical genomics.

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## Recommended for You

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### BD, CerTest Biotec Get CE Mark for SARS-CoV-2 Variant MDx

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### Twist Bioscience Fiscal Q3 Revenues Grow 65 Percent

Published on Aug 06, 2021

## Process Optimization for Assays: A Framework for Controlling Variability

This whitepaper from Artel highlights how process optimization during assay development can improve assay results beyond what can be achieved with a traditional approach. The streamlining and efficiencies that can be realized from such optimization can be significant, especially in such high-throughput operations as COVID-19 testing.

Download it from GenomeWeb's [White Paper Channel](#).

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### Scientific Manager

Company: [Agilent](#)

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### Organoid Shared Resource Core Facility Manager

Company: [Cold Spring Harbor Laboratory](#)

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### **Scientist/Senior Scientist**

Company: [Inscripta](#)

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### **Research Programmer**

Company: [Canada's Michael Smith Genome Sciences Centre](#)

Location: [Vancouver BC](#)

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### **Five-Minute Diagnosis of a Previously Unsolved Case**

This whitepaper describes how Congenica's annotation and filtering features identified the causal variant in a developmental disorder case that previous whole-genome sequencing analysis was unable to solve. Download it from GenomeWeb's [White Paper Channel](#).

### **The Great Unknown of DNA Sequencing Variants: What You Need to Know**

This whitepaper from Qiagen explores the implications and handling of variants of unknown significance, particularly in the realm of somatic cancer, to enhance understanding among clinicians and laboratory personnel. Download it from GenomeWeb's [White Paper Channel](#)

### **Saliva Samples for COVID-19 Testing**

This whitepaper from DNA Genotek presents use cases of the Omnigene Oral saliva collection and stabilization kits for COVID-19 diagnostic testing, including adoption in the UK for the country's Test to Release for International Travel program. Download it from GenomeWeb's [White Paper Channel](#).

### **Uncovering Local Genome Architecture in Regions of Interest**

This application note from Dovetail Genomics explores whether the overall sequencing costs for genome-wide conformational studies can be reduced by combining targeted enrichment with Omni-C chemistry. Download it from GenomeWeb's [White Paper Channel](#).

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### Need a Complete RNA-Seq Workflow for Your Upcoming Research?

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### **Genetic Technologies Fiscal Year 2021 Revenues Soar on COVID-19 Test Alliance**

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### **Yale School of Public Health Nabs FDA EUA for COVID-19 At-Home Saliva Collection Kit, Test**

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#### **FROM THE SPONSOR:**

#### **A Breakthrough Direct Sample, FDA-EUA COVID-19 RT-PCR with Robust Strain Coverage**

BioGX Xfree test bypasses all upfront sample processing steps and extraction - just add water and direct sample to the PCR mix in order to enable high-throughput, Sample-to-Answer results on widely available real-time PCR platforms. The lyophilized Xfree test makes SARS CoV-2 testing simpler, faster and inexpensive while providing high performance detection coverage for all known strains, including the Delta strain. *Simple Yet Superior.* [Learn more.](#)

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### **Delfi Diagnostics Tags Lung Cancer as First Target for Fragmentation-Based Liquid Biopsy Tech**

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### **BGI Genomics H1 Revenues Fall 11 Percent on COVID-19 Testing Decline**

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### **Expert Advice Establishing a SARS-CoV-2 Assay for COVID-19: A GenomeWeb eCase Study Transcript**

This transcript is from a GenomeWeb eCase Study in which Russell Garlick, Chief Scientific Officer at LGC SeraCare Life Sciences, discussed how AccuPlex reference materials can be used to validate SARS-CoV-2 assays.

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## Job listings

### Scientist / Senior Scientist, NGS Sample Preparation

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### Technical Support Scientist - Automation Solutions

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### Research Associate (Molecular Biology)

Company: [Codex DNA](#)

Location: [San Diego CA](#)

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### Director, Genome Engineering

Company: [Resilience](#)

Location: [San Diego CA](#)

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### Germline Insights from NGS Somatic Testing: Clinical Challenges and Controversies

This on-demand recording of an expert roundtable discuss challenges and opportunities related to informing clinicians, cancer patients, and their families of potential germline insights after receiving somatic testing.

Download it from GenomeWeb's [Webinar Library](#)

### Using Parallel Evaporators to Escalate COVID-19 Test Kit Preparation

Download this White Paper from SP Industries to learn how SP Genevac supported laboratories around the world to scale up their production of PCR test kits to aid the global fight against the COVID-19 virus.

Download it from GenomeWeb's [White Paper Channel](#).

**A New Way of Exploring Immunity: Linking Highly Multiplexed Antigen Recognition to Immune Repertoire and Phenotype**

This white paper from 10x Genomics demonstrates the power of the Single Cell Immune Profiling Solution with Feature Barcoding technology.

Download it from GenomeWeb's [White Paper Channel](#).

**Approaches to Optimizing Samples for RNA Sequencing**

This whitepaper from Sony highlights the important role of single-cell isolation methods for scRNA sequencing of complex biological samples.

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Date : 10/13/2021 11:17:44 AM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: California Bill Prohibiting Prior Authorizations for Cancer Biomarker Testing Becomes Law

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### October 25<sup>th</sup> Webinar: A Global Network to Empower Leaner Oncology Clinical Trials

Join Q<sup>2</sup> Solutions and Illumina for a joint webinar as they discuss key strategies for European oncology clinical trials and the benefits of a global laboratory network for genomic biomarker testing. You will learn the science behind comprehensive genomic profiling (CGP), its advantages and the emergence of key oncology biomarkers that are acting to disrupt the CDx testing landscape. [Learn More.](#)

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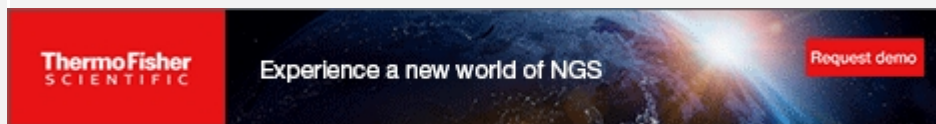
## **GeneDx, Krystal Biotech Partner to Offer Free Genetic Testing for Rare Skin Disease**

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## **FDA Grants EUAs for Cleveland Clinic COVID-19 PCR Test, Quest Diagnostics Sample Self-Collection Kit**

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## **MiRxes to Expand miRNA Assay Technology to Multiple Cancer Types, Other Disease Areas**

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## **Seegene to Enter Sample-to-Answer MDx Space With Modular, 'Walkaway' System**

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## **Partnership Aims to Sequence African Genomes in Fight for Health Equity**

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## **EU IVDR Implementation Woes Could Severely Limit Cancer Companion Test, Precision Therapy Access**

Published on Oct 11, 2021

### **Emerging Methods to Minimize Off-Target Effects of Genome Editing: A Stakeholder Panel Discussion**

In this roundtable discussion, a panel of gene-editing experts will discuss the methods that are being developed to find, assess, and minimize the effects of off-target edits that result from CRISPR-based genome editing and base editing. Our panel will cover a range of topics, including reliable methods for quality control of those effects, what these off-target detection methods have revealed about genome editing, and how they could help CRISPR researchers perfect the technology and broaden its applicability.

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## **Arab Genome Study Improves Understanding of Migration Patterns, Haplotype Imputation**

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## **Inscripta Licenses MAD7 CRISPR Nuclease to Hunterian Medicine**

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### **Nucleic Acid Contamination Application Ebook**

This ebook by Thermo Fisher Scientific outlines the benefits of a chemometric approach to analyze the chemical components present in a sample.

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#### **Principal Investigator**

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### **Bioinformatician (Protein Data Bank in Europe Team)**

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### **Manager, Demerec Building**

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spg Hbr NY](#)

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### **Principal Scientist**

Company: [Pacific Biosciences](#)

Location: [San Diego CA](#)

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### **Diagnostic Challenges in Cancer Immunotherapy: An Expert Panel Discussion**

This on-demand GenomeWebinar sponsored by LGC SeraCare features a panel of experts in cancer research, clinical laboratory practice, translational sciences, and immuno-oncology who provide insights into advances in cancer diagnostics and immunotherapy, as well as challenges facing the discipline.

Download it from GenomeWeb's [Webinar Library](#).

### **Genomic Solutions for Sensitive Viral Detection**

This application note by Tecan describes how the Trio RNA-Seq library preparation kit provides increased viral detection sensitivity from nasal swab samples by using novel proprietary technologies.

Download it from GenomeWeb's [White Paper Channel](#)

### **Spatial Profiling to Assess a Novel Gene Therapy**

This on-demand webinar by ACD discusses the use of digital spatial profiling to test a gene therapy for a rare neurodevelopmental disease that causes severe seizures, global developmental delay, and limits a patient's ability to communicate.

Download it from GenomeWeb's [Webinar Library](#)

### **Targeted Pathogen Genomics Via NGS Hybridization Capture**

This whitepaper from Arbor Biosciences highlights hybridization capture, the most versatile technique for comprehensive, cost-effective sequencing of both viruses and bacteria in complex samples.

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Subject : Daily News: Centenarian Exome Analysis Points to Conserved Longevity Pathways

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### Jumpcode Genomics, TGen Partner to Test Metagenomic Approaches for COVID Detection

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### Speedy Long-Read Genome Assembly Enabled by Minimizer-Space Analysis

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**Updated Cepheid SARS-CoV-2, Flu, RSV Test Nabs FDA  
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**Illumina Accelerator – Building Breakthrough Genomics Startups!**

Apply to Illumina Accelerator's fourth funding cycle in Cambridge, UK and Illumina Accelerator's 14<sup>th</sup> funding cycle in SF Bay Area by October 1, 2021. Illumina Accelerator is the world's first business accelerator focused solely on creating an innovation ecosystem for the genomics industry. We provide select genomics startups with access to seed capital, business guidance, access to Illumina's sequencing systems and reagents, and fully operational lab space co-located with Illumina R&D in San Francisco Bay Area and Cambridge, UK during each six-month funding cycle. To apply, visit [www.illumina.com/accelerator](http://www.illumina.com/accelerator).

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**LGC Biosearch Technologies Develops 'Ultra-High-Throughput' COVID Workflow**

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**New Initiative Aims to Drive Development, Use of Capillary Electrophoresis in Top-Down Proteomics**

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**Sophia Genetics Touts Informatics Deals With Weill Cornell, Agilent, Dasa**

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## **Strata Oncology Trial Data Support Robustness of NGS Assay for Challenging Samples**

Published on Sep 10, 2021

### **Poly-A Extension Improves mRNA Enrichment for RNA-seq**

This whitepaper describes a study investigating if extending the poly-A tails of clinically relevant fusion mRNAs in the Seraseq Fusion RNA Mix v4 reference material improves how efficiently they bind to oligo dT columns during poly(A) selection.

Download it from GenomeWeb's [White Paper Channel](#).

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## **Exact Sciences, NSABP Validating Ability of ctDNA Test to Detect MRD in Colorectal Cancer Patients**

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## **Ginkgo Bioworks to Go Public With \$1.63B in Proceeds From SPAC Merger**

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### **Illuminating the Role of the Adaptive Immune Response in Neurodegeneration**

In this whitepaper from 10x Genomics read how researchers at Stanford University revealed immune repertoire and gene expression changes that occur in immune cells from the cerebrospinal fluid in age-related neurodegeneration, including antigen-specific clonal expansion of CD8+ T cells.

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### Job listings

## **Field Service Engineer I**

Company: [Codex DNA](#)

Location: [San Diego CA](#)

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### **Scientist, Assay Development**

Company: [Talis Biomedical](#)

Location: [Menlo Park CA](#)

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### **Postdoctoral Research Associate, Gürsoy Lab**

Company: [New York Genome Center](#)

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### **Customer Facing Project Manager**

Company: [Agilent](#)

Location: [Boston MA](#)

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### **Sequencing HBA1/2 Genes for Alpha-Thalassemia Research: A GenomeWeb eCase Study Transcript**

This transcript is from a GenomeWeb eCase Study in which Colin Davidson, Senior Product Manager at Thermo Fisher Scientific, discussed the challenges of alpha-thalassemia testing and the benefits that the Ion AmpliSeq CarrierSeq ECS kit can provide.

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### **Robust Signatures for Characterizing the Tumor Microenvironment in FFPE Samples**

This white paper describes the development and verification of immune, stroma, and tumor microenvironment signatures built upon the HTG EdgeSeq RUO Precision ImmunoOncology Panel.

Download it from GenomeWeb's [White Paper Channel](#).

### **High-Throughput Microbiome Extraction from Various Human Samples**

This application note from Tecan describes an automated workflow delivering pure, inhibitor-free, sequencing-grade DNA ready for



downstream applications – including PCR, arrays, and sequencing – in 90 minutes from human fecal and skin swab samples.

Download it from GenomeWeb's [White Paper Channel](#).

### **Prevalence of Hereditary Cancer and Benefits of Multi-Gene Panel Testing**

This application note from Qiagen discusses the prevalence and causative mutations of several hereditary cancer syndromes, as well as the benefits of next-generation sequencing for hereditary cancer as compared to single-gene testing.

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Date : 7/2/2021 4:09:57 PM

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To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: DNA 'Damagenome' May Provide Disease Clues, Study Suggests

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### COVID-19 Variant PCR Test Kit – faster than sequencing

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### DNA 'Damagenome' May Provide Disease Clues, Study Suggests

Published on Jul 02, 2021

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### FDA Grants EUAs for SARS-CoV-2 Tests, Kits From Exact Sciences, BioGx, Bio-Rad, Everlywell

Published on Jul 02, 2021

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**Brief This Week: Foundation Medicine, Myriad Genetics,  
Genetron Health, and More**

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**People in the News: New Appointments at Genetron Health,  
BioSkrbyb, Geisinger, More**

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**New Products Posted to GenomeWeb: Labcorp, Qiagen,  
Thermo Fisher, GenomSys, More**

Published on Jul 02, 2021

### **Approaches to Optimizing Samples for RNA Sequencing**

This whitepaper from Sony highlights the important role of single-cell isolation methods for scRNA sequencing of complex biological samples. Download it from GenomeWeb's [White Paper Channel](#).

### **Featured in Depth**

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**Geisinger Trial to Evaluate Chatbot to Boost Cascade  
Testing in Familial Hypercholesterolemia**

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**Clear Labs Develops SARS-CoV-2 Variant Monitoring Engine  
Using Rapid Sequencing Workflow**

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**Astronomy, Biology Come Together for Cancer Biomarker  
Discovery**

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**Canadian Liquid Biopsy Startup Adela to Pursue Cancer  
Early Detection Tests**

Published on Jul 01, 2021

**NGS Variant Annotation, Filtering and Triage for a Whole-Exome  
Sequencing Workflow**

This whitepaper by Qiagen reviews an affordable and efficient approach for translational cancer research, allowing the detection of rare gene variations and helping to discover new cancer biomarkers.

Download it from GenomeWeb's [White Paper Channel](#).

**Recommended for You**

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**Caribou Biosciences Files for \$100M IPO**

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**Shoreline Biome Strikes Nordic Distribution Deal with AH  
Diagnostics**

Published on Jul 02, 2021

**B Cell Isolation for Single Cell Genomics**

In this application note, the Namo Single Cell dispenser was used to isolate single activated B cells. Gene expression was quantified for both resting and activated B cells to identify transcriptional changes associated with the activated cell state.

Download it from GenomeWeb's [White Paper Channel](#).

**Job listings**

**Associate Vice President, Business HR, LSSM**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Bioinformatician (Protein Data Bank in Europe Team)**

Company: [EMBL EBI](#)

Location: [Cambridge](#)

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### **Director, Precision Oncology**

Company: [Harold C. Simmons Comprehensive Cancer Center](#)

Location: [Dallas TX](#)

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### **Research Associate / Senior Research Associate, Molecular Biology**

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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### **Electroporation Made Easy for Hard-to-Transfect Cells**

This white paper by Mirus Bio highlights the Ingenio EZporator Electroporation System, a cost-effective workhorse that addresses the issues researchers have with their hard-to-transfect cells while being mindful of budget.

Download it from GenomeWeb's [White Paper Channel](#).

### **Get Higher Yield and Higher Quality DNA from FFPE Samples**

This white paper reviews a series of experiments conducted with the Purigen Ionic Purification System to demonstrate an automated application of isotachopheresis and improvements to workflow, nucleic acid yield, and nucleic acid quality in comparison to conventional methods with data from qPCR-based assays and next-generation sequencing.

Download it from GenomeWeb's [White Paper Channel](#)

### **Get High-Quality DNA from FFPE and Reduce PCR Duplicates**

This app note reviews how the Purigen Ionic Purification System reduces the number of PCR duplicates that decrease sequencing efficiency. Improving the quality and quantity of DNA from FFPE samples can improve sequencing interpretation by reducing PCR cycles

needed during library prep, yielding more usable high-quality sequencing reads.

Download it from GenomeWeb's [White Paper Channel](#)

### **Genomic Solutions for Sensitive Viral Detection**

This application note by Tecan describes how the Trio RNA-Seq library preparation kit provides increased viral detection sensitivity from nasal swab samples by using novel proprietary technologies.

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From : "GenomeWeb" newsletters@genomeweb.com  
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Subject : Daily News: DnaNudge Raises \$60M

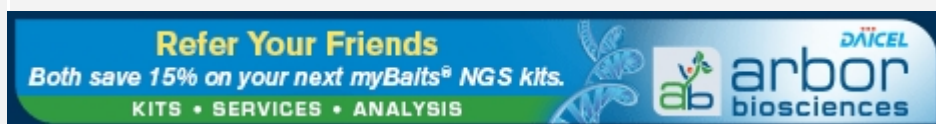
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**DnaNudge Raises \$60M**

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**AccessDx Acquires 2bPrecise from Allscripts**

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**FDA Clears BD High-Throughput Cor System, HPV Screening Assay**

Published on Aug 25, 2021

## FROM THE SPONSOR:

**WEBINAR | Analyzing Molecular Mechanisms of uLMS Tumors**  
Case study by Rockefeller University and Danbury Hospital

Tomorrow, August 26, don't miss the live webinar discussing a unique study that used WES to understand exceptional survival in a patient with very rare metastatic cancer, uterine leiomyosarcoma (uLMS).

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### **Illumina's 'Maverick' Move Secures Grail Deal But Risks Loom**

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### **Investigators See Future for NanoVelcro Cell Technology in Diagnosis of Pregnancy Complications**

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### **Data Privacy Concerns Top of Mind for Planned African Genome Project**

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### **Rhinoceros Genomic Analysis of Living and Extinct Species Uncovers Low Genetic Diversity**

Published on Aug 24, 2021

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### **Cerba Research, ACT Genomics to Open Joint Lab Facility in Taiwan**

Published on Aug 24, 2021

### **A Curated Omics Data Portal for Accessing and Analyzing Datasets**

This eBook describes the how Qiagen's OmicSoft Lands portal can reduce the time spent finding, downloading, processing and annotating omics datasets from public repositories.

Download it from GenomeWeb's [White Paper Channel](#).

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### **Production Associate II**

Company: [Takara Bio USA, Inc.](#)

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### **Senior Manager, Bioanalytical**

Company: [Thermo Fisher Scientific](#)

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### **Computational Postdoctoral Fellow - Engel Lab**

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Location: [Cold Spg Hbr NY](#)

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## **SAP CRM Functional Lead**

Company: [Agilent](#)

Location: [Wilmington DE](#)

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## **A Bioinformatics Platform for Genomic, Transcriptomic, and Epigenomic Analysis**

This eBook from Qiagen presents use cases demonstrating how the Qiagen CLC Genomics bioinformatics platform can lower the barriers of entry to bioinformatics and can process, aggregate, interrogate, and share molecular data from any sequencing platform and any species.

Download it from GenomeWeb's [White Paper Channel](#).

## **Diagnostic Challenges in Cancer Immunotherapy: An Expert Panel Discussion**

This on-demand GenomeWebinar sponsored by LGC SeraCare features a panel of experts in cancer research, clinical laboratory practice, translational sciences, and immuno-oncology who provide insights into advances in cancer diagnostics and immunotherapy, as well as challenges facing the discipline.

Download it from GenomeWeb's [Webinar Library](#).

## **Analytical Verification of an Expanded Carrier Screening Kit**

This application note from Thermo Fisher Scientific presents an analytical verification of the CarrierSeq ECS Kit, a 420-gene expanded carrier screening research panel for the Ion GeneStudio S5 System.

Download it from GenomeWeb's [White Paper Channel](#).

## **From Synthetic Gene to Vaccine: Confidence with Gene Synthesis Services**

This eCase Study from Thermo Fisher Scientific describes a range of de novo gene synthesis options for rapid vaccine development.

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**Dovetail Genomics Partners With Wildlife Conservation Group Revive & Restore on Sequencing Effort**

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**Top Five Articles on GenomeWeb Last Week: Guardant Health, Illumina, Pacific Biosciences, and More**

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## FROM THE SPONSOR:

### 2019-nCoV Assays for Detection of SARS-CoV-2

Optimized primer and probe mixes for RT-qPCR

US-2019-nCoV & EUR-2019-nCoV Kits and Individual Assays are for RT-qPCR (5' nuclease assay) detection of SARS-CoV-2. These are 20X primer

and probe pools with sequences designed by the CDC (US-2019-nCoV) & Charité Institute (EUR-2019-nCoV).

[Discover more](#)

## Featured in Depth

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**Illumina Sequencing Instrument Sales, COVID-19**

**Surveillance Continue to Boost Business**

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**Guardant Health Laying Path for Future in Cancer**

**Screening, Updates Launch Plans for CRC Assay**

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**Karius Cell-Free DNA Method to Detect Infection Validated in Study**

Published on Aug 05, 2021

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**NYU Langone Health, Philips Integrate Informatics for FDA-Cleared Cancer Sequencing Panel**

Published on Aug 05, 2021

## **A Novel Assay for the Robust Detection of MicroRNAs with Spatial Resolution**

This application note from ACD describes the new miRNAscope Assay, an in situ hybridization assay enabling highly robust detection of miRNAs, siRNAs, ASOs, and other small RNAs in tissues with spatial and morphological context at single-cell resolution.

Download it from GenomeWeb's [White Paper Channel](#)

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### People in the News: New Appointments at Guardant Health, Foundation Medicine, PGDx, GenapSys, More

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### New Products Posted to GenomeWeb: HTG Molecular, Myriad Genetics, Eclipse Bioinnovations, More

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## A CRISPR-Based Depletion System to Improve Single-Cell RNA Sequencing

This poster from Jumpcode presents a CRISPR-based system to improve single-cell RNA sequencing by depleting uninformative molecules from a sequencing library, allowing sequencer capacity to be efficiently used for greater sensitivity and/or reduced cost.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### R&D Supervisor

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## Research Programmer

Company: [Canada's Michael Smith Genome Sciences Centre](#)

Location: [Vancouver BC](#)

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### Selecting a Laboratory to Support Oncology Clinical Trials

This white paper from Canopy Biosciences outlines considerations for selecting a laboratory to support oncology clinical trials and describes cases of Canopy's support in trials investigating a biomarker assay and a therapeutic antibody drug.

Download it from GenomeWeb's [White Paper Channel](#).

### Robust Signatures for Characterizing the Tumor Microenvironment in FFPE Samples

This white paper describes the development and verification of immune, stroma, and tumor microenvironment signatures built upon the HTG EdgeSeq RUO Precision ImmunoOncology Panel.

Download it from GenomeWeb's [White Paper Channel](#).

### High-Throughput Microbiome Extraction from Various Human Samples

This application note from Tecan describes an automated workflow delivering pure, inhibitor-free, sequencing-grade DNA ready for downstream applications – including PCR, arrays, and sequencing – in 90 minutes from human fecal and skin swab samples.

Download it from GenomeWeb's [White Paper Channel](#).

### Prevalence of Hereditary Cancer and Benefits of Multi-Gene Panel Testing

This application note from Qiagen discusses the prevalence and causative mutations of several hereditary cancer syndromes, as well as the benefits of next-generation sequencing for hereditary cancer as compared to single-gene testing.

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To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: Exact Sciences Q2 Revenues Rise 62 Percent

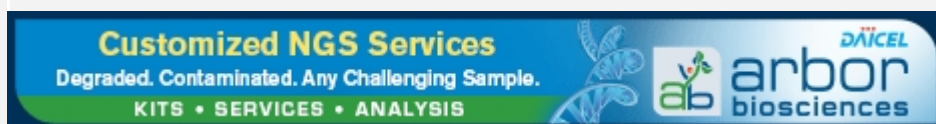
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**Hologic Q3 Revenues Rise 42 Percent Despite Lower Demand for SARS-CoV-2 MDx Assays**

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**NYU Langone Health Gets FDA Clearance for Solid Tumor Gene Sequencing Test**

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**Genetron Health Partners with Guizhou Local Government for Liver Cancer Early Screening Project**

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### **Cepheid Nabs CE Mark for PCR-Based HIV-1 Tests**

Published on Jul 29, 2021

## **Thinking of Getting a Genetic Test Kit?**

The UBC Genetic Connections study would like to hear from you! The study aims to understand the factors that go into the decision to pursue at-home genetic testing as well as the impact of receiving genetic test results.

[Learn more here](#)

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### **Quadrant Biosciences Eyes 2022 Launch for Molecular Traumatic Brain Injury Test**

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### **Akoya Demonstrates Reproducibility of Protein Imaging System as Part of Clinical Push**

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### **Sequencing Firm Phosphorus Tests Limits of Comprehensive Consumer Genomics With GeneCompass**

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### **ETH Zurich, U Toronto Team Develops Tool for Bottom-Up Proteomics Proteoform Analysis**

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## **Detect Small Regulatory RNAs with Spatial & Morphological Context**

This scientific poster by ACD presents miRNAscope, a novel in situ hybridization technology for the detection of small regulatory RNAs with spatial and morphological context.

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## Recommended for You

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**FDA Clears Promega Microsatellite Instability Test System**

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**AbbVie, Biogen, Pfizer Join With Broad Institute on  
Genebase Exome Variant Project**

Published on Jul 28, 2021

## Single Cell Deposition Efficiency

This application note establishes Namocell's deposition efficiency for single-cell isolation for multiple downstream applications including single-cell genomics, CRISPR, rare cell isolation, and cell line development.

Download it from GenomeWeb's [White Paper Channel](#).

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### Assistant/Associate Scientist, Automated Systems

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### Lab Informatics Data Scientist

Company: [Agilent](#)

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## **Director Biospecimen Repository and Protocol Support, Miami Cancer Institute**

Company: [Miami Cancer Institute at Baptist Health](#)

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## **Medical Genetics Curator, Genetic Testing Registry**

Company: [Computercraft Corporation](#)

Location: [Bethesda MD](#)

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## **Variant Interpretation in Oncology: Results from an End-User Benchmarking Survey**

This report by Qiagen summarizes the results of a benchmarking survey that sought to identify pain points and opportunities in next-generation sequencing variant interpretation workflows within the field of oncology. Download it from GenomeWeb's [White Paper Channel](#).

## **Considerations for Successful Cell Therapy Development**

This infographic from Thermo Fisher Scientific outlines considerations for successful stem cell and gene-modified cell therapy development, as well as historic breakthroughs in cell therapy research. Download it from GenomeWeb's [White Paper Channel](#).

## **Gene Therapy Development and Delivery**

This infographic from Thermo Fisher Scientific outlines approaches to gene therapy, the steps in gene therapy development and treatment, and the challenges in the field. Download it from GenomeWeb's [White Paper Channel](#).

## **Therapeutic Monoclonal Antibody Development and Delivery**

This infographic from Thermo Fisher Scientific outlines examples of monoclonal antibody treatment, breakthroughs in the field, the types of antibodies, and the challenges in their development and delivery. Download it from GenomeWeb's [White Paper Channel](#).

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From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: FDA Approves FoundationOne CDx for Takeda's ALK-Inhibitor

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### FDA Approves FoundationOne CDx for Takeda's ALK-Inhibitor

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### ERS Genomics Licenses CRISPR IP to Nippon Gene Co

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**Bio-Rad Laboratories, Seegene Partner for Infectious  
Disease MDx Development**

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**University of Birmingham, Nonacus to Develop Urine  
Cancer Liquid Biopsy Assay**

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**LumiraDx Gets CE Mark for Molecular SARS-CoV-2 Test**

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**Qiagen, Sysmex Form Global Companion Diagnostic  
Development Pact**

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##### COVID-19 Variant PCR Test Kit – faster than sequencing

- Aldatu's PANDAA qDx™ SARS-CoVAR test covers all variants of interest and concern
- Results in 1 hour from RNA
- 2 multiplex reactions per sample
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- CLIA lab testing services available with 24 hour turnaround time
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### **CRISPR-Based Wearable Diagnostics Enable SARS-CoV-2 Detection Through Mask**

Published on Jun 29, 2021

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### **New Single-Cell Algorithm Finds Gene Panels Used to ID Rare Cells**

Published on Jun 29, 2021

### **Verification of a Single-tube PCR/CE Kit for SMN1/2 Copy Number and Other Variants**

This poster from Asuragen describes the analytical performance of the AmpliX PCR/CE SMN1/2 Plus Kit, which evaluates exon 7 copy number of SMN1 and SMN2, and variant status of gene duplication and disease modifier markers.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### **Mammogen Closes \$2M Seed Round Supporting GenTRU Liquid Biopsy Tech for Breast Cancer Detection**

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### **CRISPR-Based Assay Developed for Genome Editing in Space**

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### **Illuminating the Role of the Adaptive Immune Response in Neurodegeneration**



In this whitepaper from 10x Genomics read how researchers at Stanford University revealed immune repertoire and gene expression changes that occur in immune cells from the cerebrospinal fluid in age-related neurodegeneration, including antigen-specific clonal expansion of CD8+ T cells.

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## Job listings

### Associate Director, Validation

Company: [Agilent](#)

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### Research Technician I- Wigler Lab

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)

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### Translational Research Scientist - Cancer Diagnostics

Company: [The Broad Institute of MIT & Harvard](#)

Location: [Cambridge MA](#)

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### Senior Staff Engineer, Instrument Software

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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### The Importance of Sample Pooling in COVID-19 Testing

Download this whitepaper by Zymo Research to learn about the benefits and challenges of pooled sample testing for COVID-19.

Download it from GenomeWeb's [White Paper Channel](#).

### Sequencing Challenging Genes for Alpha Thalassemia Research

This on-demand eCase Study presents case examples to illustrate how NGS kits and algorithm advancements work in combination to detect variants in genes related to alpha thalassemia.

Download it from GenomeWeb's [eCase Study Channel](#)

### **NGS Dreamprep: Automated DNA Library Preparation and Quantification**

This application note highlights the benefits of automating DNA library preparation, quantification, normalization and pooling using Tecan's NGS reagent and automation solutions.

Download it from GenomeWeb's [White Paper Channel](#).

### **NGS Dreamprep: Automated mRNA Library Preparation and Quantification**

This application note by Tecan describes a fully automated protocol for the generation of quantified mRNA libraries, including QC and library normalization, using the NGS DreamPrep workstation and the Universal Plus mRNA-Seq library preparation kit.

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To : "Ice, Gillian" iceg@ohio.edu  
Subject : Daily News: FDA Clears Promega Microsatellite Instability Test System

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## Breaking News

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**FDA Clears Promega Microsatellite Instability Test System**

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**Capio Biosciences, BioView to Explore Integration of Circulating Tumor Cell Technologies**

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**Sequence-Based Blood Type Analysis Suggests  
Neanderthals, Denisovans Arose in Africa**

Published on Jul 28, 2021

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**Testosterone-Related Genetic Variants Don't Influence  
Socioeconomic Status, Study Finds**

Published on Jul 28, 2021

### **Comparison of Splice Site Finder Algorithms**

This whitepaper presents a performance comparison of Congenica Splice Site Finder (CSSF), an algorithm that determines the splicing functionality of a given DNA sequence, against an older algorithm, SSFL. Download it from GenomeWeb's [White Paper Channel](#).

### **Featured in Depth**

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**ETH Zurich, U Toronto Team Develops Tool for Bottom-Up  
Proteomics Proteoform Analysis**

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**Sequencing Firm Phosphorus Tests Limits of  
Comprehensive Consumer Genomics With GeneCompass**

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**AbbVie, Biogen, Pfizer Join With Broad Institute on  
Genebase Exome Variant Project**

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**Extraction-Free SwabExpress COVID MDx Protocol Highly  
Sensitive, Study Finds**

Published on Jul 27, 2021

## Automated BRCA Variant Assessment Shows High Concordance with Expert Classifications

This whitepaper by Qiagen describes an evaluation that compared QCI Interpret's automated classification of 6,135 BRCA1/2 variants with the ENIGMA expert assessments, finding extremely high concordance. Download it from GenomeWeb's [White Paper Channel](#).

### Recommended for You

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**Strata Oncology Raises \$90M in Series C Financing**

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**Polygenic Cancer Risk Score Mitigated by Healthy Lifestyle, Study Suggests**

Published on Jul 28, 2021

## Longitudinal Mutational Landscape and Transcriptomic Analysis of Aggressive Uterine Leiomyosarcoma in a Patient With Exceptional Survival

In this webinar, Tatiana Omelchenko, Deep Pandya, and Jean-Noël Billaud will present a unique case study of a treatment-naïve patient with aggressive metastatic uLMS and multiple pulmonary metastases who has experienced long-term survival for more than seven years without therapy except for surgery.

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### Job listings

#### Lab Informatics Data Scientist

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## **Sr. Scientist - Transgenics**

Company: [InVivo Biosystems](#)

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## **Lateral Flow Test Strips: Design Considerations for Optimal Performance**

This on-demand webinar from Millipore Sigma discusses some of the critical features of lateral flow test strip design that affect the consistency of performance of diagnostic assays.

Download it from GenomeWeb's [Webinar Library](#)

## **Automated Protein Precipitation Extraction of Itaconic Acid for LC-MS Bioanalytical Quantification**

This application note from Waters Corporation demonstrates automated sample preparation and protein precipitation extraction of itaconic acid from human plasma for liquid chromatography-mass spectrometry analysis and quantification using the Andrew+ Pipetting Robot with the Waters Ostro 96-well Plate.

Download it from GenomeWeb's [White Paper Channel](#).

## **The Advantages, and Applications, and Challenges of Digital PCR**

This on-demand webinar from Stilla explains the principles and advantages of digital PCR (dPCR), the major dPCR platforms, and the array of possible applications for the technology, including a three-color target multiplex HIV quantification assay using the Naica System.

Download it from GenomeWeb's [Webinar Library](#).

## **The Pros, Cons, and Applications of Digital PCR**

This podcast from Stilla discusses the pros and cons of digital PCR and how it compares with qPCR and next-generation sequencing as a research and discovery method.

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Dan Peer, PhD | Aug 31 | 8:00 a. m. PDT

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**Foundation Medicine, Epic Ink Deal to Integrate Genomic  
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Partnership With Pacific Northwest National Lab**

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**PerkinElmer Reaches Deal for \$1.5B Credit Facility**



Published on Aug 25, 2021

## FROM THE SPONSOR:

### **2019-nCoV Assays for Detection of SARS-CoV-2**

Optimized primer and probe mixes for RT-qPCR

US-2019-nCoV & EUR-2019-nCoV Kits and Individual Assays are for RT-qPCR (5' nuclease assay) detection of SARS-CoV-2. These are 20X primer and probe pools with sequences designed by the CDC (US-2019-nCoV) & Charité Institute (EUR-2019-nCoV).

[Discover more](#)

## Featured in Depth

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### **US Federal Trade Commission Begins Making the Case for Unwinding Illumina's Grail Purchase**

Published on Aug 25, 2021

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### **New Protein Reporters for Minlon Sequencer Point Toward Route for Single-Molecule Proteomics**

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### **Illumina's 'Maverick' Move Secures Grail Deal But Risks Loom**

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### **Investigators See Future for NanoVelcro Cell Technology in Diagnosis of Pregnancy Complications**

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### **Spatial Profiling to Assess a Novel Gene Therapy**

This on-demand webinar by ACD discusses the use of digital spatial profiling to test a gene therapy for a rare neurodevelopmental disease that

causes severe seizures, global developmental delay, and limits a patient's ability to communicate.

Download it from GenomeWeb's [Webinar Library](#)

## Recommended for You

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### **Endometriosis Treatment Target Proposed From Genetic Analysis**

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### **Genome of Ancient Hunter-Gatherer Offers Look at Modern Human, Denisovan Population Dynamics**

Published on Aug 25, 2021

## **Precision Clinical Trial Matching**

This on-demand webinar from Qiagen provides an overview of COSMIC (Catalog of Somatic Mutations in Cancer), which now allows users to search for drugs that target somatic mutations at all stages of drug development, including those still in development, in clinical trials, or that have been repurposed.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Automation Manager**

Company: [Aether Biomachines](#)

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## Sr Staff / Staff FPGA Electrical Engineer

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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## Territory Manager II (Peninsula)

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### A Comprehensive Set of Bioinformatics Tools to Scale Data Analyses

This eBook from Qiagen describes applications for Qiagen CLC Genomics, a set of scalable bioinformatics tools for genomic, transcriptomic, and epigenomic analysis with both single-user desktop and network options, as well as enterprise-wide server and cloud solutions.

Download it from GenomeWeb's [White Paper Channel](#).

### Detecting SARS-CoV-2 Variants

In this report by Norgen learn about the effectiveness of TaqMan RT-PCR kits in detecting new variants of SARS-CoV-2

Download it from GenomeWeb's [White Paper Channel](#).

### RNA Epigenetics in a Glioblastoma Cell Line

This application note from Glen Research describes advances in the study of RNA epigenetics, major types of RNA modifications, their roles in biology, and their implications in disease. The note examines a publication on the underlying mechanism of cytosine methylation in eliminating the tumor suppressor function of miRNA-181a-5p in a glioblastoma cell line.

Download it from GenomeWeb's [White Paper Channel](#).

### NGS Variant Annotation, Filtering and Triage for a Whole-Exome Sequencing Workflow

This whitepaper by Qiagen reviews an affordable and efficient approach for translational cancer research, allowing the detection of rare gene variations and helping to discover new cancer biomarkers.

Download it from GenomeWeb's [White Paper Channel](#).

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Date : 10/7/2021 4:17:39 PM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: FDA Recognizes Portion of MSK Oncology Knowledge Base in Public Human Genetic Variant Database

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### **FDA Recognizes Portion of MSK Oncology Knowledge Base in Public Human Genetic Variant Database**

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### **Lung Cancer Treatment Response Linked to Cancer-Associated Fibroblast Cell Subtypes**

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**Hepatitis B Virus Evolution Untangled Using Ancient DNA**

Published on Oct 07, 2021

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**Orphan Gene Linked to Neurodevelopmental Disorder Characterized by Hearing Loss**

Published on Oct 07, 2021

## FROM THE SPONSOR:

### Don't miss out—Register for the Multiomics Research Event

We invite you to join and collaborate with leading researchers and industry experts October 12-14 for this 3-day virtual event featuring panels of industry experts, keynote speakers and peer-led tracks featuring the latest innovations, challenges and opportunities in multiomics research. [Register!](#)

## Featured in Depth

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**Angle Readies for Clinical Testing as CTC Research Continues to Yield Biomarker Insights**

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**Wyss Institute Spinout Pluto Biosciences Bets on Collaborative Bioinformatics Platform**

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**Princess Margaret Researchers Improve HPV Detection in Blood With NGS Method**

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**Colossal Begins Ambitious De-Extinction Plan With  
Elephant Sequencing Project, Despite Critics**

Published on Oct 06, 2021

**Overcoming Tumor Microenvironment Challenges with Spatial Profiling**

This on-demand webinar from Nanostring introduces the GeoMx Digital Spatial Profiler, which quantifies tens of thousands of RNA or protein targets in fresh frozen or FFPE tissue sections.

Download it from GenomeWeb's [Webinar Library](#).

**Recommended for You**

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**Oxford Nanopore Technologies to Raise £300M in IPO,  
Including £150M Investment by Oracle**

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**Eagle Genomics, Earlham Institute Team on Microbiome  
Datasets, Software**

Published on Sep 29, 2021

**Visualization of Tumor Microenvironment Pathways**

This white paper presents the molecules and interactions involved in the tumor microenvironment by which tumors redirect elements of the immune system to encourage proliferation and suppress immune attack, as visualized by Qiagen Ingenuity Pathway Analysis.

Download it from GenomeWeb's [White Paper Channel](#).

**Job listings**

**Molecular Biology Scientist**

Company: [Paragon Genomics](#)

Location: [Hayward CA](#)

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## Research Associate/Senior Research Associate [RDR109 Apps Mic (BL)]

Company: [Inscripta, Inc.](#)

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## Information Security Analyst

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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## Senior Staff Engineer, Systems Integration

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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## Tech Note: RNAscope 2.5 LS or BaseScope RED Assay Combined with Immunohistochemistry

This technical note from ACD provides guidelines for performing automated chromogenic co-detection of RNA and protein on the Leica BOND RX System.

Download it from GenomeWeb's [White Paper Channel](#)

## Dissecting the Cellular and Subcellular Localization of lncRNAs in Lung Cancer with the RNAscope In Situ Hybridization Assay

This application note from ACD presents the use of the RNAscope assay to visualize several lncRNAs within the tumor and its relationship to stromal cells.

Download it from GenomeWeb's [White Paper Channel](#).

## Visualization of Igr5+ Stem Cells and the Immune Response in the Inflamed Mouse Colon

In this on-demand webinar, ACD demonstrates the utility of the RNAscope technology in elucidating direct effects of inflammatory cues on intestinal stem cells, and their niche, during pathogenesis of intestinal bowel disease and other inflammatory diseases.

Download it from GenomeWeb's [Webinar Library](#)



## Single-Cell Biology Research with the RNAscope Technology

In this on-demand webinar from ACD, watch scientists describe the power of in situ transcriptomics and discuss the application of this technology to large-scale tissue mapping in the mouse brain.

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Date : 9/23/2021 4:19:09 PM  
From : "GenomeWeb" newsletters@genomeweb.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : Daily News: FDA Revises SARS-CoV-2 Test Emergency Use  
Authorization Requirements to Account for Variants

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### **FDA Revises SARS-CoV-2 Test Emergency Use Authorization Requirements to Account for Variants**

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### **Geisinger Wins \$5M NIH Grant to Develop Point-of-Care Genetic Diagnostic Tool**

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**Second Genome, Virginia Commonwealth University Partner  
on NASH Biomarker Discovery**

Published on Sep 23, 2021

**FROM THE SPONSOR:**

**Illumina Accelerator – Building Breakthrough Genomics Startups!**

Apply to Illumina Accelerator's fourth funding cycle in Cambridge, UK and Illumina Accelerator's 14<sup>th</sup> funding cycle in SF Bay Area by October 1, 2021. Illumina Accelerator is the world's first business accelerator focused solely on creating an innovation ecosystem for the genomics industry. We provide select genomics startups with access to seed capital, business guidance, access to Illumina's sequencing systems and reagents, and fully operational lab space co-located with Illumina R&D in San Francisco Bay Area and Cambridge, UK during each six-month funding cycle. To apply, visit [www.illumina.com/accelerator](http://www.illumina.com/accelerator).

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**Global Supply Chain Issues Catch up to Illumina, Leading to  
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**Machine Learning Method Allows Highly Multiplexed Cell  
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**ESMO Oncologists Debate Optimal Timing for Broad NGS,  
Align on Key Barriers to Precision Oncology**

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**ID Genomics Developing COVID Variant Test Using  
Handheld System, Dipstick Detection**

Published on Sep 23, 2021

**SARS-CoV-2 Detection and Quantification with Liquid  
Chromatography-Mass Spectrometry**

This whitepaper from Waters Corporation demonstrates the capabilities of the SARS-Cov-2 LC-MS Kit (RUO) to directly detect and quantify low levels of SARS-CoV-2 signature nucleocapsid peptides without the need to amplify the target analytes — as required for PCR — and with the ability to measure multiple analytes at a time.

Download it from GenomeWeb's [White Paper Channel](#).

**Recommended for You**

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**LGC Receives CE Mark for AccuPlex SARS-CoV-2, Flu A/B,  
RSV Reference Material Kit**

Published on Sep 23, 2021

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**Esophageal Cancer Testing Firm Lucid Diagnostics Files  
For IPO**

Published on Sep 23, 2021

**T-Cell Therapy Trafficking and Activation Analysis Using RNAscope  
In Situ Hybridization**

This white paper describes how ACD's RNAscope ISH technology enables pre-clinical screening for target antigen expression at the RNA level to avoid adverse effects resulting from on-target/off-tumor activity.

Download it from GenomeWeb's [White Paper Channel](#).

**Job listings**

**Director, Hardware**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Postdoctoral Position in cancer research at the NIH**

Company: [National Human Genome Research Institute, at NIH](#)

Location: [Bethesda MD](#)

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### **Bioinformatics Scientist, Single Cell**

Company: [New York Genome Center](#)

Location: [New York NY](#)

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### **Regional Sales Executive, Northeast**

Company: [CND Life Sciences](#)

Location: [Phoenix AZ](#)

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### **Evaluating Hypermethylated ctDNA as a Universal CRC Marker**

This application note from Stilla describes a study that sought to evaluate whether a digital PCR assay to detect hypermethylated WIF1 and NPY could be used as a universal colorectal cancer marker.

Download it from GenomeWeb's [White Paper Channel](#).

### **Epigenetics & DNA Methylation**

This whitepaper from Glen Research provides some background on epigenetic DNA modifications and an overview of recent research that leverages the epigenetic 5-methylcytosine modification in a biosensor to detect DNA methyltransferase (DNMT) activity in tumor cells.

Download it from GenomeWeb's [White Paper Channel](#).

### **Multisite Evaluation of a Single-tube Assay System for Spinal Muscular Atrophy**

This poster from Asuragen describes a multisite evaluation of the AmpliX PCR/CE SMN1/2 Plus Kit, a one-tube PCR assay that quantifies SMN1 and SMN2 copy number and genotypes gene duplication "silent carrier" markers as well as a disease modifier variant.

Download it from GenomeWeb's [White Paper Channel](#).

## **High Quality Products + Lower Lifetime Costs = Eppendorf OEM**

Download this whitepaper from Eppendorf to learn how an OEM (original equipment manufacturer) custom solution can overcome the limitations of existing instrument and consumables designs and make new assays and analyses possible.

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Subject : Daily News: FDA Warns of Potential False Positives With Abbott SARS-CoV-2 Molecular Tests

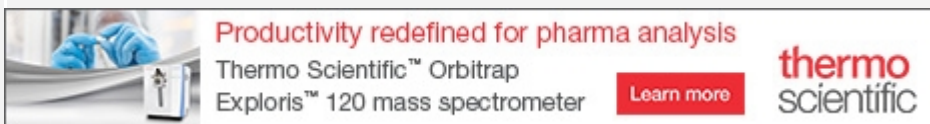
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### **Ancient DNA Analysis Highlights Three Ancestral Populations in Japan**

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### **People in the News: New Appointments at Sema4, NHGRI, Dante Labs, Ancestry, More**

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**New Products Posted to GenomeWeb: Oxford Nanopore, Beckman Coulter, Thermo Fisher Scientific, More**

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**New PacBio Library Prep Method Helps Cover 'Death Valley' Between Short and Long Reads**

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**New Facial Analysis Tool From Children's National Hospital Screens for Genetic Diseases**

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**ConcertAI Growing Presence in Real-World Data Analytics Space With Focus on Diversifying Trials**

Published on Sep 16, 2021



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**New Chelex-Based Protocol Shows Potential to Reduce Cost, Time of COVID-19 Testing**

Published on Sep 15, 2021

### **Precision Clinical Trial Matching**

This on-demand webinar from Qiagen provides an overview of COSMIC (Catalog of Somatic Mutations in Cancer), which now allows users to search for drugs that target somatic mutations at all stages of drug development, including those still in development, in clinical trials, or that have been repurposed.

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**Thermo Fisher Scientific Expects 12 Percent Revenue Growth in 2022**

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[Icon to click to save item to your GenomeWeb reading list.](#) **In Brief This Week: Myriad Genetics, Danaher, Co-Diagnostics, and More**

Published on Sep 17, 2021

### **Using QuPath to Analyze RNAscope, BaseScope and miRNAscope Images**

This guide by ACD introduces the basic workflow for using QuPath, a free open source bioimage analysis software for whole slide images, to quantify images from RNAscope assays, BaseScope assays, and miRNAscope assays.

Download it from GenomeWeb's [White Paper Channel](#).

### Job listings

#### **Research Career Fair - Pre-registration**

Company: [University of Massachusetts Medical School](#)

Location: [Worcester MA](#)

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### **Science Writer**

Company: [Biostrata Ltd](#)

Location: [Cambridge](#)

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### **Project Specialist, Biofoudry Services**

Company: [Codex DNA](#)

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### **Assistant, Associate or Full Project Scientist - Multiple Myeloma**

Company: [University of California San Diego](#)

Location: [La Jolla CA](#)

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### **Expert Advice Establishing a SARS-CoV-2 Assay for COVID-19: A GenomeWeb eCase Study Transcript**

This transcript is from a GenomeWeb eCase Study in which Russell Garlick, Chief Scientific Officer at LGC SeraCare Life Sciences, discussed how AccuPlex reference materials can be used to validate SARS-CoV-2 assays.

Download it from GenomeWeb's [White Paper Channel](#)

### **Proteomics for Developing Biomarkers of the Innate Immune Response in SARS-CoV-2**

This whitepaper describes how Biotech Support Group's products and methods can be used to characterize the innate immune response from peripheral blood.

Download it from GenomeWeb's [White Paper Channel](#).

### **Beyond the Surface: Uncovering the Layers of Immune Cell Complexity**

In this white paper from 10x Genomics learn about the challenges immunology and infectious disease researchers face due to the complex, dynamic, and heterogeneous nature of the immune system and the limitations of prevailing research tools.

Download it from GenomeWeb's [White Paper Channel](#).

### **Prenatal and Preimplantation Genetic Testing Reference Materials Developed From Clinical Samples**

This poster from SeraCare describes the development and clinical performance of reference materials for prenatal and preimplantation testing that appear suitable for a range of currently available PGT-A and NIPT methods.

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Subject : Daily News: Fulgent Genetics Revenues Increase Nearly Ninefold as Firm Makes Acquisition, Cancer Testing Deal

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**Fulgent Genetics Revenues Increase Nearly Ninefold as Firm Makes Acquisition, Cancer Testing Deal**

Published on Aug 09, 2021

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**Qiagen, OncXerna Therapeutics Ink Companion Dx Development, Technology-Licensing Deal**

Published on Aug 09, 2021

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**Castle Biosciences Q2 Revenues Rise 79 Percent**

Published on Aug 09, 2021

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**Thermo Fisher Scientific Prices \$3.1B Senior Notes Offering**

Published on Aug 10, 2021

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## **Prenetics Gets CE-IVD Mark for Handheld, Reusable SARS-CoV-2 Test System**

Published on Aug 10, 2021

**SafeSEQ**

**INTRODUCING**  
**HPV-SEQ**  
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Optimize clinical trials with ultra-sensitive NGS  
detection of HPV types 16/18 in plasma

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## **Guardant Health Laying Path for Future in Cancer Screening, Updates Launch Plans for CRC Assay**

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## **Illumina Sequencing Instrument Sales, COVID-19 Surveillance Continue to Boost Business**

Published on Aug 06, 2021

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## **Karius Cell-Free DNA Method to Detect Infection Validated in Study**

Published on Aug 05, 2021

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## **NYU Langone Health, Philips Integrate Informatics for FDA-Cleared Cancer Sequencing Panel**

Published on Aug 05, 2021

**Longitudinal Mutational Landscape and Transcriptomic Analysis of Aggressive Uterine Leiomyosarcoma in a Patient With Exceptional Survival**

In this webinar, Tatiana Omelchenko, Deep Pandya, and Jean-Noël Billaud will present a unique case study of a treatment-naïve patient with aggressive metastatic uLMS and multiple pulmonary metastases who has experienced long-term survival for more than seven years without therapy except for surgery.

[Register Here](#)

## Recommended for You

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### **Single Metastatic Cancer Genome Analysis Appears Sufficient to ID Biomarkers, Treatment Options**

Published on Aug 09, 2021

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### **Ambry Genetics, Lightbeam Health Solutions Form Genetic Testing Data Partnership**

Published on Aug 09, 2021

## **Analyzing Complex Genetic Variants in Clinical Cancer NGS Data**

This white paper from PierianDx discusses considerations for interpreting and reporting five different types of complex genetic variants in the context of somatic cancer: co-occurring variants, exon-skipping splice variants, gene fusions, copy number variants, and tumor mutation burden, and microsatellite instability.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Staff Associate II**

Company: [Columbia University Irving Medical Center](#)

Location: [New York NY](#)

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### **R&D Researcher, Immunology**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Staff Bioinformatics Scientist - Multi-omics**

Company: [Resilience](#)

Location: [La Jolla CA](#)

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### **Associate Scientist/Scientist, Functional Genomics**

Company: [New York Stem Cell Foundation](#)

Location: [New York NY](#)

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### **Integrated UV Quantification and Normalization Without Sample Loss**

This application note from Tecan demonstrates using the Frida Reader, an add-on module for the Fluent Automation Workstation, to quantify salmon sperm and whole blood DNA samples in a hanging drop at the end of a disposable pipette tip, eliminating sample loss and allowing for automated normalization.

Download it from GenomeWeb's [White Paper Channel](#).

### **Quantifying the Impact of Pipette Tip Type Using Dual Dye Ratiometric Technology**

This application note from Artel describes the use of a dual-dye photometric technology to correlate the accuracy and repeatability of volume transfers with the disposable pipette tips employed, allowing users to screen and select the appropriate tip types for their liquid handlers, pipettes, and assays.

Download it from GenomeWeb's [White Paper Channel](#).

### **Dissecting the Cellular and Subcellular Localization of lncRNAs in Lung Cancer with the RNAscope In Situ Hybridization Assay**

This application note from ACD presents the use of the RNAscope assay to visualize several lncRNAs within the tumor and its relationship to stromal cells.

Download it from GenomeWeb's [White Paper Channel](#).

### **Performance Comparison of Digital PCR vs. qPCR**

This application note from Stilla compares the precision and reproducibility of the Crystal Digital PCR technology using the Naica System to that of qPCR technology.

Download it from GenomeWeb's [White Paper Channel](#).

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Date : 7/26/2021 4:18:20 PM  
From : "GenomeWeb" newsletters@genomeweb.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : Daily News: Gene-Disrupting Ultra-Rare Variants More Common in Children With Autism Spectrum Disorder

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### Accelerate the journey from data to insight with AWS

High-performance computing (HPC) on AWS provides instant access to virtually unlimited computing resources and a portfolio of purpose-built HPC tools. Partner with AWS to bring structure-based drug design, modeling and simulation, and genomics beyond the limitations of on-premises infrastructure.

[Learn more about how HPC on AWS can fuel innovations in healthcare and life sciences](#)

## Breaking News

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### Gene-Disrupting Ultra-Rare Variants More Common in Children With Autism Spectrum Disorder

Published on Jul 26, 2021

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### FDA Revokes EUAs for Three SARS-CoV-2 Tests, Citing Use of Other Tests, Agency Clearance

Published on Jul 26, 2021

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**Analysis of Ancient Plaque Points to Agriculture-Related  
Oral Microbiome Changes in Southern Europe**

Published on Jul 26, 2021

**FROM THE SPONSOR:**

**SYNTAX System: DNA on Demand for MolBio & Genomics Workflows**

Print custom DNA oligos on demand with the new SYNTAX System. Using Enzymatic DNA Synthesis (EDS) technology, SYNTAX requires less than 15 min of setup to fully automate synthesis, quantitation, and normalization from your benchtop. Same-day synthesis for ultimate convenience and control. [Learn more](#)

**Featured in Depth**

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**Foresight Diagnostics Commercializing PhasED-Seq Liquid  
Biopsy Tech for Improved MRD Detection**

Published on Jul 26, 2021

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**Deep-Learning Method Helps Predict Sequencing Depth  
From DNA Probes**

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**Natera Minimal Residual Disease Test Predicts  
Oligometastatic CRC Patient Outcomes in New Study**

Published on Jul 22, 2021

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**Sema4 Closes SPAC Deal With CM Life Sciences, Raising  
Approximately \$500M**

Published on Jul 22, 2021

### Analytical Verification of an Expanded Carrier Screening Kit

This application note from Thermo Fisher Scientific presents an analytical verification of the CarrierSeq ECS Kit, a 420-gene expanded carrier screening research panel for the Ion GeneStudio S5 System. Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### Quidel, Beckman Coulter Settle Legal Dispute Over Cardiac Immunoassay Business

Published on Jul 26, 2021

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### Top Five Articles on GenomeWeb Last Week: Pacific Biosciences, Illumina, Natera, and More

Published on Jul 26, 2021

### Ending an 8 Year Odyssey: Delivering a Diagnosis in 20 Days

This whitepaper from Congenica describes a case study in which the company's clinical decision support platform helped diagnose an inherited genetic disorder after other approaches failed. Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### Head, Biostatistics

Company: [Adela](#)

Location: [New Haven CT](#)

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### Sales Executive

Company: [Gencove, Inc.](#)

Location: [New York NY](#)

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## **SSD eCommerce Project Manager**

Company: [Agilent](#)

Location: [Wilmington DE](#)

[Apply now](#)

## **Principal Engineer, Software**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

[Apply now](#)

### **Electroporation Made Easy for Hard-to-Transfect Cells**

This white paper by Mirus Bio highlights the Ingenio EZporator Electroporation System, a cost-effective workhorse that addresses the issues researchers have with their hard-to-transfect cells while being mindful of budget.

Download it from GenomeWeb's [White Paper Channel](#).

### **Uncovering Genomic Evidence of SARS-CoV-2 Infection and Reinfection**

In this on-demand webinar from Qiagen, Joel Sevinsky, coauthor of a recent paper exploring the genomic evidence for reinfection with SARS-CoV-2, discusses how next-generation sequencing and off-the-shelf software confirmed the first documented SARS-CoV-2 reinfection in the US.

Download it from GenomeWeb's [Webinar Library](#).

### **Gene Expression Profiling in Small Samples Without RNA Extraction Bias**

This poster from HTC compares the performance of RNA-seq and the HTG EdgeSeq Precision Immuno-Oncology Panel, which measures the expression of 1,392 genes involved in oncology and immune pathways, finding that the panel requires less sample input and offers greater sensitivity.

Download it from GenomeWeb's [White Paper Channel](#).

### **Potential Predictive Biomarkers of Response to Trabectedin in Soft-Tissue Sarcoma Patients**

This poster from HTG investigates the expression of immune checkpoint genes and others as potential predictors of response to trabectedin in 139 soft-tissue sarcoma patients.

Download it from GenomeWeb's [White Paper Channel](#).

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Date : 9/20/2021 11:07:05 AM

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Subject : Daily News: Grail Gets NY State Department of Health Approval for Galleri Multicancer Test

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### Extraction-Free Sample Preparation for Rapid PCR Results

The XpressAmp™ Direct Amplification Reagents simplify your workflow and speed time to results by eliminating time-consuming sample extraction steps. With a 10-minute room-temperature incubation, the protocol reduces hands-on time and consumables required, compared to traditional methods. [See the Workflow](#)

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### Grail Gets NY State Department of Health Approval for Galleri Multicancer Test

Published on Sep 20, 2021

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### Genomenon, Alexion Pharmaceuticals Team on Rare Disease Dx

Published on Sep 20, 2021

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**DiaSorin Molecular Receives CE Mark for Multiplex  
COVID-19, Influenza Test**

Published on Sep 20, 2021

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**Top Five Articles on GenomeWeb Last Week: Ginkgo  
Bioworks, Illumina, FDA, and More**

Published on Sep 20, 2021

**FROM THE SPONSOR:**

**A Breakthrough Direct Sample, FDA-EUA COVID-19 RT-PCR with  
Robust Strain Coverage**

BioGX Xfree test bypasses all upfront sample processing steps and extraction - just add water and direct sample to the PCR mix in order to enable high-throughput, Sample-to-Answer results on widely available real-time PCR platforms. The lyophilized Xfree test makes SARS CoV-2 testing simpler, faster and inexpensive while providing high performance detection coverage for all known strains, including the Delta strain. *Simple Yet Superior.* [Learn more.](#)

**Featured in Depth**

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**New PacBio Library Prep Method Helps Cover 'Death Valley'  
Between Short and Long Reads**

Published on Sep 17, 2021

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**New Facial Analysis Tool From Children's National Hospital  
Screens for Genetic Diseases**

Published on Sep 17, 2021

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**ConcertAI Growing Presence in Real-World Data Analytics  
Space With Focus on Diversifying Trials**

Published on Sep 16, 2021

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### **New Chelex-Based Protocol Shows Potential to Reduce Cost, Time of COVID-19 Testing**

Published on Sep 15, 2021

### **The Importance of Rapid, Accurate, and Reproducible Molecular Results for CML Monitoring**

The webinar discussion will touch on the revolution of Tyrosine kinase inhibitors and their resistance, the current CML guidelines, and the clinical impact of different assays. Additionally, our speakers will provide a first-hand perspective on the clinical value of rapid molecular CML monitoring and its effect on patient care. [Register here.](#)

## Recommended for You

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### **Ancient DNA Analysis Highlights Three Ancestral Populations in Japan**

Published on Sep 17, 2021

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### **FDA Warns of Potential False Positives With Abbott SARS-CoV-2 Molecular Tests**

Published on Sep 17, 2021

### **LC-MS Analysis of Plasma Samples with Solid Phase Extraction Cartridges**

This white paper from Millipore Sigma describes a study in which a mixture of twenty compounds was analyzed from calf serum using a Supel Swift hydrophilic-lipophilic balanced solid-phase extraction cartridge, finding the cartridge to produce excellent recoveries and minimal ion enhancements. Download it from GenomeWeb's [White Paper Channel.](#)

## Job listings

### **Science Writer**

Company: [Biostrata Ltd](#)



Location: [Cambridge](#)

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### **Electrical Engineer - Scientific Instrumentation**

Company: [Agilent](#)

Location: [Chicopee MA](#)

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### **Research Career Fair - Pre-registration**

Company: [University of Massachusetts Medical School](#)

Location: [Worcester MA](#)

[Apply now](#)

### **Project Specialist, Biofoudry Services**

Company: [Codex DNA](#)

Location: [San Diego CA](#)

[Apply now](#)

### **A Bioinformatics Platform for Genomic, Transcriptomic, and Epigenomic Analysis**

This eBook from Qiagen presents use cases demonstrating how the Qiagen CLC Genomics bioinformatics platform can lower the barriers of entry to bioinformatics and can process, aggregate, interrogate, and share molecular data from any sequencing platform and any species.

Download it from GenomeWeb's [White Paper Channel](#).

### **Comparison of Splice Site Finder Algorithms**

This whitepaper presents a performance comparison of Congenica Splice Site Finder (CSSF), an algorithm that determines the splicing functionality of a given DNA sequence, against an older algorithm, SSFL.

Download it from GenomeWeb's [White Paper Channel](#).

### **Multomic Changes in the Postnatal Mouse Heart**

This on-demand webinar presents a use case for Qiagen IPA and Qiagen OmicSoft in the analysis of changes in postnatal mouse heart tissues using transcriptomic, proteomic, and metabolomic data. Download it from GenomeWeb's [Webinar Library](#)

### **Performance of a Self-Sampling Urine Capturing Device for HPV-Based Cervical Cancer Screening**

This whitepaper from Novosanis explains the performance of Colli-Pee — a self-sampling urine-capturing device that collects the first 20 ml of urine flow — in HPV-based cervical cancer screening, highlighting current studies and literature in the field.

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Date : 8/6/2021 11:04:28 AM  
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To : "Ice, Gillian" iceg@ohio.edu  
Subject : Daily News: Illumina Q2 Revenues Jump 78 Percent

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**Illumina Q2 Revenues Jump 78 Percent**

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**Natera Q2 Revenues Grow 64 Percent**

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**Guardant Health Q2 Revenues Grow 39 Percent**

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**Twist Bioscience Fiscal Q3 Revenues Grow 65 Percent**

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**NeoGenomics Q2 Revenues Grow 40 Percent**

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**Meridian Bioscience Fiscal Q3 Revenues Drop 25 Percent**

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**T2 Biosystems Q2 Revenues More Than Double, Beat Estimates**

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**Quanterix Revenues Almost Double in Q2**

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**Quidel Q2 Revenues Dip 12 Percent; Misses on Revenues and EPS Estimates**

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**Fluidigm Q2 Revenues Grow 19 Percent**

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**BD, CerTest Biotec Get CE Mark for SARS-CoV-2 Variant MDx**

Published on Aug 06, 2021

## **Viral Pathogenesis Research: Molecular Detection with RNA ISH**

In this on-demand webinar ACD demonstrates how RNA in situ hybridization offers molecular detection coupled with morphological context to enable visualization of viruses, such as SARS-CoV-2, in infected tissues and cell types.

Download it from GenomeWeb's [Webinar Library](#)

Featured in Depth

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**Karius Cell-Free DNA Method to Detect Infection Validated in Study**

Published on Aug 05, 2021

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**NYU Langone Health, Philips Integrate Informatics for FDA-Cleared Cancer Sequencing Panel**

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**10x Genomics Sees Bump in Chromium Instrument Sales After Price Drop**

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**Preferred Medicine Building Data for Breast Cancer MicroRNA Screening Test**

Published on Aug 05, 2021

## **Genomics Data Transfer, Analytics, and Machine Learning Using Cloud Services**

This whitepaper from Amazon Web Services (AWS) demonstrates how to build a next-generation sequencing platform using AWS services, including recommendations and reference architectures for transferring genomics data to the AWS Cloud, running secondary analysis workflows, and performing tertiary analysis using machine learning.

Download it from GenomeWeb's [White Paper Channel](#).

## **Recommended for You**

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**Fluidigm Inks Comarketing Pacts With Ultivue, ImaBiotech**

Published on Aug 05, 2021

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**State-Regulated Illinois Health Plans Subject to Biomarker Test Coverage Mandate Starting 2022**

Published on Aug 05, 2021

## Tech Note: RNAscope or BaseScope RED Assay Combined with Immunohistochemistry

This technical note from ACD provides guidelines for performing in situ hybridization using the RNAscope 2.5 HD Detection Kit RED or the BaseScope Detection Reagent Kit v2 RED with immunohistochemistry on FFPE tissue sections.

Download it from GenomeWeb's [White Paper Channel](#)

### Job listings

#### Scientific Manager

Company: [Agilent](#)

Location: [Carpinteria CA](#)

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#### Organoid Shared Resource Core Facility Manager

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spg Hbr NY](#)

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#### Scientist/Senior Scientist

Company: [Inscripta](#)

Location: [Boulder CO](#)

[Apply now](#)

#### Research Programmer

Company: [Canada's Michael Smith Genome Sciences Centre](#)

Location: [Vancouver BC](#)

[Apply now](#)

## The Great Unknown of DNA Sequencing Variants: What You Need to Know

This whitepaper from Qiagen explores the implications and handling of variants of unknown significance, particularly in the realm of somatic

cancer, to enhance understanding among clinicians and laboratory personnel.

Download it from GenomeWeb's [White Paper Channel](#)

### **Electroporation Made Easy for Hard-to-Transfect Cells**

This white paper by Mirus Bio highlights the Ingenio EZporator Electroporation System, a cost-effective workhorse that addresses the issues researchers have with their hard-to-transfect cells while being mindful of budget.

Download it from GenomeWeb's [White Paper Channel](#).

### **Integrating Tools and Measures from Landscape Ecology to Study the Spatial Transcriptomics of Cancer**

This poster from NanoString describes a study that applied measures from landscape ecology to spatial transcriptomics data of a colorectal tumor, suggesting “landscape transcriptomics” approaches may be useful in understanding a variety of immune responses.

Download it from GenomeWeb's [White Paper Channel](#).

### **Potential Predictive Biomarkers of Response to Trabectedin in Soft-Tissue Sarcoma Patients**

This poster from HTG investigates the expression of immune checkpoint genes and others as potential predictors of response to trabectedin in 139 soft-tissue sarcoma patients.

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Date : 10/15/2021 4:14:27 PM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: In Brief This Week: The Jackson Laboratory, CareDx, Merck Global Health Innovation Fund, and More

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**Brief This Week: The Jackson Laboratory, CareDx, Merck  
Global Health Innovation Fund, and More**

Published on Oct 15, 2021



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**People in the News: New Appointments at Grail, Foundation Medicine, Personalis, More**

Published on Oct 15, 2021

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**New Products Posted to GenomeWeb: NanoString, Sophia Genetics, EliTech, Lybe Scientific, More**

Published on Oct 15, 2021

**Spatially Resolved Heterogeneity of Triple Negative Breast Cancer**

Download this whitepaper from 10x Genomics to learn how Visium Spatial Gene Expression can provide a better understanding of the biology within a triple negative breast cancer sample.

Download it from GenomeWeb's [White Paper Channel](#).

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**Natera Builds Data Backing Serial ctDNA Changes to Aid CRC Patient Management, Treatment Decisions**

Published on Oct 15, 2021

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**IsoPlexis Using IPO Funds to Support Move Into Transcriptomics, Metabolomics**

Published on Oct 15, 2021

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**Immunis.AI Validates Cancer Risk Assessment Platform With Prostate Cancer Early Detection Data**

Published on Oct 14, 2021

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**MiRxes to Expand miRNA Assay Technology to Multiple Cancer Types, Other Disease Areas**

Published on Oct 13, 2021

### Clues to Long Lifespan Revealed by Single-Cell Transcriptomics

This research snapshot from 10x Genomics describes a project that used single-cell transcriptomics to study immune systems in supercentenarians — individuals at least 110 years of age—to find clues to their incredibly long health spans.

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### Recommended for You

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#### UK Government Suspends SARS-CoV-2 PCR Testing at Laboratory Due to Potential Erroneous Results

Published on Oct 15, 2021

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#### FDA Classifies Abbott SARS-CoV-2 Molecular Test Recall as Class I Due to False Positives

Published on Oct 14, 2021

### Therapeutic Monoclonal Antibody Development and Delivery

This infographic from Thermo Fisher Scientific outlines examples of monoclonal antibody treatment, breakthroughs in the field, the types of antibodies, and the challenges in their development and delivery.

Download it from GenomeWeb's [White Paper Channel](#).

### Job listings

#### Research Assistant

Company: [Agilent](#)

Location: [Carpinteria CA](#)

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#### NeuroAI Summer Intern

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spg Hbr NY](#)

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### **Sr Scientist, Surface Chemistry**

Company: [Omniome \(Pacific Biosciences\)](#)

Location: [San Diego CA](#)

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### **National Lab and Synchrotron Postdoc for Biology**

Company: [Lawrence Berkeley National Laboratory](#)

Location: [Berkeley CA](#)

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### **Visualize KRAS Point Mutations Using In Situ Hybridization**

This scientific poster from ACD highlights the benefits of visualizing KRAS point mutations in non-small cell lung cancer tumors using the BaseScope in situ hybridization assay.

Download it from GenomeWeb's [White Paper Channel](#).

### **Tech Note: RNAscope 2.5 LS or BaseScope RED Assay Combined with Immunohistochemistry**

This technical note from ACD provides guidelines for performing automated chromogenic co-detection of RNA and protein on the Leica BOND RX System.

Download it from GenomeWeb's [White Paper Channel](#)

### **Tech Note: RNAscope LS Multiplex Fluorescent Assay Combined with Immunofluorescence**

This technical note from ACD provides guidelines for performing automated fluorescent co-detection of RNA and protein by combining in situ hybridization and immunofluorescence on the Leica BOND RX System.

Download it from GenomeWeb's [White Paper Channel](#)

### **eCase Study Transcript: Optimized Protocol for Sequencing the SARS-CoV-2 Genome**

This transcript is from a GenomeWeb eCase Study that outlined an optimized workflow for sequencing the SARS-CoV-2 genome, demonstrating the coverage and variant detection achieved.

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To : "Ice, Gillian" iceg@ohio.edu  
Subject : Daily News: IsoPlexis Raises \$125M in IPO

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Published on Oct 06, 2021

### [Icon to click to save item to your GenomeWeb reading list.](#) Colossal Begins Ambitious De-Extinction Plan With Elephant Sequencing Project, Despite Critics

Published on Oct 06, 2021

### Considerations When Ordering Non-Invasive Prenatal Screening

This white paper from Illumina is based on a webinar presentation by Katie Ellis, senior genetic counselor at Genea in Australia, who discussed important issues to consider when ordering non-invasive prenatal screening, including patient preferences, technology platforms, test limitations, and the implications of inconclusive results.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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Published on Oct 07, 2021

[Icon to click to save item to your GenomeWeb reading list.](#) **Orphan Gene Linked to Neurodevelopmental Disorder Characterized by Hearing Loss**

Published on Oct 07, 2021

**A Novel Chromogenic ISH Assay for High-Resolution Detection of DNA Copy Number and Structural Variants**

This on-demand webinar from ACD demonstrates how the DNAscope assay can detect DNA copy number and structural variations with high specificity and enables greater morphological detail, higher resolution, and simpler interpretation than traditional DNA ISH assays without the need for specialized equipment.

Download it from GenomeWeb's [Webinar Library](#).

## Job listings

**HudsonAlpha - Computational Biologist I - Clevenger Lab**

Company: [HudsonAlpha Institute for Biotechnology](#) [Favorited By Catrina Paseur](#) ([cpaseur@hudsonalpha.org](mailto:cpaseur@hudsonalpha.org))

Location: [Huntsville AL](#)

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**Bioinformatician (Protein Data Bank in Europe Team)**

Company: [EMBL EBI](#)

Location: [Cambridge](#)

[Apply now](#)

**R&D Software Engineer**

Company: [Agilent](#)

Location: [Carpinteria CA](#)

[Apply now](#)

**IT Business Relationship Manager**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Genomics Data Transfer, Analytics, and Machine Learning Using Cloud Services**

This whitepaper from Amazon Web Services (AWS) demonstrates how to build a next-generation sequencing platform using AWS services, including recommendations and reference architectures for transferring genomics data to the AWS Cloud, running secondary analysis workflows, and performing tertiary analysis using machine learning.

Download it from GenomeWeb's [White Paper Channel](#).

### **Finding a Diagnosis in a Race Against Time**

In this white paper from Qiagen, learn how Turkey's largest genetic testing lab is accelerating rare disease diagnosis with Qiagen Clinical Insight (QCI) Interpret.

Download it from GenomeWeb's [White Paper Channel](#).

### **Use of HGMD Mutation Data Within Popular Variant Annotation Tools**

This technical note from Qiagen provides a step-by-step guide for the use of HGMD data by three variant annotation tools: ANNOVAR, snpEff, and VariantAnnotation.

Download it from GenomeWeb's [White Paper Channel](#).

### **Lab Performing Expanded Carrier Screening Boosts Efficiency by 80 Percent**

This white paper describes how one of the first DNA testing and genetic counseling companies to offer expanded carrier screening in the United States evaluated a clinical decision support solution to help scale its genomic interpretation processes.

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Date : 8/30/2021 11:06:57 AM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: Jury Awards ArcherDx, MGH \$4.7M in Qiagen Patent Infringement Lawsuit

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**Genome Medical Raises \$60M in Series C Round, to Acquire Telehealth Firm GeneMatters**

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**At ESHG, DeCode Genetics Highlights Integration of Proteomics, Genomics for Disease Research**

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**Visby Medical Obtains FDA 510(k), CLIA Waiver for Multiplex STI Test Using Handheld PCR Device**

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**Top Five Articles on GenomeWeb Last Week: Illumina, Rhinos, DnaNudge, and More**

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**Oncocyte Launches Prospective Registry to Drive DetermaRx Adoption, Improve Coverage**

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**Studies Show Benefits of Long-Read Sequencing in Toughest Rare Disease Cases**

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## **Pandemic Accelerates Development of Informatics Tools for Viral Genome Analysis**

Published on Aug 26, 2021



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## **Ulcerative Colitis Study Analyzes Gene Expression to Measure Risk of Progression to Surgery**

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## **Brief This Week: Mount Sinai Health System, Sophia Genetics, CellMax Life, and More**

Published on Aug 27, 2021

### **Rapid Implementation of SARS-CoV-2 Testing: A GenomeWeb eCase Study Transcript**

This transcript is from a GenomeWeb eCase Study in which Joel Lefferts of Dartmouth-Hitchcock Medical Center shared his experience implementing and validating SARS-CoV-2 testing.

Download it from GenomeWeb's [White Paper Channel](#)

### Job listings

#### **Manufacturing Associate (Molecular Techniques)**

Company: [Codex DNA](#)

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## **Senior Engineer, CMOS Image Sensor Metrology**

Company: [Pacific Biosciences](#)

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## **Technical and Regulatory Considerations for Designing NGS Controls and Standards: A Panel Discussion**

In this on-demand webinar from SeraCare, an expert panel discusses technical and regulatory considerations for designing NGS controls and standards.

Download it from GenomeWeb's [Webinar Library](#)

## **Measuring the Efficiency of CRISPR Genome Editing Using Single-Cell DNA Custom Panels**

This technical note from Mission Bio demonstrates the Tapestry Platform's ability to help optimize genome editing technologies by characterizing genome-edited systems to detect on- and off-target effects with single-cell DNA analysis.

Download it from GenomeWeb's [White Paper Channel](#).

## **Preclinical CAR-T Cell Target Safety, Biodistribution, and Tumor Infiltration Analysis**

In this report, ACD illustrates a way to detect activated CAR-T cells in the tissue context, as well as low expression of CAR target antigen, using the RNAscope in situ hybridization technology.

Download it from GenomeWeb's [White Paper Channel](#).

## **Tumor Microenvironment and Immune Cell Analysis with ISH and IHC Assays**

This application note from ACD shows how combining RNAscope ISH technology with immunohistochemistry or immunofluorescence assays allows for the spatial analysis of targets, biomarkers, cytokines, and CAR-T cells within the tumor microenvironment.

Download it from GenomeWeb's [White Paper Channel](#).

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Subject : Daily News: Labcorp Receives FDA EUA for Combo COVID-19/Flu Home Collection Kit

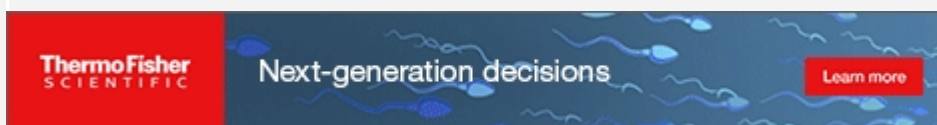
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**UK Researchers Show Cytotoxic T-Cell Level Predicts Melanoma Immunotherapy Response**

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**People in the News: New Appointments at Thermo Fisher, Sera Prognostics, PreludeDx, More**

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### **Brief This Week: Guardant Health, Pacific Biosciences, Thermo Fisher Scientific, and More**

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### **GenomeWeb Index Takes 7 Percent Tumble in September**

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## **Performance of Preimplantation Genetic Testing Reference Materials**

This poster from SeraCare presents data on newly developed reference materials for preimplantation genetic testing for aneuploidies and demonstrates the materials' performance using primary template-directed amplification for whole genome amplification.

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## **Featured in Depth**

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### **Pancreatic Cancer Data Preview Freenome's Plans for Expanded Cancer Detection Assay**

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### **RNA-Guided Systems May Be Present in Eukaryotes, Hold Promise as Biotech Tools**

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### **Jackson Laboratory Modernizes its Research Data Storage Infrastructure**

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### **Metagenomic Infectious Disease Sequencing Test**

### **Repurposed for Cancer Detection From CSF Samples**

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### **Characterizing Tumor-infiltrated Immune Cells with Spatial Context**

This poster from ACD demonstrates a new integrated in situ hybridization and immunohistochemistry workflow that can substantially improve RNA-protein co-detection.

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### **Euformatics Inks Southeast Asian Distribution Deals With**

### **All Eights, Biomedic**

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### **CRISPR Bioinformatics Startup Latch Bio Emerges From**

### **Stealth With \$5M in Seed Funding**

Published on Oct 01, 2021

### **Using Single-Cell RNA-Seq Data to Elucidate Liver Disease and Type 2 Diabetes**

This white paper presents use cases for exploring single-cell RNA sequencing data to discover common lymphoid signatures of resident myeloid cell genes in human livers and differentially expressed genes in type 2 diabetes using the Qiagen OmicSoft Single Cell Land database.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Postdoctoral Fellow**

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)



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Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Territory Manager I (New England)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Scientist (Immunology and NK Cells)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Identifying Functional Variants in Claudin-Low Breast Cancer Cell Lines**

This on-demand eCase Study video outlines a filtering strategy to identify true, rare, homozygous variants in claudin-low cell lines for functional follow-up in the lab.

Download it from GenomeWeb's [Webinar Library](#)

### **Simultaneous Visualization of RNA and Protein Targets Using a New Co-Detection Kit**

This resource from ACD describes new kits that allow researchers to simultaneously examine cell-type specific gene expression and identify cellular sources of secreted proteins.

Download it from GenomeWeb's [White Paper Channel](#).

### **Investigating the Mechanisms of Fear Memory With Spatial Transcriptomics**

In this on-demand webinar from ACD, Kaitlin Sullivan of the University of British Columbia discusses using multiplexed, fluorescent RNA in situ hybridization (mFISH) based on the RNAscope technology to assess neuronal activity during the creation and recollection of fear memory.

Download it from GenomeWeb's [Webinar Library](#).

### **Robust Antibody Validation for Spatially Resolved Protein Expression Research**

This white paper reviews the multistep process NanoString follows to screen, conjugate, and validate oligo-tagged antibodies prior to incorporation into its GeoMx Digital Spatial Profiler.

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Subject : Daily News: Lung Cancer Features, Treatment Clues Emerge From 'Omic Analysis of Difficult-to-Treat Subtype

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### **Lung Cancer Features, Treatment Clues Emerge From 'Omic Analysis of Difficult-to-Treat Subtype**

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**Genome, Metagenomic Sequence Data Highlight Microbe Adaptations to Human Guts**

Published on Aug 05, 2021

**The Expanding Role of Circulating Tumor DNA in the Management of Solid Tumors: A Multidisciplinary Approach**

This webinar will explore the expanding role of circulating tumor DNA (ctDNA) for assessing molecular residual disease (MRD) and monitoring treatment response in patients with solid tumors.

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**Preferred Medicine Building Data for Breast Cancer MicroRNA Screening Test**

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**State-Regulated Illinois Health Plans Subject to Biomarker Test Coverage Mandate Starting 2022**

Published on Aug 05, 2021

**Lessons on Sample Accessioning and Processing at Clinical Labs During the COVID-19 Pandemic**

This e-book from LGC, Biosearch Technologies details the major challenges labs have faced in sample accessioning and processing during the COVID-19 pandemic and describes how they have adapted to handle the sustained demand for large-scale testing.

Download it from GenomeWeb's [White Paper Channel](#)

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### **Pillar Biosciences Receives FDA Approval for OncoReveal Dx Lung and Colon Cancer Assay**

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### **Berry Oncology Raises \$99.2M in Series B1 Round**

Published on Aug 05, 2021

## **Single-Cell Intracellular Proteome**

In this ebook by Isoplexis learn how to reveal critical signaling mechanisms by uncovering intracellular communication.

Download it from GenomeWeb's [White Paper Channel](#).

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### **Organoid Shared Resource Core Facility Manager**

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### **Scientist/Senior Scientist**

Company: [Inscripta](#)

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### **Research Programmer**

Company: [Canada's Michael Smith Genome Sciences Centre](#)

Location: [Vancouver BC](#)

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### **Director, Precision Oncology**

Company: [Harold C. Simmons Comprehensive Cancer Center](#)

Location: [Dallas TX](#)

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### **Comparison of Splice Site Finder Algorithms**

This whitepaper presents a performance comparison of Congenica Splice Site Finder (CSSF), an algorithm that determines the splicing functionality of a given DNA sequence, against an older algorithm, SSFL.

Download it from GenomeWeb's [White Paper Channel](#).

### **Trends in Variant Interpretation Workflows: Expert Insights to Advance NGS Oncology Profiling**

Join GenomeWeb and Qiagen for an on-demand roundtable discussion where a panel of experts review challenges and opportunities around genomic variant interpretation workflows in the field of oncology.

Download it from GenomeWeb's [Webinar Library](#)

### **B Cell Isolation for Single Cell Genomics**

In this application note, the Namo Single Cell dispenser was used to isolate single activated B cells. Gene expression was quantified for both resting and activated B cells to identify transcriptional changes associated with the activated cell state.

Download it from GenomeWeb's [White Paper Channel](#).

### **Automating PCR and ELISA Workflows in a COVID-19 Testing Lab**

This case study brief from Tecan describes how ABC Labs, an influenza and COVID-19 testing lab in Stockholm, Sweden, employed robotic workstations to scale up their PCR and serology testing over the course of the pandemic from hundreds of samples a day to nearly 20,000.

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Subject : Daily News: Mawi DNA Technologies Inks Japanese Distribution Deal With Fujifilm

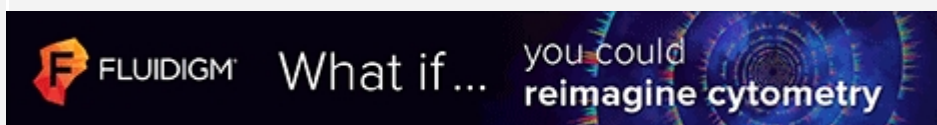
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**Top Five Articles on GenomeWeb Last Week: Illumina, CareDx, Oxford Nanopore, and More**

Published on Oct 04, 2021

## Immunotherapy Challenges and Solutions

This infographic from Thermo Fisher Scientific outlines the applications and benefits of immunotherapy treatments as well as challenges and solutions in developing immunotherapies.

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### **IVBH Bio Takes Aim at 'High-Impact' Diseases With RNA-Based Liquid Biopsy Incubator**

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### **STIs Reached Record Highs, Then COVID-19 Hit. Test Makers Now Ponder What's Next**

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### **Pancreatic Cancer Data Preview Freenome's Plans for Expanded Cancer Detection Assay**

Published on Sep 30, 2021

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### **RNA-Guided Systems May Be Present in Eukaryotes, Hold Promise as Biotech Tools**

Published on Sep 30, 2021

## **The Case for Automated Variant Classification for Rare Disease Cases**

In this on-demand webinar, Helen Savage, Lead Clinical Scientist at Congenica, discusses new advances in automated variant classification for rare diseases.

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## Recommended for You

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### **OpGen Receives FDA Clearance for AMR Panel, Prelim Q3 Revenues Up 9 Percent**

Published on Oct 04, 2021

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**Labcorp Receives FDA EUA for Combo COVID-19/Flu Home Collection Kit**

Published on Oct 01, 2021

**Breaking the Hi-C Resolution Barrier**

This on-demand webinar describes the Micro-C kit from Dovetail Genomics, which uses MNase to enable high-resolution chromatin conformation.

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**Job listings**

**Postdoctoral Fellow**

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)

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**Postdoctoral Research Associate, Gürsoy & Sanjana Labs**

Company: [New York Genome Center](#)

Location: [New York NY](#)

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**Web Development Manager**

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)

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**Business Development - Data Platform**

Company: [Invitae](#)

Location: [San Francisco CA](#)

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### **Spatially Resolved Heterogeneity of Triple Negative Breast Cancer**

Download this whitepaper from 10x Genomics to learn how Visium Spatial Gene Expression can provide a better understanding of the biology within a triple negative breast cancer sample.

Download it from GenomeWeb's [White Paper Channel](#).

### **Probing Protein-Directed Chromatin Architecture by Combining ChIP and Hi-C**

This technical note describes the Dovetail HiChIP MNase Kit, which combines the benefits of ChIP-seq with Hi-C, enabling researchers to query protein-directed chromatin conformation mediated by specific proteins of interest.

Download it from GenomeWeb's [White Paper Channel](#).

### **The Importance of Expert Curation in Clinical NGS Testing**

This white paper provides an overview of Qiagen's variant interpretation software and services, which take advantage of different curation methods to accurately transform the literature into biological and clinical insights.

Download it from GenomeWeb's [White Paper Channel](#)

### **Single-Cell DNA Analysis of Myelodysplastic Syndrome Using a Single-Cell DNA AML Panel**

This technical note from Mission Bio describes a study analyzing the mutational landscape of two patients with myelodysplastic syndrome (MDS) using the Tapestry Single-cell DNA AML Panel, demonstrating high sensitivity, clonal resolution, and concordance of variant allele frequency between single-cell and bulk next-generation sequencing data.

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To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: MDxHealth H1 2021 Revenues Up 9 Percent As Testing Volumes Rebound

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[Learn more about RBM's Ultrasensitive Immunoassays for Clinical Trials](#)

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### MDxHealth H1 2021 Revenues Up 9 Percent As Testing Volumes Rebound

Published on Aug 26, 2021

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## **Osteoarthritis GWAS Leads to Key Genes, Treatment**

### **Targets**

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## **Risk Related to Genetic Contributors Can Decline With Age for Some Common Diseases**

Published on Aug 26, 2021

### **NGS Variant Annotation, Filtering and Triage for a Whole-Exome Sequencing Workflow**

This whitepaper by Qiagen reviews an affordable and efficient approach for translational cancer research, allowing the detection of rare gene variations and helping to discover new cancer biomarkers.

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### **Featured in Depth**

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## **Pandemic Accelerates Development of Informatics Tools for Viral Genome Analysis**

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## **Illumina's 'Maverick' Move Secures Grail Deal But Risks**

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### **NGS-based Reference Materials for Fusion and Somatic Variant Detection in Myeloid Cancers**

Download this poster from SeraCare to learn how they characterized NGS-based reference materials for fusion and somatic variant detection in myeloid cancers.

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### **Performance of a Formalin-Damaged Tumor Mutation Reference Material**

Download this poster from SeraCare to learn about a formalin-damaged, multiplexed biosynthetic FFPE reference material that mimics the damage found in patient samples. This patient-like control can be used to assess the entire tumor profiling workflow.

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Company: [Resilience](#)

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## **Automation Manager**

Company: [Aether Biomachines](#)

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## **Senior Manager, Clinical Software Development**

Company: [Thermo Fisher Scientific](#)

Location: [South San Francisco CA](#)

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## **Prenatal and Preimplantation Genetic Testing Reference Materials Developed From Clinical Samples**

This poster from SeraCare describes the development and clinical performance of reference materials for prenatal and preimplantation testing that appear suitable for a range of currently available PGT-A and NIPT methods.

Download it from GenomeWeb's [White Paper Channel](#).

## **How to Reduce False Negative SARS-CoV-2 Results with Silicon Carbide**

Download this whitepaper from Norgen to learn why it matters if viral RNA is fragmented from VTM storage.

Download it from GenomeWeb's [White Paper Channel](#).

## **Identification of Functional Variants in Claudin-low Breast Cancer Cell Lines**

This transcript is from a GenomeWeb eCase Study sponsored by Qiagen that discussed a study that used QCI Interpret Translational to look for differences in claudin-low versus claudin-high breast cancer cells.

Download it from GenomeWeb's [White Paper Channel](#).

### **Pipetting Viscous Solutions – Best Practices**

This reference poster from Artel describes best practices for pipetting viscous solutions including using positive displacement for methods or reverse mode pipetting.

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Published on Aug 04, 2021

### Bigger, Faster, Cheaper: Breaking the Bottleneck in Clinical Genetic Testing

This white paper by Qiagen argues that to prepare for the future of NGS testing, clinical labs will need to adopt automation as a broad strategy and partner with commercial companies that can support and streamline their informatics workflow.

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### **Expert Advice Establishing a SARS-CoV-2 Assay for COVID-19: A GenomeWeb eCase Study Transcript**

This transcript is from a GenomeWeb eCase Study in which Russell Garlick, Chief Scientific Officer at LGC SeraCare Life Sciences, discussed how AccuPlex reference materials can be used to validate SARS-CoV-2 assays.

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### **Approaches to Optimizing Samples for RNA Sequencing**

This whitepaper from Sony highlights the important role of single-cell isolation methods for scRNA sequencing of complex biological samples.

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### **Director, Hardware**

Company: [Takara Bio USA, Inc.](#)

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### **Genetic Diagnostic Laboratory Assistant Director**

Company: [Genetic Diagnostic Laboratory \(GDL\), Department of Genetics, Perelman School of Medicine, University of Pennsylvania](#)

Location: [Philadelphia PA](#)

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### **Scientist, Mammalian Cell Biology**

Company: [Inscripta](#)

Location: [Boulder CO](#)

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### **NGS Sales Specialist - Northeast US**

Company: [Paragon Genomics](#)

Location: [Hayward CA](#)

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### **A New CNV Calling Tool for Exomes**

This whitepaper from Congenica describes the development, validation, and analytical performance of a newly developed copy-number variant (CNV) calling module released as part of the Congenica clinical decision support platform.

Download it from GenomeWeb's [White Paper Channel](#).

### **The Pros, Cons, and Applications of Digital PCR**

This podcast from Stilla discusses the pros and cons of digital PCR and how it compares with qPCR and next-generation sequencing as a research and discovery method.

Download it from GenomeWeb's [Webinar Library](#).

### **Experience with SARS-CoV-2 (COVID-19) Assay Validation**

In this 20 minute eCase Study from SeraCare you will hear first-hand how Dr. Jeff SoRelle and his team at the University of Texas Southwestern Medical Center developed and validated a COVID-19 RT PCR assay.

Download it from GenomeWeb's [eCase Study Videos](#)

### **Automated Affinity Purification of Immunoglobulins**

The affinity extraction protocol described in this application note from Integra demonstrates high recoveries, low background, and reproducible antibody enrichment.

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### **A Breakthrough Direct Sample, FDA-EUA COVID-19 RT-PCR with Robust Strain Coverage**

BioGX Xfree test bypasses all upfront sample processing steps and extraction - just add water and direct sample to the PCR mix in order to enable high-throughput, Sample-to-Answer results on widely available real-time PCR platforms. The lyophilized Xfree test makes SARS CoV-2 testing simpler, faster and inexpensive while providing high performance detection coverage for all known strains, including the Delta strain. *Simple Yet Superior.* [Learn more.](#)

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**Global Supply Chain Issues Catch up to Illumina, Leading to  
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**Machine Learning Method Allows Highly Multiplexed Cell  
Surface Protein Analysis via Flow Cytometry**

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**Clonal Heterogeneity in Acute Lymphoblastic Leukemia at Diagnosis  
and During Chemotherapy Treatment Detected by Single-Cell  
Sequencing**

In this webinar, the second in a “Meet the Authors” series sponsored by Mission Bio, Jan Cools of the VIB Center for Cancer Biology in Leuven, Belgium will discuss the application of single-cell analysis to determine the clonal heterogeneity of the leukemia cells of ALL cases at diagnosis.

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**Ancient DNA Details Population Dynamics Within Andean  
Tiwanaku Civilization**

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**A Guide to NGS Methods in Liquid Biopsy**

This white paper from Zymo provides an overview of next-generation sequencing methods used in liquid biopsy, along with an overview of applications, including cancer detection, surveillance, and treatment selection and monitoring, as well as prenatal genetic testing, organ transplant monitoring, and trauma recovery monitoring. Download it from GenomeWeb's [White Paper Channel](#).

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### **Field Applications Specialist**

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### **Director of Immuno-oncology**

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### **Business and Payment Plan Administrator**

Company: [Agilent](#)

Location: [Wilmington DE](#)

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### **Single-Cell Genomic Data Portals and Analysis Tools**

This infographic from Qiagen describes how Qiagen Digital Insights solutions can be applied for single-cell genomic analysis, including single-cell RNA sequencing (scRNA-seq) for biomarker discovery, visualization of scRNA-seq data, cell type identification, oncogenomics, and single-cell pathway analysis.



Download it from GenomeWeb's [White Paper Channel](#).

### **Tech Note: RNAscope Multiplex Fluorescent v2 Assay Combined with Immunofluorescence**

This technical note from ACD provides guidelines for performing in situ hybridization using an RNAscope Multiplex Fluorescent Reagent Kit v2 combined with immunofluorescence on FFPE tissue sections.

Download it from GenomeWeb's [White Paper Channel](#)

### **Variant Interpretation in Oncology: Results from an End-User Benchmarking Survey**

This report by Qiagen summarizes the results of a benchmarking survey that sought to identify pain points and opportunities in next-generation sequencing variant interpretation workflows within the field of oncology.

Download it from GenomeWeb's [White Paper Channel](#).

### **Troubleshooting Automated Assays**

This reference poster from Artel describes how to troubleshoot problems with automated assays, including how to inspect laboratory instruments, consumables, reagents, and other factors that may be causing issues in data.

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### **Jackson Laboratory Modernizes its Research Data Storage Infrastructure**

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## **The Association Between Diabetes and Latent TB Infection: The Role of Diagnostics in Improving Outcomes**

In this webinar, Dr. Sonia Qasba will journey through the epidemiology, risk, and treatment recommendations of diabetic patients with LTBI. [Register Here.](#)

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### **Labcorp Receives FDA EUA for Combo COVID-19/Flu Home Collection Kit**

Published on Oct 01, 2021

## **An End-to-End Automated Workflow for High-Throughput SARS-Cov-2 Sequencing and Surveillance**

In this webinar, we highlight the collaboration between the European Molecular Biology Laboratory (EMBL), New England Biolabs (NEB), and Beckman Coulter Life Sciences to develop an automated high-throughput NGS library prep workflow for SARS-CoV-2 surveillance using the NEBNext ARTIC SARS-CoV-2 Library Prep Kit (Illumina) and the Biomek i7 Hybrid NGS Workstation.

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#### **Senior Bioinformatics Software Engineer**

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Location: [Pasadena CA](#)

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#### **Field Applications Scientist (FAS), Europe**

Company: [Inscripta](#)

Location: [London](#)

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#### **Web Development Manager**

Company: [Cold Spring Harbor Laboratory](#)

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#### **Horticulturist II**

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)

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## **cDNA Conversion From Limited and Poor-Quality Total RNA for qPCR**

This on-demand webinar from Tecan demonstrates how Crescendo cDNA Synthesis for qPCR minimizes the rate of false negatives from SARS-

CoV-2 nasal swab samples, detects limited transcripts with high sensitivity, obtains unbiased amplification to preserve biological information, and generates sufficient cDNA for qPCR studies and sample archiving. For Research Use Only. Not for use in diagnostic procedure.  
Download it from GenomeWeb's [Webinar Library](#).

### **Multimic Cytometry: A Vivid, Full View of the Immune System**

This infographic from 10x Genomics highlights how the layers of immune system complexity can be revealed with high-throughput single cell multimic cytometry.

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### **cDNA Conversion From Limited and Poor-Quality Total RNA for qPCR**

This on-demand webinar from Tecan demonstrates how Crescendo cDNA Synthesis for qPCR minimizes the rate of false negatives from SARS-CoV-2 nasal swab samples, detects limited transcripts with high sensitivity, obtains unbiased amplification to preserve biological information, and generates sufficient cDNA for qPCR studies and sample archiving. For Research Use Only. Not for use in diagnostic procedure.

Download it from GenomeWeb's [Webinar Library](#).

### **Curated Omics Data Portals for Gene Signature, Biomarker, and Target Discovery**

This infographic from Qiagen describes how data in OmicSoft OncoLand, DiseaseLand, and Single Cell Land omics data portals are gathered, curated, annotated, and deployed to assist the discovery of gene signatures, biomarkers, and drug targets.

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Subject : Daily News: Oxford Nanopore Technologies to Raise £300M in IPO,  
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**Thermo Fisher Scientific Receives CE Mark for TaqPath COVID-19 RNase P 2.0 Testing Kit**

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This on-demand webinar from Thermo Fisher Scientific reviews how absorbance is used to analyze nucleic acid samples to detect DNA/RNA contamination.  
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**Molecular Health, Eone-Diagnomics Genome Center Ink Liquid Biopsy Partnership**



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## Sample Preparation for Single Cell Applications in Oncology

This whitepaper from 10x Genomics introduces the core concepts and best practices to optimize sample preparation for single-cell research in oncology, providing pertinent protocols, technical notes, video tutorials, and other resources for each step of the sample preparation workflow.

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Location: [Montreal QC](#)

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### Lab Technician

Company: [Agilent](#)

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### Genomics Technical Officer

Company: [University of Sydney](#)

Location: [Camperdown NSW](#)

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### **Therapeutic Monoclonal Antibody Development and Delivery**

This infographic from Thermo Fisher Scientific outlines examples of monoclonal antibody treatment, breakthroughs in the field, the types of antibodies, and the challenges in their development and delivery.

Download it from GenomeWeb's [White Paper Channel](#).

### **Get High-Quality DNA from FFPE and Reduce PCR Duplicates**

This app note reviews how the Purigen Ionic Purification System reduces the number of PCR duplicates that decrease sequencing efficiency. Improving the quality and quantity of DNA from FFPE samples can improve sequencing interpretation by reducing PCR cycles needed during library prep, yielding more usable high-quality sequencing reads.

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### **Rapid Assessment of Novel Alleles and QTL Through Background Genome Selection**

In this on-demand webinar, David Francis of Ohio State University discusses how his lab leveraged KASP to develop more than 7,000 SNP assays in tomato, leading his project from knowledge of sequence variations to functional characterization.

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### **Single-Cell Genomic Data Portals and Analysis Tools**

This infographic from Qiagen describes how Qiagen Digital Insights solutions can be applied for single-cell genomic analysis, including single-cell RNA sequencing (scRNA-seq) for biomarker discovery, visualization of scRNA-seq data, cell type identification, oncogenomics, and single-cell pathway analysis.

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### **Sci-Space Method Ties Single-Cell Gene Expression Differences to Spatial Context**

Published on Jul 14, 2021

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### **Genedrive Expects CE-IVD Mark for POC SARS-CoV-2 Test by Fall; Advances Hearing Loss, HCV Assays**

Published on Jul 13, 2021

### **How to Reduce False Negative SARS-CoV-2 Results with Silicon Carbide**

Download this whitepaper from Norgen to learn why it matters if viral RNA is fragmented from VTM storage.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### **OraSure Stock Ticks Up on Rumor of Declined Quidel Acquisition Offer**

Published on Jul 19, 2021

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### **New Approach Uncovers Somatic Mutations in Non-Unique Genome Regions of Cancer Samples**

Published on Jul 19, 2021

### **Categorization of Blood-Based Biomarkers**

This ebook describes new strategies to support proteomic analysis of blood to support precision medicine, including Biotech Support Group products and methods that can help proteomic investigators explore all blood compartments.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Sales Representative, Western US & Europe Territory**

Company: [Golden Helix](#)

Location: [Bozeman MT](#)

[Apply now](#)

### **Senior Scientist, Single Cell Technologies**

Company: [Resilience](#)

Location: [La Jolla CA](#)

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### **Regulatory Affairs Manager, Intelligence**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Scientist (DNA-, RNA-protein; Polymerase)**

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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### **A Multi-Laboratory Investigation of 18 Oncogenic RNA Fusions in FFPE and Purified RNA-based Reference Materials**

This scientific poster from SeraCare reviews the SereSeq Fusion RNA v4 standards, in both purified and FFPE formats, that include more common fusions of ALK, RET, and ROS1, as well as rare fusion events such as PAX-PPARG and ETV6-NTRK3.

Download it from GenomeWeb's [White Paper Channel](#).

### **10 Strategic Considerations When Outsourcing Production of In Vitro Diagnostics**

This white paper from Millipore Sigma highlights 10 important benefits of outsourcing and key considerations that should factor into the evaluation of an IVD partner, from investment to development capabilities.

Download it from GenomeWeb's [White Paper Channel](#).

### **A Clear and Easy Guide to ELISAs**

Download this ebook from Bio-Techne for a deep-dive look at the different types of ELISAs, advantages and disadvantages of each, and why you would want to use an ELISA over other techniques.

Download it from GenomeWeb's [White Paper Channel](#).

### **A Clear and Easy Guide to Luminex Multiplex Immunoassays**

Download this guide from Bio-Techne for a detailed overview of the performance capabilities of Luminex multiplex immunoassays. The guide includes a detailed Q&A section with answers to common questions.

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**PerkinElmer to Acquire BioLegend for \$5.25B; Q2 Revenues Rise 51 Percent**

Published on Jul 26, 2021

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**Canine Genetics Firm Embark Veterinary Raises \$75M in Series B Round**

Published on Jul 26, 2021

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**American Heart Association Provides Guidance for Genomic Research With Underrepresented Groups**

Published on Jul 26, 2021



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**Top Five Articles on GenomeWeb Last Week: Pacific Biosciences, Illumina, Natera, and More**

Published on Jul 26, 2021

**FROM THE SPONSOR:**

**A Breakthrough Direct Sample, FDA-EUA COVID-19 RT-PCR with Robust Strain Coverage**

BioGX Xfree test bypasses all upfront sample processing steps and extraction - just add water and direct sample to the PCR mix in order to enable high-throughput, Sample-to-Answer results on widely available real-time PCR platforms. The lyophilized Xfree test makes SARS CoV-2 testing simpler, faster and inexpensive while providing high performance detection coverage for all known strains, including the Delta strain. *Simple Yet Superior.* [Learn more.](#)

**Featured in Depth**

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**Deep-Learning Method Helps Predict Sequencing Depth From DNA Probes**

Published on Jul 23, 2021

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**Natera Minimal Residual Disease Test Predicts Oligometastatic CRC Patient Outcomes in New Study**

Published on Jul 22, 2021

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**Sema4 Closes SPAC Deal With CM Life Sciences, Raising Approximately \$500M**

Published on Jul 22, 2021

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## **Scale Biosciences, Still in Stealth Mode, to Develop Single-Cell, Spatial Biology Tech**

Published on Jul 22, 2021

### **FROM THE SPONSOR:**

#### **DxPx Industry & Investor Partnering Conference**

On Diagnostics, Digital Health, Precision Medicine & Life Science Tools  
The DxPx Conference facilitates financing, licensing, and M&A through an effective partnering process for innovative startups/growth companies, investors, and industry experts. It's the only partnering conference with a focus on diagnostics, digital health, precision medicine and life science tools. [Find out more](#)

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## **Quidel, Beckman Coulter Settle Legal Dispute Over Cardiac Immunoassay Business**

Published on Jul 26, 2021

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## **Sophia Genetics Raises \$234M in IPO, Eyes Additional Partnerships**

Published on Jul 23, 2021

## **Multisite Evaluation of a Single-tube SMN1/2 PCR/CE Assay System that Assesses Copy Number and Expanded Content for Spinal Muscular Atrophy**

This whitepaper from Asuragen describes the multisite performance of a single-tube PCR/CE kit, including companion software that reports such expanded content.

Download it from GenomeWeb's [White Paper Channel](#).

### **Job listings**

## **Research Associate II (Molecular Biology)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Senior Firmware Engineer**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Bioinformatics Scientist/ Scientific Data Curator**

Company: [Computercraft Corporation](#)

Location: [Bethesda MD](#)

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### **Director, Software Engineering**

Company: [Resilience](#)

Location: [La Jolla CA](#)

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### **Spatial Profiling of Lung Tissue from SARS-CoV-2-Positive Rapid Autopsies**

This on-demand webinar from ACD discusses a project at the Broad Institute to use spatial profiling to understand the disease progression of COVID-19.

Download it from GenomeWeb's [Webinar Library](#)

### **Solutions for Sensitive Viral Detection**

This whitepaper from Tecan presents use cases from peer-reviewed publications demonstrating Trio RNA-Seq and the Ovation RNA-Seq System V2 — workflows for NGS library construction and cDNA conversion that increase viral detection sensitivity in challenging or limited samples.

Download it from GenomeWeb's [White Paper Channel](#).

### **An RNA-seq Method with Customizable Host Transcript Depletion for Viral Detection in Clinical Samples**

This poster from Tecan presents data demonstrating the detection of viruses in clinically relevant samples using the Trio RNA-Seq workflow, a hypothesis-free RNA-seq method for NGS library construction that includes customizable depletion of abundant or uninformative host transcripts to reduce the number of reads needed for viral detection. Download it from GenomeWeb's [White Paper Channel](#).

### **Genomic Solutions for Sensitive Viral Research**

This on-demand webinar from Tecan presents studies investigating SARS-CoV-2 that employed the Trio RNA-Seq workflow, demonstrating how the system can detect low amounts of virus and complement qPCR studies in challenging samples.

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**Quidel Nabs CE Mark for Savanna Analyzer, Respiratory Panel**

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**Thermo Fisher, Ellume Get FDA Emergency Use Authorizations for SARS-CoV-2 Tests**

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**Perspectum Launches Study of Digital Pathology, WGS to Guide Liver Cancer Treatment**

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**Pathogen Detection Firm Nephros Acquires Infectious  
Disease Monitoring Company GenArraytion**

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**Top Five Articles on GenomeWeb Last Week: Sophia  
Genetics, Bio-Rad, COVID-19, and More**

Published on Jul 12, 2021

**Multiomic Changes in the Postnatal Mouse Heart**

This on-demand webinar presents a use case for Qiagen IPA and Qiagen OmicSoft in the analysis of changes in postnatal mouse heart tissues using transcriptomic, proteomic, and metabolomic data.

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Featured in Depth

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**Human Reference Genome Choice Impacts Variant Calling,  
but Switching Is Tricky**

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**With \$6M in Seed Funding, MIT Spinout Glyphic  
Biotechnologies Building Proteomic Platform**

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**Nvidia Launches Cambridge-1 Supercomputer to Support  
'Digital Biology'**

Published on Jul 08, 2021

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**BforCure Preparing Multiple Infectious Disease Panels for  
Point-of-Care qPCR Platform**

Published on Jul 08, 2021

## Prevalence of Hereditary Cancer and Benefits of Multi-Gene Panel Testing

This application note from Qiagen discusses the prevalence and causative mutations of several hereditary cancer syndromes, as well as the benefits of next-generation sequencing for hereditary cancer as compared to single-gene testing.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### Integrated Tumor, Microbiome Features Influence Immunotherapy Combo Effects in Advanced Melanoma

Published on Jul 09, 2021

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### Brief This Week: Thermo Fisher Scientific, Luminex, Eurofins, and More

Published on Jul 09, 2021

## Breaking the Hi-C Resolution Barrier

This on-demand webinar describes the Micro-C kit from Dovetail Genomics, which uses MNase to enable high-resolution chromatin conformation.

Download it from GenomeWeb's [Webinar Library](#).

## Job listings

### Lab Informatics Data Application Developer

Company: [Agilent](#)

Location: [Wilmington DE](#)

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### Senior R&D Scientist, Cell Analysis Division

Company: [Agilent](#)

Location: [Lexington MA](#)

[Apply now](#)

### **R&D Group Leader (NGS/Reproductive Health Technologies)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Product Manager (PCR/OEM)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

[Apply now](#)

### **Electroporation Made Easy for Hard-to-Transfect Cells**

This white paper by Mirus Bio highlights the Ingenio EZporator Electroporation System, a cost-effective workhorse that addresses the issues researchers have with their hard-to-transfect cells while being mindful of budget.

Download it from GenomeWeb's [White Paper Channel](#).

### **Protein Purification with a Handheld Electronic Pipette**

In this whitepaper from Integra learn how an electronic multichannel pipette can automate protein purification using immobilized metal affinity chromatography (IMAC).

Download it from GenomeWeb's [White Paper Channel](#).

### **Automated Nucleic Acid Extraction and RT-PCR Setups for SARS-CoV-2 Testing**

This application note from Integra describes how a pipetting robot can be used for rapid implementation of COVID-19 testing and automation of sample preparation processes.

Download it from GenomeWeb's [White Paper Channel](#).

### **High-Throughput, 3D Assay Development on Spheroids in 1536 Well Plates**

In this whitepaper from Integra learn about an automated method for seeding, dosing, and assaying spheroids in 1536-well spheroid microplates.

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**SeqLL to Go Public in \$13M IPO**

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**Mount Sinai, Empire City Laboratories SARS-CoV-2 Tests  
Get FDA Emergency Use Authorizations**

Published on Aug 27, 2021

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**People in the News: New Appointments at Genomics  
England, Seven Bridges, Dante Labs, More**

Published on Aug 27, 2021

**Single-Cell Proteogenomic Reference Maps of the Hematopoietic  
System Enable Massive Profiling of Precisely Defined Cell States**

In this webinar, Sergio Triana of the European Molecular Biology Laboratory and Dominik Vonficht of the German Cancer Research Center will describe their latest work, where they generated high-content single-cell proteogenomic reference maps of human blood and bone marrow that quantitatively link the expression of up to 197 surface markers to cellular identities and biological processes across all major hematopoietic cell types in healthy aging and leukemia.

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## Featured in Depth

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### **Studies Show Benefits of Long-Read Sequencing in Toughest Rare Disease Cases**

Published on Aug 27, 2021

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### **Pandemic Accelerates Development of Informatics Tools for Viral Genome Analysis**

Published on Aug 26, 2021

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### **US Federal Trade Commission Begins Making the Case for Unwinding Illumina's Grail Purchase**

Published on Aug 25, 2021

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### **New Protein Reporters for Minlon Sequencer Point Toward Route for Single-Molecule Proteomics**

Published on Aug 20, 2021

### **Spatial Profiling of Lung Tissue from SARS-CoV-2-Positive Rapid Autopsies**

This on-demand webinar from ACD discusses a project at the Broad Institute to use spatial profiling to understand the disease progression of COVID-19.

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### **Osteoarthritis GWAS Leads to Key Genes, Treatment**

#### **Targets**

Published on Aug 26, 2021

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### **MDxHealth H1 2021 Revenues Up 9 Percent As Testing**

#### **Volumes Rebound**

Published on Aug 26, 2021

### **Single-Cell Genomic Data Portals and Analysis Tools**

This infographic from Qiagen describes how Qiagen Digital Insights solutions can be applied for single-cell genomic analysis, including single-cell RNA sequencing (scRNA-seq) for biomarker discovery, visualization of scRNA-seq data, cell type identification, oncogenomics, and single-cell pathway analysis.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Manufacturing Associate (Molecular Techniques)**

Company: [Codex DNA](#)

Location: [San Diego CA](#)

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### **HIRING: Data Brokers and Data Broker Supervisor at UC Santa Cruz**

Company: [Genomics Institute at UC Santa Cruz](#)

Location: [Santa Cruz CA](#)

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### **Marketing Coordinator**

Company: [Golden Helix Inc](#)

Location: [Bozeman MT](#)

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### **Production Associate I**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **Curated Omics Data Portals for Gene Signature, Biomarker, and Target Discovery**

This infographic from Qiagen describes how data in OmicSoft OncoLand, DiseaseLand, and Single Cell Land omics data portals are gathered, curated, annotated, and deployed to assist the discovery of gene signatures, biomarkers, and drug targets.

Download it from GenomeWeb's [White Paper Channel](#).

### **Verification of a Single-tube PCR/CE Kit for SMN1/2 Copy Number and Other Variants**

This poster from Asuragen describes the analytical performance of the AmpliX PCR/CE SMN1/2 Plus Kit, which evaluates exon 7 copy number of SMN1 and SMN2, and variant status of gene duplication and disease modifier markers.

Download it from GenomeWeb's [White Paper Channel](#).

### **Genome Conformation Offers an Enhanced View of the Regulatory Landscape**

This on-demand webinar from Dovetail Genomics explains the role of genome conformation in gene regulation and explains why topological interactions paint a more complete picture of gene regulation.

Download it from GenomeWeb's [Webinar Library](#).

### **NGS Dreamprep: Automated DNA Library Preparation and Quantification**

This application note highlights the benefits of automating DNA library preparation, quantification, normalization and pooling using Tecan's NGS reagent and automation solutions.

Download it from GenomeWeb's [White Paper Channel](#).

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Subject : Daily News: Skin Health Startup Sequential Skin Raises \$1.65M

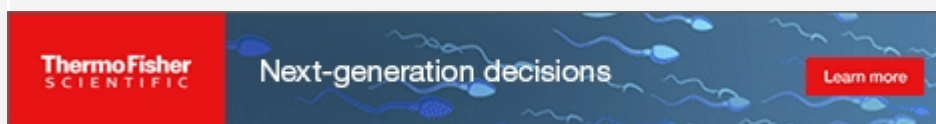
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BioGX Xfree test bypasses all upfront sample processing steps and extraction - just add water and direct sample to the PCR mix in order to enable high-throughput, Sample-to-Answer results on widely available real-time PCR platforms. The lyophilized Xfree test makes SARS CoV-2 testing

simpler, faster and inexpensive while providing high performance detection coverage for all known strains, including the Delta strain. *Simple Yet Superior.* [Learn more.](#)

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### **Genomic Vision Aims to Enable Biomarker Discovery With New Telomere Length Measuring Service**

Published on Oct 11, 2021

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### **Angle Readies for Clinical Testing as CTC Research Continues to Yield Biomarker Insights**

Published on Oct 07, 2021

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### **Wyss Institute Spinout Pluto Biosciences Bets on Collaborative Bioinformatics Platform**

Published on Oct 07, 2021

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### **Princess Margaret Researchers Improve HPV Detection in Blood With NGS Method**

Published on Oct 06, 2021

### **Emerging Methods to Minimize Off-Target Effects of Genome Editing: A Stakeholder Panel Discussion**

In this roundtable discussion, a panel of gene-editing experts will discuss the methods that are being developed to find, assess, and minimize the effects of off-target edits that result from CRISPR-based genome editing and base editing. Our panel will cover a range of topics, including reliable methods for quality control of those effects, what these off-target detection methods have revealed about genome editing, and how they could help CRISPR researchers perfect the technology and broaden its applicability.

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Published on Oct 08, 2021

### **Point-of-Care Testing to Enhance Infectious Disease Triage and Treatment**

**Dr. Glen Hansen** and **Dr. Matthew Faron** will discuss how rapid and accurate point-of-care (POC) testing systems have the potential to (i) enhance patient triage and treatment, (ii) mitigate the spread of infectious diseases by rapidly identifying infected individuals, (iii) speed up diagnostics when access to centralized labs is limited, and (iv) lower testing costs. [Register here.](#)

## Job listings

### **Genomics Manufacturing QC Engineer**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Assistant Director, Diversity and Research Readiness**

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)

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### **Bioinformatician (Protein Data Bank in Europe Team)**

Company: [EMBL EBI](#)

Location: [Cambridge](#)

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## **Lead Computational Biologist - Stockholm, Sweden**

Company: [10x Genomics](#)

Location: [Stockholm](#)

[Apply now](#)

### **Understanding Biological Mechanisms in Transcriptomics or Proteomics Datasets**

This whitepaper from Qiagen highlights how Analysis Match in IPA enables you to strengthen your hypotheses and discover new biological insights. Download it from GenomeWeb's [White Paper Channel](#).

### **Analyzing Complex Genomic Variants in Somatic Cancer**

In this on-demand webinar, PierianDx provides practical strategies for analyzing and classifying complex alterations, such as gene fusions, co-occurring variants, copy number variants, and tumor mutational burden, in the context of somatic cancer.

Download it from GenomeWeb's [Webinar Library](#)

### **Expanded Droplet Digital PCR Multiplexing Capability Using Two Different Strategies**

This whitepaper from Bio-Rad Laboratories describes how Droplet Digital PCR enables easy multiplexing via two approaches: amplitude-based multiplexing and probe-mixing multiplexing.

Download it from GenomeWeb's [White Paper Channel](#).

### **Automation of PCR Reaction Setup**

This technical note by Beckman Coulter guides users through the process of setting up a PCR reaction for 1 to 192 samples in 96-well plates with any combination of master mix, primers, and samples.

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**Sophia Genetics Files for \$100M IPO, Inks Cancer Data Deal With GE Healthcare**

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**Imputation of UK Biobank Data Uncovers Rare Coding Variants Linked to Range of Traits**

Published on Jul 06, 2021

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**Telo Genomics Raises \$2.1M in Private Placement**

Published on Jul 06, 2021

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**Hologic Upgraded to Outperform by Evercore ISI**

Published on Jul 06, 2021

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### **Evercore ISI Upgrades Waters to Outperform Based on Improved Fundamentals**

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### **ACT Genomics Acquires MC Diagnostics**

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### **Bio-Me Raises NOK 10M for Microbiome Precision Medicine**

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### **People in the News: New Appointments at Genetron Health, BioSkryb, Geisinger, More**

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### **FDA Grants EUAs for SARS-CoV-2 Tests, Kits From Exact Sciences, BioGx, Bio-Rad, Everlywell**

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### **New Products Posted to GenomeWeb: Labcorp, Qiagen, Thermo Fisher, GenomSys, More**

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### **Brief This Week: Foundation Medicine, Myriad Genetics, Genetron Health, and More**

Published on Jul 02, 2021

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**DNA 'Damagenome' May Provide Disease Clues, Study Suggests**

Published on Jul 02, 2021

**Utility of ctDNA-Based Liquid Biopsy Testing in the Detection of Molecular Residual Disease and Recurrence in Patients with Early-Stage Non-Small Cell Lung Cancer**

This webinar will discuss expert insights and summarize recent findings on how ctDNA testing can be applied to detect molecular residual disease (MRD) and early risk of relapse ahead of standard-of-care imaging surveillance.

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**Concert Genetics New Test ID Tool Works to Improve Reimbursement Process**

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**MIT-Led Team Develops Genomics Platform to Support Heart Disease Treatment Decisions**

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**Geisinger Trial to Evaluate Chatbot to Boost Cascade Testing in Familial Hypercholesterolemia**

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**Clear Labs Develops SARS-CoV-2 Variant Monitoring Engine Using Rapid Sequencing Workflow**

Published on Jul 02, 2021

## **Viral Pathogenesis Research: Molecular Detection with RNA ISH**

In this on-demand webinar ACD demonstrates how RNA in situ hybridization offers molecular detection coupled with morphological context to enable visualization of viruses, such as SARS-CoV-2, in infected tissues and cell types.

Download it from GenomeWeb's [Webinar Library](#)

### Recommended for You

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#### **Caribou Biosciences Files for \$100M IPO**

Published on Jul 02, 2021

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#### **Shoreline Biome Strikes Nordic Distribution Deal with AH Diagnostics**

Published on Jul 02, 2021

## **Automation of PCR Reaction Setup**

This technical note by Beckman Coulter guides users through the process of setting up a PCR reaction for 1 to 192 samples in 96-well plates with any combination of master mix, primers, and samples.

>Download it from GenomeWeb's [White Paper Channel](#).

### Job listings

#### **Associate Vice President, Business HR, LSSM**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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#### **Bioinformatician (Protein Data Bank in Europe Team)**

Company: [EMBL EBI](#)

Location: [Cambridge](#)

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## Director, Precision Oncology

Company: [Harold C. Simmons Comprehensive Cancer Center](#)

Location: [Dallas TX](#)

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## Research Associate / Senior Research Associate, Molecular Biology

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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## Comparison of Splice Site Finder Algorithms

This whitepaper presents a performance comparison of Congenica Splice Site Finder (CSSF), an algorithm that determines the splicing functionality of a given DNA sequence, against an older algorithm, SSFL.

Download it from GenomeWeb's [White Paper Channel](#).

## Genomic Surveillance of SARS-CoV-2 Strains in the Greater NYC Area

This review from Tecan describes a study on the early transmission of COVID-19 in the New York area and how researchers used the Trio RNA-Seq library preparation kit to identify the major circulating strains.

Download it from GenomeWeb's [White Paper Channel](#)

## NGS-based Reference Materials for Fusion and Somatic Variant Detection in Myeloid Cancers

Download this poster from SeraCare to learn how they characterized NGS-based reference materials for fusion and somatic variant detection in myeloid cancers.

Download it from GenomeWeb's [White Paper Channel](#).

## Reference Materials for Measurable Residual Disease (MRD) Monitoring

Download this poster to learn how SeraCare characterized its reference materials for measurable residual disease monitoring.

Download it from GenomeWeb's [White Paper Channel](#)

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Date : 7/15/2021 11:03:39 AM

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Subject : Daily News: Takeda Pharmaceutical, Rady Children's Partner on Rare Genetic Disease Drug Development

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### **IL-2: A Cytokine with Immunostimulatory and Immunoregulatory Functions**

The IL-2/IL-2R pathway is an important target for the treatment of various diseases, including cancer, infectious diseases, and autoimmune diseases. Sino Biological has developed a panel of IL-2/IL-2R recombinant proteins for studying IL-2 biology.

[Click here for more information](#)

## Breaking News

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### **Takeda Pharmaceutical, Rady Children's Partner on Rare Genetic Disease Drug Development**

Published on Jul 15, 2021

## FROM THE SPONSOR:

**ChromaCode HDPCR™ SARS-CoV-2 Assay Direct Workflow.**  
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Leveraging our XPRIZE winning, variant inclusive assay, but now with a faster workflow.

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\*Validation of Direct Workflow for HDPCR SARS-CoV-2 Assay has not been reviewed by FDA. Review under the EUA program is pending

## Featured in Depth

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**Geneoscopy Enrolls Patients in Pivotal Trial for Colorectal Cancer Dx Approval**

Published on Jul 14, 2021

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**Sci-Space Method Ties Single-Cell Gene Expression Differences to Spatial Context**

Published on Jul 14, 2021

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**Genedrive Expects CE-IVD Mark for POC SARS-CoV-2 Test by Fall; Advances Hearing Loss, HCV Assays**

Published on Jul 13, 2021

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**Standard Molecular Looks to Streamline NGS Test Ordering for Community Oncologists**

Published on Jul 12, 2021

### **NGS Variant Annotation, Filtering and Triage for a Whole-Exome Sequencing Workflow**

This whitepaper by Qiagen reviews an affordable and efficient approach for translational cancer research, allowing the detection of rare gene variations and helping to discover new cancer biomarkers.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### **Cardiomyopathy Genetic Testing in Minors Has No Ill Effect on Family Dynamics, Study Finds**

Published on Jul 14, 2021

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### **Children's National Licenses Pediatric Genetic Disease Screening Tech to MGeneRx**

Published on Jul 14, 2021

### **Visualize KRAS Point Mutations Using In Situ Hybridization**

This scientific poster from ACD highlights the benefits of visualizing KRAS point mutations in non-small cell lung cancer tumors using the BaseScope in situ hybridization assay.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Field Application Scientist**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Senior Scientist, Biochemical Assay, Polymerase**

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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### **Commercial Lead**

Company: [Hyrax Biosciences](#)

Location: [Cape Town](#)

[Apply now](#)

## Research Specialist - Kingsley Lab

Company: [Howard Hughes Medical Institute \(HHMI\)](#)

Location: [Stanford CA](#)

[Apply now](#)

## Using Parallel Evaporators to Escalate COVID-19 Test Kit Preparation

Download this White Paper from SP Industries to learn how SP Genevac supported laboratories around the world to scale up their production of PCR test kits to aid the global fight against the COVID-19 virus.

Download it from GenomeWeb's [White Paper Channel](#).

## B Cell Isolation for Single Cell Genomics

In this application note, the Namo Single Cell dispenser was used to isolate single activated B cells. Gene expression was quantified for both resting and activated B cells to identify transcriptional changes associated with the activated cell state.

Download it from GenomeWeb's [White Paper Channel](#).

## Spatial Profiling of Lung Tissue from SARS-CoV-2-Positive Rapid Autopsies

This on-demand webinar from ACD discusses a project at the Broad Institute to use spatial profiling to understand the disease progression of COVID-19.

Download it from GenomeWeb's [Webinar Library](#)

## Pipette Calibration and Operator Competency Assessment Using a Dual-Dye Ratiometric Photometry System

This whitepaper describes how the Artel Pipette Calibration System (PCS) helps maintain an audit-ready state of pipette calibration and operator training documentation, and increases confidence in the laboratory's data integrity.

Download it from GenomeWeb's [White Paper Channel](#).

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Date : 8/17/2021 4:25:11 PM

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Subject : Daily News: Tempus Submits PMA Application for Tumor Profiling Assay to FDA

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# Daily News

The Latest Headlines From The GenomeWeb Newsroom

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## FROM THE SPONSOR:

### Seven years of compute time in seven days with AWS

Fred Hutch Microbiome Research Initiative uses AWS to power the HPC platform used to analyze the gigabytes of genomic microbiome data they work with each day. The scalability of AWS allowed them to perform 7 years' worth of compute time in 7 days, getting insights for patient care faster.

[Learn more about how HPC on AWS can save time and money in complex scientific research workloads](#)

## Breaking News

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### Tempus Submits PMA Application for Tumor Profiling Assay to FDA

Published on Aug 17, 2021

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### Piper Sandler Initiates Coverage of Cytex Biosciences With Overweight Rating

Published on Aug 17, 2021

## FROM THE SPONSOR:

### **Prevent off targets when performing genome editing**

Create cell models confidently with low off-target effects

Looking for robust, high-quality CRISPR reagents with reduced off-target effects for a range of cell types? The new Invitrogen™ TrueCut™ HiFi Cas9 protein is designed to enhance gene-editing specificity and efficiency in a variety of cell types.

[Sign up here to get access to the new Invitrogen HiFi Cas9 protein from Thermo Fisher Scientific](#)

## Featured in Depth

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### **\$60M Wellcome Leap R3 Program to Support Network of RNA-Based Biofoundries**

Published on Aug 16, 2021

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### **908 Devices Plans to Target Proteomics Market With Capillary Electrophoresis Separation Tech**

Published on Aug 13, 2021

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### **Norway's Genetic Analysis Hopes HumGut Database Will Spawn New Diagnostics, Therapies**

Published on Aug 12, 2021

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### **Despite MDx Product Delays, Talis Biomedical Expecting 'Meaningful Revenue Ramp in 2022'**

Published on Aug 11, 2021

### **A Comprehensive Set of Bioinformatics Tools to Scale Data Analyses**

This eBook from Qiagen describes applications for Qiagen CLC Genomics, a set of scalable bioinformatics tools for genomic, transcriptomic, and



epigenomic analysis with both single-user desktop and network options, as well as enterprise-wide server and cloud solutions.  
Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### **ERS Genomics Licenses CRISPR-Cas9 Portfolio to Cellular Engineering Technologies**

Published on Aug 17, 2021

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### **Amoy Diagnostics CDx Gets Japanese Approval to ID NSCLC Patients Eligible for Tepmetko**

Published on Aug 17, 2021

## **Verifying Protein Purity and Concentration Throughout Structural Biology Workflows**

This whitepaper from Thermo Fisher Scientific describes how to integrate NanoDrop spectrophotometers into NMR, XRC, and cryo-EM workflows to verify that protein samples remain pure and concentrated throughout structural biology processes.

Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### **Field Application Scientist**

Company: [Golden Helix](#)

Location: [Bozeman MT](#)

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### **Postdoc in Mobile Health Data Science**

Company: [Stanford](#)

Location: [Stanford CA](#)

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## **Manufacturing Technician - Microarrays**

Company: [Invitae](#)

Location: [San Francisco CA](#)

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## **Lead Development Representative I**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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### **An RNA-seq Method with Customizable Host Transcript Depletion for Viral Detection in Clinical Samples**

This poster from Tecan presents data demonstrating the detection of viruses in clinically relevant samples using the Trio RNA-Seq workflow, a hypothesis-free RNA-seq method for NGS library construction that includes customizable depletion of abundant or uninformative host transcripts to reduce the number of reads needed for viral detection.

Download it from GenomeWeb's [White Paper Channel](#).

### **Deep Understanding of Cell and Gene Therapy Genome Editing Protocols Enabled with Single-cell Sequencing**

Download this whitepaper from Mission Bio to learn how single-cell sequencing can help reduce the time and cost for cell and gene therapies to go to market.

Download it from GenomeWeb's [White Paper Channel](#).

### **An RNA-seq Method with Customizable Host Transcript Depletion for Viral Detection in Clinical Samples**

This poster from Tecan presents data demonstrating the detection of viruses in clinically relevant samples using the Trio RNA-Seq workflow, a hypothesis-free RNA-seq method for NGS library construction that includes customizable depletion of abundant or uninformative host transcripts to reduce the number of reads needed for viral detection.

Download it from GenomeWeb's [White Paper Channel](#).

### **Advancing Personalized Oncology with Transcriptomic Profiling and Mechanistic Modeling**

In this on-demand GenomeWebinar sponsored by Qiagen, Moritz Schütte, head of next-generation sequencing data analysis at Alacris, explores the advantages of RNA sequencing alone or in combination with whole-exome sequencing as part of a precision oncology workflow

and how mathematical modeling of molecular data can predict drug sensitivity.

Download it from GenomeWeb's [Webinar Library](#).

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Date : 10/5/2021 11:03:44 AM

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COMING SOON...  
**KAPA HyperPETE**  
(Primer Extension Target Enrichment)

Combine the **performance** of hybrid capture with the **ease of use** and **TAT** of amplicon workflows.

\*Product In Development, Not for Sale in the US



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**Tesis Labs Raises \$20M in Growth Equity Financing Round**

Published on Oct 05, 2021

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**Genetic Analysis Raises \$6.8M in Oversubscribed IPO**

Published on Oct 05, 2021

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**BARDA Exercises \$6.4M Option on T2 Biosystems Contract**

Published on Oct 04, 2021

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**Takara Bio Gets CE-IVD Mark for SARS-CoV-2 Test**

Published on Oct 05, 2021

## FROM THE SPONSOR:

### **A Breakthrough Direct Sample, FDA-EUA COVID-19 RT-PCR with Robust Strain Coverage**

BioGX Xfree test bypasses all upfront sample processing steps and extraction - just add water and direct sample to the PCR mix in order to enable high-throughput, Sample-to-Answer results on widely available real-time PCR platforms. The lyophilized Xfree test makes SARS CoV-2 testing simpler, faster and inexpensive while providing high performance detection coverage for all known strains, including the Delta strain. *Simple Yet Superior.* [Learn more.](#)

## Featured in Depth

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### **Thermo Fisher Scientific Charts Digital PCR Expansion After Combinati Acquisition**

Published on Oct 04, 2021

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### **IVBH Bio Takes Aim at 'High-Impact' Diseases With RNA-Based Liquid Biopsy Incubator**

Published on Oct 04, 2021

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### **STIs Reached Record Highs, Then COVID-19 Hit. Test Makers Now Ponder What's Next**

Published on Oct 04, 2021

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### **Pancreatic Cancer Data Preview Freenome's Plans for Expanded Cancer Detection Assay**

Published on Sep 30, 2021

### **Leiomyosarcoma Mutational and Transcriptomic Signatures in a Patient with Exceptional Survival**

In this on-demand GenomeWebinar sponsored by Qiagen, speakers present findings from whole-exome sequencing of tumors from a

treatment-naïve patient with aggressive metastatic uterine leiomyosarcoma and multiple metastases who has experienced survival for more than seven years without therapy except for surgery.  
Download it from GenomeWeb's [Webinar Library](#).

## Recommended for You

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### **Top Five Articles on GenomeWeb Last Week: Illumina, CareDx, Oxford Nanopore, and More**

Published on Oct 04, 2021

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### **Mawi DNA Technologies Inks Japanese Distribution Deal With Fujifilm**

Published on Oct 04, 2021

## **Digital PCR Principles and Advantages**

This video from Stilla describes the principles behind digital PCR and the technology's advantages over traditional bulk qPCR, focusing on liquid biopsy to detect tumor-derived DNA as an example.

Download it from GenomeWeb's [Webinar Library](#).

## Job listings

### **Bioinformatician (European Variation Archive Team)**

Company: [EMBL EBI](#)

Location: [Cambridge](#)

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### **Mechanical Engineer [RDR111 Eng (DB)]**

Company: [Inscripta, Inc.](#)

Location: [Boulder CO](#)

[Apply now](#)

### **Research Technician I: Wigler Lab**

Company: [Cold Spring Harbor Laboratory](#)

Location: [Cold Spring Harbor NY](#)

[Apply now](#)

## Senior Scientist II

Company: [Talis Biomedical](#)

Location: [Menlo Park CA](#)

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### Troubleshooting Automated Assays

This reference poster from Artel describes how to troubleshoot problems with automated assays, including how to inspect laboratory instruments, consumables, reagents, and other factors that may be causing issues in data.

Download it from GenomeWeb's [White Paper Channel](#).

### Get Higher Yield and Higher Quality DNA from FFPE Samples

This white paper reviews a series of experiments conducted with the Purigen Ionic Purification System to demonstrate an automated application of isotachophoresis and improvements to workflow, nucleic acid yield, and nucleic acid quality in comparison to conventional methods with data from qPCR-based assays and next-generation sequencing.

Download it from GenomeWeb's [White Paper Channel](#)

### High-throughput qPCR and RT-qPCR Workflows Enabled by Acoustic Liquid Handling

This application note by Beckman Coulter outlines the benefits of automated reaction setup for high-throughput qPCR applications using the Echo 525 acoustic liquid handler.

Download it from GenomeWeb's [White Paper Channel](#).

### Detect Small Regulatory RNAs with Spatial & Morphological Context

This scientific poster by ACD presents miRNAscope, a novel in situ hybridization technology for the detection of small regulatory RNAs with spatial and morphological context.

Download it from GenomeWeb's [White Paper Channel](#).

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Date : 10/7/2021 11:19:26 AM

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Subject : Daily News: Thermo Fisher Scientific Prices €5.25B Notes Offering

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### Selectins: Regulators in the Immune System and Tumor Microenvironment

Selectins are involved in constitutive lymphocyte homing, chronic and acute inflammation, and cancer metastasis. They are hot targets for developing therapeutics to treat sickle cell disease, malignancies, etc. Sino Biological has developed a panel of high-activity selectin and ligand proteins.

[Click here for more information](#)

## Breaking News

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### Thermo Fisher Scientific Prices €5.25B Notes Offering

Published on Oct 07, 2021

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### FDA Issues Emergency Use Authorization for PerkinElmer COVID-19/Flu Test

Published on Oct 07, 2021

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**Caris Life Sciences, Essa Pharma Ink Liquid Biopsy  
Partnership for Prostate Cancer Trial**

Published on Oct 07, 2021

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**Genoox, Aspira Women's Health Partner to Develop New  
MDx Technologies**

Published on Oct 07, 2021

**FROM THE SPONSOR:**

**Achieve breakthrough research faster to bring lifesaving products to market**

At the intersection of innovative technologies and evolving genomic applications, organizations build on AWS to overcome business challenges and put the focus back on the science. Learn more about how genomics companies use AWS to reduce costs, ensure scalability, and fuel new discoveries. [Download content](#)

**Featured in Depth**

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**Princess Margaret Researchers Improve HPV Detection in  
Blood With NGS Method**

Published on Oct 06, 2021

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**Colossal Begins Ambitious De-Extinction Plan With  
Elephant Sequencing Project, Despite Critics**

Published on Oct 06, 2021

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**Thermo Fisher Scientific Charts Digital PCR Expansion  
After Combinati Acquisition**

Published on Oct 04, 2021

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## **IVBH Bio Takes Aim at 'High-Impact' Diseases With RNA-Based Liquid Biopsy Incubator**

Published on Oct 04, 2021

### **Selected Cancer Research Publications Using Spatial Analysis From 2020**

This blog post from NanoString highlights selected cancer research publications from 2020 that used spatial analysis to make discoveries about the tumor microenvironment, immune response, and predicting treatment response.

Download it from GenomeWeb's [White Paper Channel](#).

### Recommended for You

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## **Synthego Preemptively Sues Agilent Technologies to Ward Off CRISPR Patent Infringement Allegations**

Published on Oct 06, 2021

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## **NIH Awards \$38.5M to Fund Developmental Genotype-Tissue Expression Project**

Published on Oct 06, 2021

### **Advancing Personalized Oncology with Transcriptomic Profiling and Mechanistic Modeling**

In this on-demand GenomeWebinar sponsored by Qiagen, Moritz Schütte, head of next-generation sequencing data analysis at Alacris, explores the advantages of RNA sequencing alone or in combination with whole-exome sequencing as part of a precision oncology workflow and how mathematical modeling of molecular data can predict drug sensitivity.

Download it from GenomeWeb's [Webinar Library](#).

### Job listings

## **Software Engineer, Software Integration and DevOps**

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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### **R&D Group Leader, Bioinformatics (DNA-Seq)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

[Apply now](#)

### **Bioinformatics Developer**

Company: [EMBL EBI](#)

Location: [Cambridge](#)

[Apply now](#)

### **Scientist (NGS Automation)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

[Apply now](#)

### **SARS-CoV-2 Detection and Characterization in Nasal Swab Samples With RNA-Seq**

This application note from Tecan describes the effective use of the Revelo RNA-Seq library preparation kit to convert low quality, degraded nasal swab samples of patients with COVID-19 to high quality libraries to accurately identify SARS-CoV-2 even at low copy numbers.

Download it from GenomeWeb's [White Paper Channel](#).

### **Preclinical CAR-T Cell Target Safety, Biodistribution, and Tumor Infiltration Analysis**

In this report, ACD illustrates a way to detect activated CAR-T cells in the tissue context, as well as low expression of CAR target antigen, using the RNAscope in situ hybridization technology.

Download it from GenomeWeb's [White Paper Channel](#).

### **Visualize Gene Expression and Splice Junctions at the Single-Cell Level Using the RNAscope and BaseScope In Situ Hybridization Assays**

In this application note, ACD highlights the RNAscope in situ hybridization ISH assay capable of highly sensitive and specific gene expression visualization within the nervous system.

Download it from GenomeWeb's [White Paper Channel](#).

### **Publications Utilizing the RNAscope Assay to Validate and Spatially Map Single-Cell RNA-Seq Results in the Tissue**

This application note from ACD references a list of researchers that are publishing in prominent journals using RNAscope assays to spatially map scRNA-Seq results.

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To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: Twist Bioscience, SomaLogic Partner on Antibodies, Target Discovery

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## Breaking News

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**Twist Bioscience, SomaLogic Partner on Antibodies, Target Discovery**

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**Agilent Technologies Q3 Revenues Rise 26 Percent**

Published on Aug 17, 2021

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**Seegene Q2 Revenues up 11 Percent**

Published on Aug 18, 2021

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**Kwokman Dx Gets FDA EUA for SARS-CoV-2 Molecular Testing Sample Collection Kit**

Published on Aug 18, 2021

## FROM THE SPONSOR:

### Reduce Hands-on Time up to 50%

HDPCR™ SARS-CoV-2 Assay Direct Workflow\*\* by ChromaCode  
The HDPCR SARS-CoV-2 Direct Workflow reduces hands-on time up to 50% by eliminating multiple manual steps and avoiding potential errors. Using your existing qPCR instrument, save labor and reduce errors with the ChromaCode COVID-19 test.

[Reassess your existing COVID-19 test today](#)

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### Datar Cancer Genetics Expands Business from Treatment Monitoring to Dx and Screening

Published on Aug 18, 2021

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### Ischemia Care Launches Gene Signature LDT to Detect and Differentiate Stroke

Published on Aug 17, 2021

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### \$60M Wellcome Leap R3 Program to Support Network of RNA-Based Biofoundries

Published on Aug 16, 2021

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### 908 Devices Plans to Target Proteomics Market With Capillary Electrophoresis Separation Tech

Published on Aug 13, 2021

## Transcriptomic Analyses of In Vitro Flavivirus- or Coronavirus-infected Cell Lines

In this webinar from Qiagen learn about transcriptomic analyses of in vitro flavivirus- or coronavirus-infected cell lines.

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## Recommended for You

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### **Piper Sandler Initiates Coverage of Cytex Biosciences With Overweight Rating**

Published on Aug 17, 2021

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### **Tempus Submits PMA Application for Tumor Profiling Assay to FDA**

Published on Aug 17, 2021

## **How to Qualify an Enzyme Supplier for Commercial Molecular Assays**

This on-demand webinar from Qiagen discusses the challenges molecular assay manufacturers face when deciding to purchase enzymes in bulk from an OEM supplier, how to qualify a supplier for a long-term partnership, and considerations such as development capabilities, customization, confidentiality, quality, scaling, and consistency.

Download it from GenomeWeb's [Webinar Library](#).

## Job listings

### **Director of Mass Spectrometry Marketing**

Company: [Agilent Technologies](#)

Location: [Santa Clara CA](#)

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### **Field Application Scientist**

Company: [Golden Helix](#)

Location: [Bozeman MT](#)

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## Lead Development Representative I

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## Designing and Optimizing High Multiplexing Digital PCR Assays

This on-demand webinar from Stilla discusses considerations for designing and optimizing digital PCR assays to maximize the potential of PCR instruments and presents data on SNP detection in liquid biopsy samples obtained using the Naica dPCR instrument.

Download it from GenomeWeb's [Webinar Library](#).

## Launching a Cloud-Based Genomics Research Environment to Fuel SARS-CoV-2 Vaccine, Treatment, and Early-Detection Research

This whitepaper from Amazon Web Services describes how Lifebit Biotech Ltd. launched a research environment to study COVID-19 for Genomics England in under three months.

Download it from GenomeWeb's [White Paper Channel](#).

## Measuring the Biodistribution of Gene Therapy Products

In this report ACD demonstrates the use of the RNAscope assay to measure the biodistribution of gene therapy products at single-cell resolution in target and non-target tissues.

Download it from GenomeWeb's [White Paper Channel](#).

## Linking Sequence Variation to Chromatin Dynamics through Genome Topology

This on-demand webinar from Dovetail Genomics explains why integrating conformation data with genotyping data can provide a more complete view of variants.

Download it from GenomeWeb's [Webinar Library](#).

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Date : 10/15/2021 11:08:34 AM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: UK Government Suspends SARS-CoV-2 PCR Testing at Laboratory Due to Potential Erroneous Results

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Deploy a Purpose-Built Dx LIMS for Lower Total Cost of Ownership  
Clinical and molecular diagnostics labs using a technologically advanced purpose-built LIMS can, purely through configuration, manage requests from intake through reporting, seamlessly deliver accurate results to physicians, comply with regulations, and more. [Find out how in this white paper.](#)

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### UK Government Suspends SARS-CoV-2 PCR Testing at Laboratory Due to Potential Erroneous Results

Published on Oct 15, 2021

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### FDA Classifies Abbott SARS-CoV-2 Molecular Test Recall as Class I Due to False Positives

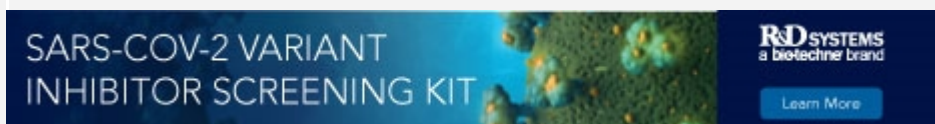
Published on Oct 14, 2021

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## **RADx Issues \$77.7M in New Contracts for SARS-CoV-2**

### **Rapid Diagnostic Tests**

Published on Oct 14, 2021



## **Featured in Depth**

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## **IsoPlexis Using IPO Funds to Support Move Into**

### **Transcriptomics, Metabolomics**

Published on Oct 15, 2021

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## **Immunis.AI Validates Cancer Risk Assessment Platform**

### **With Prostate Cancer Early Detection Data**

Published on Oct 14, 2021

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## **MiRxes to Expand miRNA Assay Technology to Multiple**

### **Cancer Types, Other Disease Areas**

Published on Oct 13, 2021

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## **Seegene to Enter Sample-to-Answer MDx Space With**

### **Modular, 'Walkaway' System**

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## **Advances in Immunology With Single-Cell and Spatial Multiomics**

This eBook from 10x Genomics examines how immunologists are using single-cell and spatial multiomics to study infectious diseases, vaccine and therapeutic development, immuno-oncology, autoimmunity, allergies and inflammation, and transplantation autoimmunity to build a more detailed

map of the cellular and molecular signatures of immune cells in health and disease.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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### **Imec, MiDiagnostics Ink Licensing Agreement To Commercialize COVID-19 Breathalyzer**

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### **Computomics Sells Minority Stakes to BASF Venture Capital, Amathaon Capital**

Published on Oct 14, 2021

## **High-Plex Spatial Analysis of Tissue Microenvironments**

This on-demand webinar from Nanostring reviews a whole-transcriptome spatial profiling application designed for RNA expression profiling of more than 18,000 genes in human and more than 21,000 genes in mouse.

Download it from GenomeWeb's [Webinar Library](#).

## Job listings

### **NeuroAI Summer Intern**

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Location: [Cold Spg Hbr NY](#)

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### **Sr Scientist, Surface Chemistry**

Company: [Omniome \(Pacific Biosciences\)](#)

Location: [San Diego CA](#)

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## **Strategic Marketing Director**

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### **Improving the Diagnostic Path of Complex Neurological Disorders**

This application note from Qiagen summarizes using Human Gene Mutation Database (HGMD) Professional, a manually curated resource for finding disease-causing mutations, to improve diagnosis of complex neurological disorders including Alzheimer's and Parkinson's disease. Download it from GenomeWeb's [White Paper Channel](#).

### **miRNAscope: Detect Small Regulatory RNAs with Spatial and Morphological Context**

This poster from ACD, describes the miRNAscope in situ hybridization assay, which detects small RNA species with unparalleled detection sensitivity and specificity, enabling morphological information with single-cell resolution.

Download it from GenomeWeb's [White Paper Channel](#)

### **Tech Note: RNAscope or BaseScope RED Assay Combined with Immunohistochemistry**

This technical note from ACD provides guidelines for performing in situ hybridization using the RNAscope 2.5 HD Detection Kit RED or the BaseScope Detection Reagent Kit v2 RED with immunohistochemistry on FFPE tissue sections.

Download it from GenomeWeb's [White Paper Channel](#)

### **Tech Note: RNAscope Multiplex Fluorescent v2 Assay Combined with Immunofluorescence**

This technical note from ACD provides guidelines for performing in situ hybridization using an RNAscope Multiplex Fluorescent Reagent Kit v2 combined with immunofluorescence on FFPE tissue sections.

Download it from GenomeWeb's [White Paper Channel](#)

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Date : 7/16/2021 4:11:53 PM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: Unique Fraction of Modern Human Genome Surprisingly Small, Comparison With Archaic Hominins Suggests

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### **Seraseq ctDNA MRD Reference Standard – An Industry-First**

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**People in the News: New Appointments at Castle Biosciences, Oxford Nanopore, PGDx, More**

Published on Jul 16, 2021



## **Development of Matched Maternal-Fetal NIPT Reference Materials Compatible with a Broad Range of Assay Methods**

Download this poster from SeraCare to learn how to assure quality of NIPT tests and concordance of test results between various platforms.

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### **Featured in Depth**

#### **[Icon to click to save item to your GenomeWeb reading list.](#) BGI Sees Rapid Growth of US Proteomics Business**

Published on Jul 16, 2021

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#### **[Icon to click to save item to your GenomeWeb reading list.](#) Sci-Space Method Ties Single-Cell Gene Expression Differences to Spatial Context**

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#### **[Icon to click to save item to your GenomeWeb reading list.](#) Genedrive Expects CE-IVD Mark for POC SARS-CoV-2 Test by Fall; Advances Hearing Loss, HCV Assays**

Published on Jul 13, 2021

## **Shortened Hybridization Times Using Mechanical Fragmentation**

This white paper from Roche describes an accelerated workflow for hybridization-based target-enriched next-generation sequencing that yields high-quality whole-exome sequencing data with hybridization times as short as 1 hour.

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## Unique Parts of Modern Human Genome Surprisingly Small, Comparison With Archaic Hominins Suggests

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## FDA Approves Foundation Medicine's Liquid Biopsy Test as CDx for Novartis' Tavegyl in NSCLC

Published on Jul 16, 2021

### Approaches to Optimizing Samples for RNA Sequencing

This whitepaper from Sony highlights the important role of single-cell isolation methods for scRNA sequencing of complex biological samples. Download it from GenomeWeb's [White Paper Channel](#).

## Job listings

### Computational Biologist, Software Development

Company: [Canada's Michael Smith Genome Sciences Centre](#)

Location: [Vancouver BC](#)

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### Postdoctoral Fellow - ProID Project - Goldman Research

Company: [EMBL EBI](#)

Location: [Cambridge](#)

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### Staff Optical Systems Engineer

Company: [Thermo Fisher Scientific](#)

Location: [South San Francisco CA](#)

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### Assistant, Associate or Full Project Scientist - Multiple Myeloma

Company: [University of California San Diego](#)

Location: [La Jolla CA](#)

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### **High Quality Products + Lower Lifetime Costs = Eppendorf OEM**

Download this whitepaper from Eppendorf to learn how an OEM (original equipment manufacturer) custom solution can overcome the limitations of existing instrument and consumables designs and make new assays and analyses possible.

Download it from GenomeWeb's [White Paper Channel](#)

### **Life Sciences & Biotechnology Labeling Dilemmas**

In this case study from Tailored Label learn how challenges are met associated with sample container tracking: sizing, legibility, durability, and increased information requirements.

Download it from GenomeWeb's [White Paper Channel](#).

### **Five Questions to Consider for Variable Print**

This white paper from Tailored Label details five questions to consider when either launching or advancing your variable print initiatives for product identification.

Download it from GenomeWeb's [White Paper Channel](#).

### **Expand Bulk Sequencing Analysis with BioLegend and Illumina**

Download this application note from BioLegend to learn more about the utility of bulk epitope and nucleic acid sequencing (BEN-seq) and see how the technique was used to detect 280 proteins and measure the Th1 response on both unstimulated and stimulated cells.

Download it from GenomeWeb's [White Paper Channel](#).

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Date : 8/25/2021 4:15:28 PM

From : "GenomeWeb" newsletters@genomeweb.com

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Subject : Daily News: US Federal Trade Commission Begins Making the Case for Unwinding Illumina's Grail Purchase

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### Endometriosis Treatment Target Proposed From Genetic Analysis

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### Genome of Ancient Hunter-Gatherer Offers Look at Modern Human, Denisovan Population Dynamics

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### Genetic Analyses Trace How Mutations Accumulate in Cells of the Human Body Over Time

Published on Aug 25, 2021

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## **Getting Started in Spatial Biology: What You Need to Know**

There is a range of technologies that provide spatial resolution for expressed genes or proteins and allow scientists to look at even the best-characterized biological mechanisms with fresh eyes. [Read more.](#)

### **Featured in Depth**

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#### **US Federal Trade Commission Begins Making the Case for Unwinding Illumina's Grail Purchase**

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#### **Illumina's 'Maverick' Move Secures Grail Deal But Risks Loom**

Published on Aug 19, 2021

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#### **Investigators See Future for NanoVelcro Cell Technology in Diagnosis of Pregnancy Complications**

Published on Aug 19, 2021

### **Experience with SARS-CoV-2 (COVID-19) Assay Validation**

In this 20 minute eCase Study from SeraCare you will hear first-hand how Dr. Jeff SoRelle and his team at the University of Texas Southwestern Medical Center developed and validated a COVID-19 RT PCR assay. Download it from GenomeWeb's [eCase Study Videos](#)

## Recommended for You

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### **AccessDx Acquires 2bPrecise From Allscripts**

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### **FDA Approves BD High-Throughput Cor System, HPV Screening Assay**

Published on Aug 25, 2021

## **Next-Gen Multimodal Spatial Analytical Methods for Understanding Tissue Responses to Infection and Cancer**

In this webinar, Sizun Jiang, Principal Investigator at Beth Israel Deaconess Medical Center, will discuss recent work on spatial methodologies and frameworks broadly applicable to deciphering tissue responses to various malignancies, including infectious diseases and tumor biology.

[Register Here](#)

## Job listings

### **Product Manager - Real Time Cell Analysis**

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### **Sr Staff / Staff FPGA Electrical Engineer**

Company: [Pacific Biosciences](#)

Location: [Menlo Park CA](#)

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### **Staff Scientist, Molecular Biology**

Company: [Thermo Fisher Scientific](#)

Location: [South San Francisco CA](#)

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## **Territory Manager II (Peninsula)**

Company: [Takara Bio USA, Inc.](#)

Location: [San Jose CA](#)

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## **Germline Insights from NGS Somatic Testing: Clinical Challenges and Controversies**

This GenomeWeb report is based on a virtual roundtable that discussed challenges, opportunities, and controversies related to informing clinicians, cancer patients, and their families of potential germline insights after receiving somatic testing.

Download it from GenomeWeb's [White Paper Channel](#).

## **How to Start COVID-19 Testing In Your Lab**

This guide from Zymo Research outlines the key aspects that a lab should consider before starting COVID-19 testing.

Download it from GenomeWeb's [White Paper Channel](#).

## **SARS-CoV-2 Sequencing: A GenomeWeb eCase Study Transcript**

This transcript is a companion piece for a GenomeWeb eCase Study in which Heather Fehling and Rob Grbac of Clinical Reference Laboratory discussed how their lab quickly developed a PCR-based COVID-19 saliva test and optimized their processes with the help of Artel's MVS technology.

Download it from GenomeWeb's [White Paper Channel](#).

## **Automated Preparation and LC-MS/MS Analysis of Methylmalonic Acid in Serum**

This application note from Waters Corporation demonstrates the automated extraction of methylmalonic acid from serum for analysis by liquid chromatography-tandem mass spectrometry, employing the Ostro Plate for protein precipitation and phospholipid removal on the Andrew+ Pipetting Robot.

Download it from GenomeWeb's [White Paper Channel](#).

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Date : 7/16/2021 11:02:49 AM

From : "GenomeWeb" newsletters@genomeweb.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Daily News: US House Appropriations Committee Seeks 15 Percent NIH Funding Increase for Fiscal 2022

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Published on Jul 16, 2021

### Hemoglobin Removal: A Range of Depletion Strategies and Their Successful Uses

This white paper describes Biotech Support Group products for hemoglobin removal in a variety of separation strategies and formats. Sample types include erythrocyte lysates, hemolyzed serum, whole blood, and dried blood cards.

Download it from GenomeWeb's [White Paper Channel.](#)

## Featured in Depth

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Published on Jul 12, 2021

### Methods and Challenges of Variant Annotation in Hereditary Cancer

In this whitepaper from Qiagen learn how identification of mutation carriers is critical, as it enables the administration of interventions that are proven to confer significant survival benefits, particularly for highly penetrant genetic mutations.

Download it from GenomeWeb's [White Paper Channel](#).

## Recommended for You

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[Icon to click to save item to your GenomeWeb reading list.](#) **Germline Loss-of-Function Variants in ATM Gene May Contribute to Melanoma Predisposition**

Published on Jul 15, 2021

### Gene Therapy Biodistribution Analysis Using In Situ Hybridization

This application note from ACD demonstrates how RNAscope ISH technology and Professional Assay Services can provide morphology-based, cell-specific quantification of adeno-associated virus vector DNA and therapeutic transgene mRNA expression within intact tissue, addressing questions on biodistribution, persistence, cellular tropism, and vector promoter activity. Download it from GenomeWeb's [White Paper Channel](#).

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### Staff Optical Systems Engineer

Company: [Thermo Fisher Scientific](#)

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### Assistant, Associate or Full Project Scientist - Multiple Myeloma

Company: [University of California San Diego](#)

Location: [La Jolla CA](#)

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### Applications Scientist

Company: [Union Biometrica, Inc.](#)

Location: [Holliston MA](#)

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### 1 PostDoc and 2 PhD positions in microRNA, scRNAseq and paleotranscriptomics

Company: [The Fromm Lab](#), [The Arctic University Museum of Norway](#), [UiT The Arctic University of Norway](#)

Location: [Tromsø](#)

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### Accelerating Probe and Primer Production to Enable COVID-19 Testing

Download this white paper to learn how LGC, Biosearch Technologies, is using SP Genevac technology to facilitate the rapid production of probes and primers for COVID-19 test kit development.

Download it from GenomeWeb's [White Paper Channel](#).

### Increase Diagnostic Yield with Class-Leading Variant Prioritization

This white paper describes Exomiser, a variant prioritization tool that enables geneticists to make faster, more accurate diagnoses and achieve a consistently higher diagnostic yield than industry averages.

Download it from GenomeWeb's [White Paper Channel](#).

### **Analyze, Interpret and Report NGS Data Faster than Ever Before**

This white paper describes an analysis of more than 2,000 complex cases interpreted using the Congenica decision support platform, which showed that complex clinical analyses that used to take 20 hours to interpret and report can now be completed in an average of 30 minutes.

Download it from GenomeWeb's [White Paper Channel](#).

### **Single-cell DNA Analysis of a Novel Acute Erythroid Leukemia CRISPR Induced Mouse Model**

This application note from Mission Bio describes a project that used CRISPR and single-cell DNA sequencing to generate mouse models of acute erythroid leukemia and to analyze clonal structure and co-mutations responsible for tumorigenesis.

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From : "MedPage Today | Daily Headlines"  
daily.headlines@broadcaster3.medpagetoday.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : DEA Issues Rare Public Safety Alert on Fake Prescription Pills

## MEDPAGE TODAY®

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Wednesday, September 29, 2021

#### NEUROLOGY

### DEA Issues Rare Public Safety Alert on Fake Prescription Pills



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### FDA Probes LAAO; Dairy Fat's Heart Benefit; Repatha OK'd for Pediatric HeFH



#### INFECTIOUS DISEASE

### CDC Staff: After Third Dose for the Immunocompromised, Hold Off on 'Booster'



#### SPECIAL REPORTS

### Doc With 'Outsized Personality' Convicted in Opioids-for-Injections Scheme



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### Walensky on Boosters: 'The Scientific Process Worked'



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### USPSTF Doubles Down on Aspirin for Preeclampsia Prevention



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### Does Slight Autism Risk With Epidurals Matter?



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## Real-World Evidence Shows Pfizer Vax Works Against Delta in Teens



ONCOLOGY/HEMATOLOGY

## High Rate of Negative Cancer Trials Raises Concerns



GASTROENTEROLOGY

## Bone Trouble Common in Chronic Pancreatitis Patients



INFECTIOUS DISEASE

## Racial Gap in COVID Vaccination Closes



MEETING COVERAGE

## Highlights in Lung Cancer From ESMO 2021



CARDIOLOGY

## Combo Thrombectomy Approach No Better for Large Vessel Strokes



PRACTICE MANAGEMENT

## Can Medicine Be 'Race-Conscious' Without Being Racist?



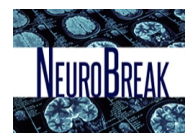
ONCOLOGY

## Improved DFS, but No OS Boost, With Chemo in CRC With Liver Metastases



NEUROLOGY

## Guillain-Barré and COVID; Head-to-Head Alzheimer's Blood Tests; Fastball EEG



Weekly Survey

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345 Hudson Street 16th Floor New York, NY 10014

Date : 8/7/2021 8:19:16 AM

From : "MedPage Today | Daily Headlines"  
daily.headlines@broadcaster3.medpagetoday.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Debate Is Over: COVID Vax Doubled Protection for the Previously Infected

## MEDPAGE TODAY®

### Daily Headlines

Saturday, August 07, 2021

#### INFECTIOUS DISEASE

### Debate Is Over: COVID Vax Doubled Protection for the Previously Infected



#### SPECIAL REPORTS

### No, Most COVID Infections Are Not Occurring in Vaccinated People



#### SPECIAL REPORTS

### Lawsuit: Doc Using Old Baylor Affiliation While Dishing COVID Vax Falsehoods



#### INFECTIOUS DISEASE

### One Vax Dose and Done? Evidence Mounts in Previously Infected



#### ONCOLOGY/HEMATOLOGY

### Are Hemoglobin Cutoffs for Anemia Outdated?



#### OPINION

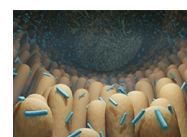
### All Eyes on FDA: The Upcoming Regulation of Juul E-Cigarettes



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#### GASTROENTEROLOGY

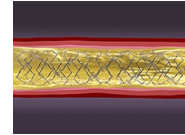
### Probiotics Show Promise for Symptoms of Functional GI Disorders





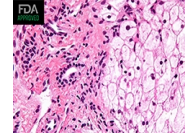
CARDIOLOGY

## Another Bioresorbable Stent Hits a Snag



PUBLIC HEALTH & POLICY

## New Enzyme Therapy OK'd for Pompe Disease



ASCO

## Keytruda in Advanced NSCLC -- Still on Target for Upping Long-Term Survival

RHEUMATOLOGY

## Canakinumab a Success in Systemic JIA, Study Confirms



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## 'Exciting But Very Real Possibility of Metastatic NSCLC Becoming a Chronic Illness'



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To : "Ice, Gillian" iceg@ohio.edu  
Subject : Doc Admits to Using Misbranded Eye Medication on Patients

## MEDPAGE TODAY®

### Daily Headlines

Friday, October 08, 2021

#### SPECIAL REPORTS

### Doc Admits to Using Misbranded Eye Medication on Patients



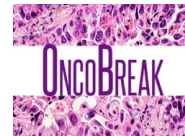
#### NEUROLOGY

### Neuroscientist Nadia Chaudhri, Who Reached Thousands, Dies at 43



#### ONCOLOGY/HEMATOLOGY

### Patients and Tumor Genomics; Big Jump in Esophageal Cancer; Cervical Cell Lawsuit



#### SPECIAL REPORTS

### New Ads Target Vaccine Holdouts in Rural Pennsylvania



#### MEETING COVERAGE

### Forteo Injection May Soon Face Competition From a Pill



#### SURGERY

### FDA Nails Surgical Staplers With Stronger Regulation



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#### POP MEDICINE

### Are the Strict COVID Plans for the Beijing Olympics Necessary?



OPINION

## It's Time to Cement the Expansion of Telehealth



CLINICAL CHALLENGES

## Clinical Challenges: Surgery for De Novo Metastatic Breast Cancer?



WASHINGTON-WATCH

## Experts Weigh FDA Implementation of EUAs During the Pandemic



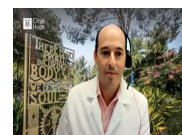
INFECTIOUS DISEASE

## WHO Backs 'Long-Awaited' Malaria Vaccine for Children at Risk



MEETING COVERAGE

## Doxorubicin-Trabectedin Impresses in Leiomyosarcoma



MEETING COVERAGE

## Lurbinectedin-Doxorubicin Combo Misses Survival Mark in SCLC



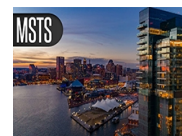
ONCOLOGY/HEMATOLOGY

## Standard of Care Hard to Beat in HER2-Negative Breast Cancer



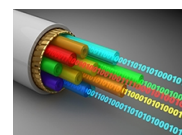
MEETING COVERAGE

## Antibiotic Could Thwart Costly Sarcoma Surgery Complication



PRACTICE MANAGEMENT

## Broadband Key to Expanding Telehealth's Pandemic Gains, Say Experts



PEDIATRICS

## Pandemic Sank Routine Vaccination Rates for Kids



PUBLIC HEALTH & POLICY

## More Work Needed to Clean Up Polluted Drinking Water, Experts Tell House Members



ASCO READING ROOM

## Naomi Haas, MD, on the Expanding Options for Adoptive Cellular Therapy in Solid Tumors



### Weekly Survey

### Would You Lie to Get a Booster?

The FDA and CDC have so far only authorized a COVID booster shot for certain recipients of Pfizer's vaccine, but some people are [skirting the rules](#) and getting one anyway [VOTE >](#)

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**Date : 8/31/2021 2:36:43 PM**

**From : "Evelyn Jones" evelyn.jones@info.greycompliance.com**

**To : "Ice, Gillian" iceg@ohio.edu**

**Subject : eCTD Submissions of IND-NDA to the US FDA, EU and Canada**

Hi Gillian,

Despite there being extensive information available from FDA and other regulatory bodies regarding eCTD submission, creating one and submitting it through the electronic submission gateway (ESG) of the FDA, is a daunting task even for those proficient in computer systems and coding languages.

The off-the-shelf software and consultations available are prohibitively expensive not only in the capital investment required but also in terms of the time needed for getting a submission ready.

This 90 minutes session is designed to address all these and provide the attendees with step-by-step instructions in creating and submitting eCTD submissions for IND, NDA, BLA, and ANDA applications without the need for expensive tools or unreasonable efforts.

The trainers will use their own case studies of how eCTD submissions were created and successfully submitted to the FDA using indigenous tools and expertise. Also discussed will be logistical issues associated with managing and maintaining eCTD compliance with regards to all regulatory submissions.

### **Course Objectives:**

- What are the requirements for electronic datasets in eCTD submissions?
- Where are the contents of clinical datasets located in the eCTD structure for: tabulation datasets, analysis-ready datasets and programs, and patient profiles
- What approaches should be taken to assure submission-readiness of datasets?
- How can the datasets package be remediate for submission if the deliverables are not submission-ready?
- What is the impact of CDISC and what steps should be taken now to assure compliance with CDISC requirements?
- What steps should be taken if electronic datasets are not available?

### **Course Outline:**

- Overview of the drug development program and source of relevant submission documents
- Discussion of the roles and responsibilities for CTD preparation
- Review of the CTD format requirements
- Discussion on the successful transition from other formats to the CTD

- Implementing tools for the project management of CTD preparation and publishing
- Technical requirements for an eCTD submission
- Document naming requirements
- Building the folder structure
- Performing “pre-publishing” work for each document
- Tools for tracking and managing eCTD content
- Performing quality checks on the eCTD
- Updating content in the CTD and eCTD (amendments, supplements, variations, etc.)

**Join us for this highly educational and immensely beneficial session**

**Topic:** eCTD Submissions of IND-NDA to the US FDA, EU and Canada

**Date:** 2<sup>nd</sup>- September, 2021 | **Time:** 1:00 PM EDT | **Duration:** 60 Minutes

**Location:** Live, interactive training on your computer

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#### **Instructor profile:**

**Peggy J. Berry, MBA, RAC**, is the President & CEO at Synergy Consulting where she provides consulting services to companies in all aspects of drug development. Prior to founding Synergy Consulting in 2015, she was Vice President of Regulatory Affairs at Insmed (2/2015-5/2015) where she was responsible for the development and implementation of global regulatory strategies and the management and oversight of the regulatory affairs department. Prior to Insmed, she was Vice President of Regulatory Affairs and Quality at Amarin (3/2009-2/2014). She has also held a variety of senior level positions at Dyax (5/2006-3/2009), MGI Pharma (now Eisai; 7/2005-5/2006), AstraZeneca (10/2001-7/2005), and Dey Pharma (now Mylan; 12/1997-10/2001). She has also held Regulatory Affairs roles within two clinical contract research organizations (ILEX Oncology and Cato Research Ltd; 1992-1997) and has worked in review divisions at the FDA (1985-1992). In addition, Ms. Berry consults for a number of companies in the regulatory and quality area, conducts a number of training courses, and is active in the Regulatory Affairs Professionals Society. She is the editor of the 2010 book “Choosing the Right Regulatory Career” (RAPS, MD) and author of the 2011 book “Communication & Negotiation” (RAPS, MD).

#### **Warm Regards**

Evelyn Jones

Training Manager

Tel No.: 1-888-844-8963

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From : "MedPage Today | Second Opinions"

daily.headlines@broadcaster3.medpagetoday.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Ending COVID Groundhog Day; Recommend Boosters to Patients? Putting Up With Abuse

## MEDPAGE TODAY®



### Second Opinions

Essays and opinions from our readers,  
always thought-provoking, sometimes controversial

Tuesday, August 10, 2021

Are you a **healthcare provider** who has gotten a **COVID booster**? [Email us](#) to (anonymously) share the what, when, how, and why.



**Cruelty Won't End This COVID Groundhog Day**

**Should You Recommend a COVID Booster to Patients?**

**For So Long, I Put Up With the Abuse**

**All Eyes on FDA: The Upcoming Regulation of Juul E-Cigarettes**

**Scrap the Old COVID Script for Act Four**

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## The Tyranny of 'Just Sign Here'

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## Does CPAP Therapy for Sleep Apnea Really Have Heart Benefits?

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## Introducing MedPage Today's 'The Lab' -- Nominations Now Open

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To : "Ice, Gillian" iceg@ohio.edu  
Subject : Fauci Predicts 'Turnaround' in U.S. Pandemic Curve

## MEDPAGE TODAY®

### Daily Headlines

Thursday, August 05, 2021

#### INFECTIOUS DISEASE

### Fauci Predicts 'Turnaround' in U.S. Pandemic Curve



#### CARDIOLOGY

### TAVR Debris Deflector Doesn't Fly With FDA Advisory Panel



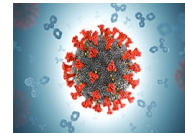
#### OPINION

### 'A Problem You'd Rather Not Address'



#### GASTROENTEROLOGY

### COVID-19 Antibody Response in IBD Patients Quickly Wanes



#### PSYCHIATRY

### Sad Suburbs; Dream Psychiatrist Dies; Lyme Disease Ups Suicide Risk



#### CRITICAL CARE

### Inotrope Showdown Leaves No Winner in Cardiogenic Shock



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#### INFECTIOUS DISEASE

### Full-Dose Heparin Benefit in Certain COVID-19 Patients Confirmed



RHEUMATOLOGY

## Rheumatic Flares Uncommon After COVID Vax



DERMATOLOGY

## JAK Inhibitor Tops Mab for Eczema



PAIN MANAGEMENT

## New Data on Opioids for Chronic Pain: Less Than Meets the Eye?



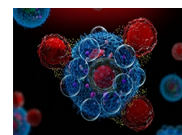
ENDOCRINOLOGY

## Diabetes Patients on Dialysis See Better Sugar Control With Artificial Pancreas



ONCOLOGY/HEMATOLOGY

## Anti-CD7 CAR-T Therapy Yields High Response Rate in Acute Leukemia



ASCO

## Arun Azad, PhD, on PTEN-PI3K-AKT Pathway Aberrations in Metastatic Prostate Cancer

PSYCHIATRY

## Can Financial Incentives Help Opioid Users Kick Other Addictions?



### Weekly Survey

## How to Get More Shots in Arms

With vaccination rates stalled and COVID cases and hospitalizations continuing to climb, [calls for vaccine mandates](#) are growing and [incentives](#) are getting a renewed push [VOTE >](#)

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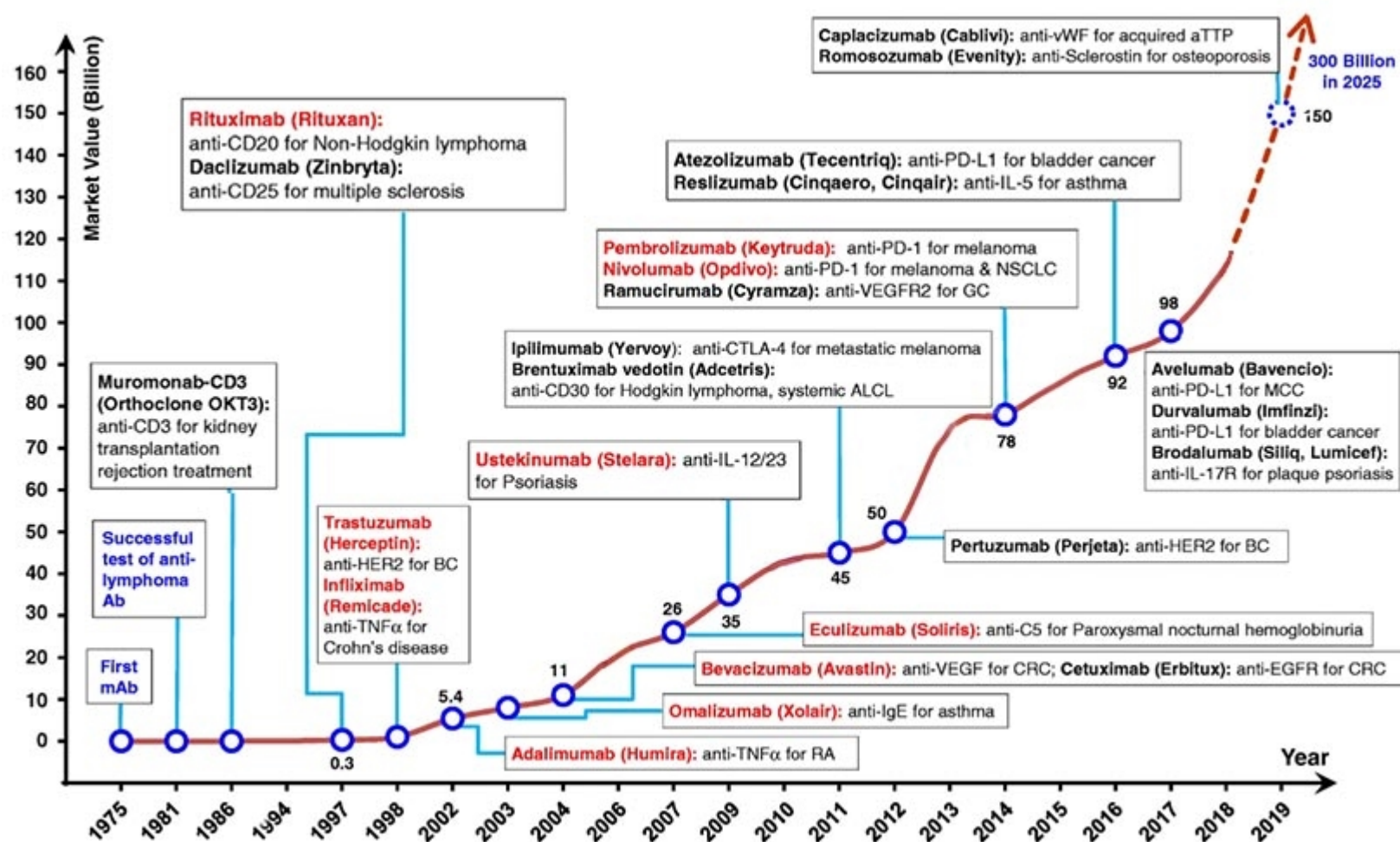
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Date : 9/2/2021 8:31:30 AM  
 From : "Allen" reply@selleckchemical.com  
 To : "Ice, Gillian" iceg@ohio.edu  
 Subject : FDA Approved Monoclonal Antibody on the Market



## Development Timeline on Therapeutic Antibodies



## FDA-approved Monoclonal Antibody on the Market

For research use only. Not for use in humans.

| Antibody           | Target   | Format                   | Indication                                                 | Year of FDA Approval |
|--------------------|----------|--------------------------|------------------------------------------------------------|----------------------|
| Rituximab >>       | CD20     | Chimeric IgG1            | Non-Hodgkin lymphoma                                       | 1997                 |
| Trastuzumab >>     | HER2     | Humanized IgG1           | Breast cancer                                              | 1998                 |
| Alemtuzumab        | CD52     | Humanized IgG1           | Chronic myeloid leukemia                                   | 2001                 |
| Adalimumab >>      | TNFα     | Human IgG1               | Rheumatoid arthritis                                       | 2002                 |
| Ibritumomab        | CD20     | Murine IgG1              | Non-Hodgkin lymphoma                                       | 2002                 |
| Cetuximab >>       | EGFR     | Chimeric IgG1            | Colorectal cancer                                          | 2004                 |
| Bevacizumab >>     | VEGF-A   | Humanized IgG1           | Colorectal cancer                                          | 2004                 |
| Natalizumab        | ITGA4    | Humanized IgG4           | Multiple sclerosis                                         | 2004                 |
| Panitumumab        | EGFR     | Human IgG2               | Colorectal cancer                                          | 2006                 |
| Ranibizumab        | VEGF-A   | Humanized IgG1 Fab       | Macular degeneration                                       | 2006                 |
| Eculizumab         | C5       | Humanized IgG2/4         | Paroxysmal nocturnal hemoglobinuria                        | 2007                 |
| Certolizumab pegol | TNFα     | Humanized Fab, pegylated | Crohn’s disease                                            | 2008                 |
| Ustekinumab >>     | IL-12/23 | Human IgG1               | Psoriasis                                                  | 2009                 |
| Canakinumab        | IL-1β    | Human IgG1               | Muckle-Wells syndrome                                      | 2009                 |
| Golimumab          | TNFα     | Human IgG1               | Rheumatoid and psoriatic arthritis, ankylosing spondylitis | 2009                 |
| Ofatumumab         | CD20     | Human IgG1               | Chronic lymphocytic leukemia                               | 2009                 |
| Tocilizumab >>     | IL-6R    | Humanized IgG1           | Rheumatoid arthritis                                       | 2010                 |
| Ipilimumab >>      | CTLA-4   | Human IgG1               | Metastatic melanoma                                        | 2011                 |



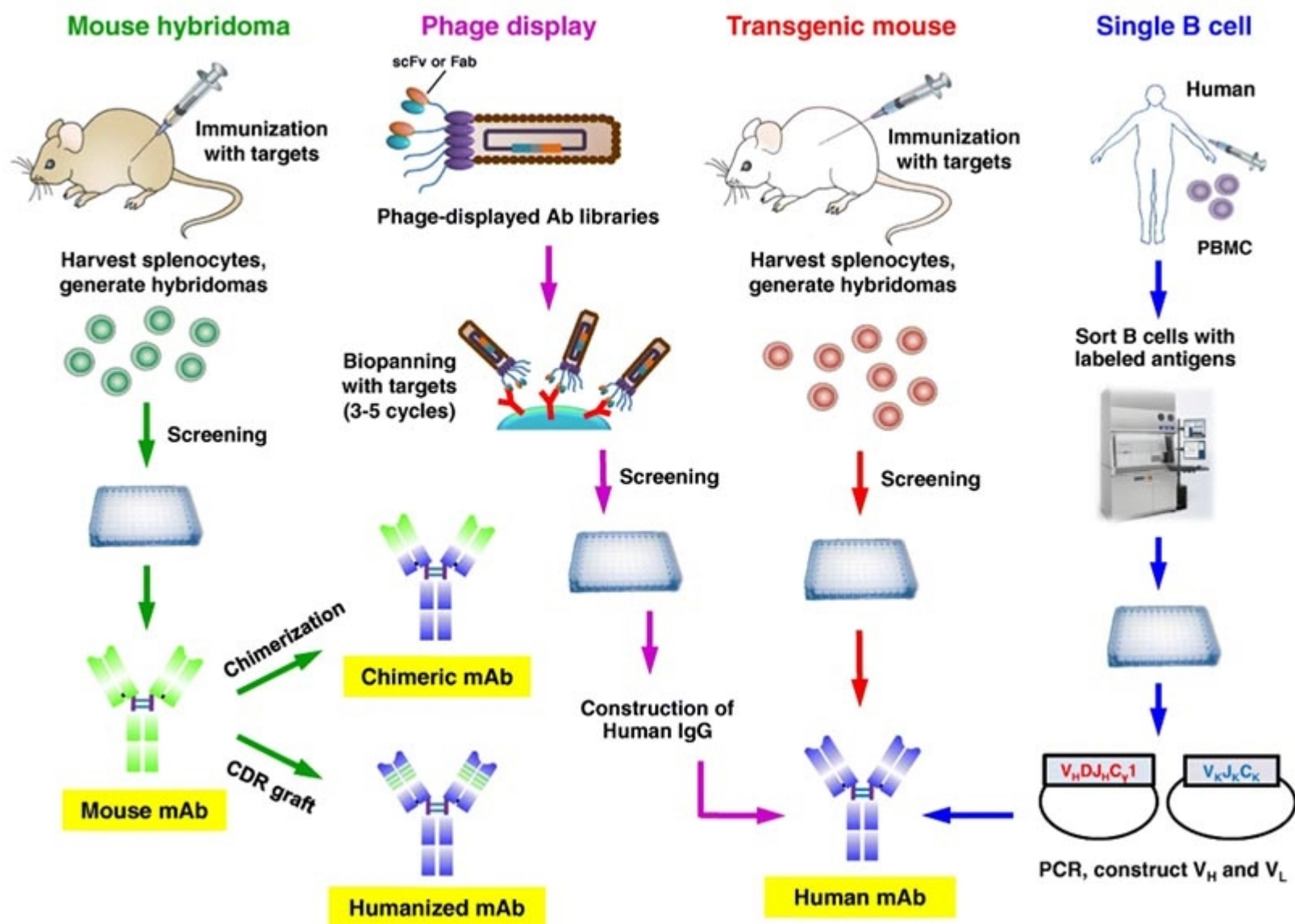
|                  |                            |                                   |                                                           |      |
|------------------|----------------------------|-----------------------------------|-----------------------------------------------------------|------|
| Brentuximab      | CD30                       | Chimeric IgG1; ADC                | Hodgkin lymphoma, systemic anaplastic large cell lymphoma | 2011 |
| Pertuzumab >>    | HER2                       | Humanized IgG1                    | Breast Cancer                                             | 2012 |
| Trastuzumab >>   | HER2                       | Humanized IgG1; ADC               | Breast cancer                                             | 2012 |
| Obinutuzumab >>  | CD20                       | Humanized IgG1<br>Glycoengineered | Chronic lymphocytic leukemia                              | 2013 |
| Siltuximab       | IL-6                       | Chimeric IgG1                     | Castleman disease                                         | 2014 |
| Ramucirumab >>   | VEGFR2                     | Human IgG1                        | Gastric cancer                                            | 2014 |
| Vedolizumab      | $\alpha 4\beta 7$ integrin | Humanized IgG1                    | Ulcerative colitis, Crohn disease                         | 2014 |
| Blinatumomab     | CD19, CD3                  | Murine bispecific<br>tandem scFv  | Acute lymphoblastic leukemia                              | 2014 |
| Nivolumab >>     | PD-1                       | Human IgG4                        | Melanoma, non-small cell lung cancer                      | 2014 |
| Pembrolizumab >> | PD-1                       | Humanized IgG4                    | Melanoma                                                  | 2014 |
| Necitumumab      | EGFR                       | Human IgG1                        | Non-small cell lung cancer                                | 2015 |
| Dinutuximab      | GD2                        | Chimeric IgG1                     | Neuroblastoma                                             | 2015 |
| Secukinumab >>   | IL-17 $\alpha$             | Human IgG1                        | Psoriasis                                                 | 2015 |
| Mepolizumab      | IL-5                       | Humanized IgG1                    | Severe eosinophilic asthma                                | 2015 |
| Daratumumab >>   | CD38                       | Human IgG1                        | Multiple myeloma                                          | 2015 |
| Elotuzumab       | SLAMF7                     | Humanized IgG1                    | Multiple myeloma                                          | 2015 |
| Ixekizumab       | IL-17 $\alpha$             | Humanized IgG4                    | Psoriasis                                                 | 2016 |
| Reslizumab       | IL-5                       | Humanized IgG4                    | Asthma                                                    | 2016 |
| Olaratumab       | PDGFR $\alpha$             | Human IgG1                        | Soft tissue sarcoma                                       | 2016 |
| Atezolizumab >>  | PD-L1                      | Humanized IgG1                    | Bladder cancer                                            | 2016 |
| Obiltoxaximab    | B.anthraxis PA             | Chimeric IgG1                     | Prevention of inhalational anthrax                        | 2016 |
| Dupilumab        | IL-4R $\alpha$             | Human IgG4                        | Atopic dermatitis                                         | 2017 |
| Sarilumab >>     | IL-6R                      | Human IgG1                        | Rheumatoid arthritis                                      | 2017 |
| Avelumab >>      | PD-L1                      | Human IgG1                        | Merkel cell carcinoma                                     | 2017 |
| Ocrelizumab      | CD20                       | Humanized IgG1                    | Multiple sclerosis                                        | 2017 |
| Benralizumab     | IL-5R $\alpha$             | Humanized IgG1                    | Asthma                                                    | 2017 |



|               |                               |                        |                                                |      |
|---------------|-------------------------------|------------------------|------------------------------------------------|------|
| Durvalumab >> | PD-L1                         | Human IgG1             | Bladder cancer                                 | 2017 |
| Mogamulizumab | CCR4                          | Humanized IgG1         | Mycosis fungoides or Sézary syndrome           | 2018 |
| Tildrakizumab | IL-23 p19                     | Humanized IgG1         | Plaque psoriasis                               | 2018 |
| Cemiplimab >> | PD-1                          | Human mAb              | Cutaneous squamous cell carcinoma              | 2018 |
| Emapalumab    | IFN $\gamma$                  | Human IgG1             | Primary hemophagocytic lymphohistiocytosis     | 2018 |
| Fremanezumab  | CGRP                          | Humanized IgG2         | Migraine prevention                            | 2018 |
| Ibalizumab    | CD4                           | Humanized IgG4         | HIV infection                                  | 2018 |
| Moxetumoma    | CD22                          | Murine IgG1 dsFv       | Hairy cell leukemia                            | 2018 |
| Risankizumab  | IL-23 p19                     | Humanized IgG1         | Plaque psoriasis                               | 2019 |
| Polatuzumab   | CD79 $\beta$                  | Humanized IgG1 ADC     | Diffuse large B-cell lymphoma                  | 2019 |
| Brolucizumab  | VEGF-A                        | Humanized scFv         | Macular degeneration                           | 2019 |
| margetuximab  | HER2                          | Chimeric IgG1k         | HER2+ breast cancer                            | 2020 |
| Ansuvimab     | GP1,2 surface protein         | human mAb IgG1         | ebola                                          | 2020 |
| Naxitamab     | GD2                           | humanized mAB          | high-risk refractory or relapsed neuroblastoma | 2020 |
| Aducanumab    | amyloid- $\beta$ (A $\beta$ ) | human-derived antibody | Alzheimer's disease                            | 2021 |

J Biomed Sci. 2020 Jan 2;27(1):1.  
doi: 10.1186/s12929-019-0592-z

## Approaches for Development of Therapeutic Antibodies



J Biomed Sci. 2020 Jan 2;27(1):1.

doi: 10.1186/s12929-019-0592-z

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To : "Ice, Gillian" iceg@ohio.edu  
Subject : FDA Approves Pfizer's COVID Vaccine

## MEDPAGE TODAY®

### Daily Headlines

Tuesday, August 24, 2021

#### INFECTIOUS DISEASE

### FDA Approves Pfizer's COVID Vaccine



#### PEDIATRICS

### Don't Use Pfizer's COVID Vax Off-Label in Kids, Experts Warn



#### SPECIAL REPORTS

### Five Florida Hospitals Issue Dire Plea for COVID Vaccination, Masks



#### NEUROLOGY

### Blood Test Discerns Alzheimer's From Other Dementia With High Accuracy



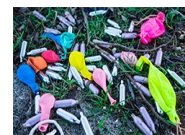
#### OPINION

### Your Thrilling Case May Be Your Patient's Worst Nightmare



#### CASE STUDIES

### Neuropathy After Recreational Use of Laughing Gas



#### ADVERTISEMENT

#### UROLOGY

### Surveillance for Prostate Cancer Is on the Rise -- Do Men Stick It Out?



MEETING COVERAGE

## Kidney Disease No Barrier to Effient Benefit in ACS



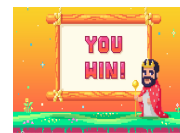
OB/GYN

## Mom's Obesity During Pregnancy Linked to Colon Cancer in Offspring



PODCASTS

## Early in COVID: A Win and a White House Call



AGA

## Victor Navarro on Hepatotoxicity From Garcinia Cambogia

ONCOLOGY/HEMATOLOGY

## Non-Chemo Regimen Highly Active in R/R Hodgkin Lymphoma



PODCASTS

## A Victory for Cancer Prevention



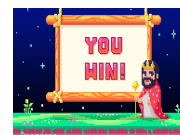
INFECTIOUS DISEASE

## Biden Urges the Hesitant to Get COVID Vaccine in Wake of Pfizer Approval



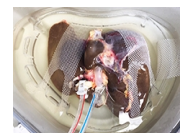
PODCASTS

## Winning in Medicine: Victories Large and Small



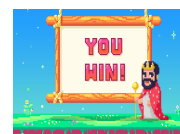
GASTROENTEROLOGY

## Can Liver Donor Biomarker Predict Liver Transplant Rejection?



PODCASTS

## Breaking Down Patients' Barriers



AGA READING ROOM

## Unexplained Liver Injury? Look for Use of Garcinia Cambogia

---



### Weekly Survey

### Is Your Compassion Wearing Thin?

This week has brought [reports of compassion fatigue](#) among healthcare workers, particularly those whose hospitals are [full of unvaccinated COVID-19 patients](#) [VOTE >](#)

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**Date : 10/15/2021 3:46:22 PM**  
**From : "Katelyn Jetelina from Your Local Epidemiologist"**  
**yourlocalepidemiologist@substack.com**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : FDA Meetings: Cliff notes for the Moderna booster, J&J booster, and mixing**

## **FDA Meetings: Cliff notes for the Moderna booster, J&J booster, and mixing**

Katelyn Jetelina  
Oct 15    Comment    54

*On Tuesday night I'm thrilled to join the President of the American Academy of Pediatrics to discuss COVID19 vaccine for young kids. This event is free and hosted by Scary Mommy. This event typically has 20,000 in live attendance, so if you're interested be sure to register prior [HERE](#). The recording will be available.*

*Also, if you haven't completed it yet, please take my Who Are You? survey. The survey will close Sunday. You can find it [HERE](#).*

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For the past two days, VRBPAC (external scientific advisory committee to the FDA) has been discussing and voting on the following topics:

1. **Moderna Booster:** What is the need, effectiveness, and safety of a low-dose (50 µg) booster?
2. **J&J Booster:** What is the need, effectiveness, and safety of a J&J booster?
3. **Mixing:** What is the effectiveness and safety of mixing vaccines?

These were absolutely fascinating discussions. And proved the utility of having this step in the United States regulatory process. There was a lot of push (from the vaccine sponsors) and a lot of pushback from the review board. Here are cliff notes...

### **Moderna Booster**

**Need:** Moderna **presented** data that people more recently vaccinated had a 36-40% lower rate of “breakthrough” infections compared with those vaccinated longer ago. So, protection is waning and Delta didn’t help.

**Effectiveness:** Moderna presented data showing that a booster is very effective in rebounding this response, especially among those 65+. The booster worked against the original virus (13-fold increase) and worked even better against Delta (17-fold increase).

The problem is that there is **very little** data. We had this problem with the Pfizer booster too, but Moderna had even less. Moderna presented their Phase II trial where only 149 adults received the two-dose series and a booster. So, the committee only had data on 149 people to make a decision for 69 million people. The FDA said this was enough data, but the committee members voiced uneasiness. For example, Dr. Patrick Moore said:

“I’ve got real issues with this vote ... [it’s] more of a gut feeling rather than really truly serious data. I think it’s very important that companies really take seriously that we need to see good, solid data, and it needs to be explained well.”

**Dose:** There was significant discussion about the dosage. Moderna applied for a low-dose booster (50µg, which is half the dosage of the original series). During this meeting, they indirectly cited three reasons for the lower-dosage:

1. Should be enough protection for a robust response;
2. Fewer reactions, such as fever and muscle aches, compared to the higher dosage;
3. Global pressure. By dividing the vaccines in half, there will be more vaccine available for global supply.

Several advisers weren’t convinced, though. Some voting members said a low-dose booster could cost people the potential benefit of a full strength booster over time. It may have tremendous impact on durability.



There was also confusion on what happens with immunocompromised now. They already got the full 100 µg booster. So do they need the 50 µg now? This will hopefully be cleared up by ACIP next week.

**Safety** data was based on 171 people, so data was scarce and certainly wasn't large enough to find rare safety signals, like myocarditis. Thankfully, during this meeting, Israel was willing to come back to the FDA meeting and present their updated data on the safety and effectiveness of their universal booster program. It's important to note that they are only using Pfizer doses, but the myocarditis data is still applicable.

Thus far, Israel has boosted 3.7 million people and it's not any riskier than the original series. In fact, in terms of myocarditis, a booster is *less* risky because of the longer period between doses. Israel reported only 17 cases of myocarditis/pericarditis after the booster. All these cases were among males.

**Decision:** Ultimately, VRBPAC unanimously voted (19-0) to recommend the Moderna booster for three specific groups (which are the same exact groups for Pfizer):

1. 65+ year olds
2. 18-64 year olds at high risk of severe COVID19
3. 18-64 year olds with high exposure to COVID19

#### **J&J booster**

**Need:** J&J approached this very differently than the mRNA sponsors. J&J asked to authorize a booster *not* because of waning immunity but as an opportunity to increase efficacy against variants of concern. J&J even went one step further and said it is more durable than mRNA vaccines. The [slide](#) below was presented, which showed that Pfizer and Moderna had a 34-44 fold decrease after 8 months, compared to J&J which has no change. It's important to note that this is based on data from 8 people. It has been [published](#) in New England Journal of Medicine (as of this morning).

There was a **lot** of skeptical discussion, though. There has been a number of real-world studies showing waning effectiveness and suboptimal efficacy from the J&J va

ccine. The FDA even went to the mic and said J&J ignored real-world data in their presentation. The FDA pulled up [this study](#) that was peer reviewed and published in NEJM which showed a much lower efficacy compared to the mRNA vaccine. The CDC came to the mic too and summarized another study showing the same thing. After this discussion, it was clear: Without a booster, the J&J vaccine did not protect people well.

**Effectiveness:** Nonetheless, J&J presented data from their clinical trial of >9,000 people. A booster significantly increased protection across all variants of concern.

**Timing:** When should people get the booster? In a smaller study, J&J studied the effectiveness of giving a booster at 2, 3, and 6 months after the original vaccine. J&J advocated for a 6 month booster by showing protection was highest then (see slide below).

But this study was very small. VRBPAC members voiced concern that they were making a decision for millions of people based on data from 17 people aged 18-55 years old. If we make this a 2-month booster, then this should really be considered a two-dose vaccine NOT a booster. J&J does not want this to be a 2 dose vaccine (probably because there's a marketing advantage for some parts of the world for a single dose vaccine).

**Safety:** J&J reviewed the safety of a booster. Overall, benefits continue to outweigh the risks. But there are rare side effects:

1. Blood clots: After EUA, 133 cases of thrombosis with thrombocytopenia (special type of blood clot) were identified; only 73 cases met criteria for investigation. This equates to 2.1 cases of blood clots per million doses. Unfortunately, 12 people died. Data showed a booster is more safe in regards to blood clots compared to the primary shot.
2. Guillain-Barre: After EUA, 162 cases of Guillain-Barre Syndrome (a progressive but generally reversible paralysis) were identified. This equated to 7.5 cases per million doses. There was 1 fatal outcome. This rate was higher than the background rate (1-5 cases per million).

**Decision:** Ultimately, VRBPAC voted in favor (19-0) to recommending the J&J booster for anyone 18+ at least 2 months after the single dose primary vaccination.

### **Mixing**

VRBPAC also discussed mixing vaccines. But before they got to this presentation, J&J made it clear this morning that they didn't support this policy. J&J said there are "questions that remain about how safe heterologous boosting is and how durable the response to a heterologous boost will be." J&J wants the J&J shot boosted with J&J. (Remember there may be conflict of interest here).

Regardless, VRBPAC reviewed data from a mixing study that was released this week. I talked about this study in great detail [here](#). It's very compelling data and clearly safe and effective.

VRBPAC didn't vote today because the FDA didn't have time to assess the legitimacy of this data. Instead, the FDA wanted to hear the advisory committee's opinion on potentially approving mixing vaccines.

Overall, VRBPAC was impressed with the mix and match study. But there were differing thoughts about how to move forward:

- Some said that it's hard to know the impact of mixing because we don't know if neutralizing antibodies correlate with protection. Also, if we go forward does this really have to go through the FDA if we expect full licensure in months to come? Some said we can just wait a few months to start mixing.
- Others urged the FDA for a quick EUA, so people can have the benefit of mixing as quickly as possible. This will be important for vaccine access, it will provide flexibility, and it will aid in vaccine mandates. The CDC also made it clear that they need allowable language from FDA to make a policy recommendation.

### **Next Steps**

Assuming that the FDA agrees with its advisory committee, [ACIP](#) and CDC will discuss policy decisions next week on all of the above. The meeting is scheduled on

October 21 and the agenda is [here](#). If the CDC and FDA ultimately align, then it's legal for some groups to get the Moderna and J&J vaccine booster.

Have a great weekend.

Love, YLE

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Subject : FDA Missed What Closely Watched Deadline This Week?

## MEDPAGE TODAY®

### Daily Headlines

Monday, September 13, 2021

#### QUIZZES

### FDA Missed What Closely Watched Deadline This Week?



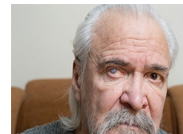
#### OPINION

### Don't Rush FDA's Vaping Products Review



#### OPINION

### When Prior Authorization Practices Go Too Far



#### MEETING COVERAGE

### Heart Failure's 'Golden Moment' Not Translating into Better Health



#### OPINION

### 'Spectacular Things Can Happen': What We Heard This Week



#### MEETING COVERAGE

### Plant-Based Diet Tied to Better Urological Health in Men



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#### SPECIAL REPORTS

### For the First Time, Top College Rankings Include Undergrad Nursing Programs



MEETING COVERAGE

## Cell Therapy Safe and Effective in Women with Prior Urinary Incontinence Surgery



MEETING COVERAGE

## Feared ARNI Effect on Cognition Hasn't Come to Fruition



PODCASTS

## Treating Carotid Stenosis; Social Factors in USPSTF Guidance



OPINION

## How Clinicians Can Cope With Grief; Legal Risks of Virtual Care



MEETING COVERAGE

## Second-Gen Drug for HCM Emerges, Nipping at Mavacamten's Heels



MEETING COVERAGE

## Durable Response with Immunotherapy Combos in NSCLC with Brain Metastases



MEETING COVERAGE

## Immuno-Oncology Combo Active in Recurrent EGFR/ALK Positive NSCLC



OPINION

## COVID and Afghanistan: A War on Two Fronts



MEETING COVERAGE

## Triplet Therapy Proves Safe in Resectable Malignant Pleural Mesothelioma



MEETING COVERAGE

## Darolutamide Tied to Symptom Control in Non-Metastatic Prostate Cancer





## Weekly Survey

### Reading and Writing and COVID Vaccines

The Los Angeles Unified School District became [the first major district in the country](#) to mandate COVID-19 vaccination for eligible students [VOTE >](#)

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**Subject :** FDA Novel Drug Approvals for 2021



## FDA's Novel Drug Approvals for 2021

For research use only. Not for human uses

| Active Ingredient                                          | Drug Name    | Approval Date | FDA-approved use on approval date                                                                                             |
|------------------------------------------------------------|--------------|---------------|-------------------------------------------------------------------------------------------------------------------------------|
| odevixibat                                                 | Bylvay       | 7/20/2021     | To treat pruritus                                                                                                             |
| belumosudil >>>                                            | Rezurock     | 7/16/2021     | To treat chronic graft-versus-host disease after failure of at least two prior lines of systemic therapy                      |
| fexinidazole >>>                                           | fexinidazole | 7/16/2021     | To treat human African trypanosomiasis caused by the parasite Trypanosoma brucei gambiense                                    |
| finerenone >>>                                             | Kerendia     | 7/9/2021      | To reduce the risk of kidney and heart complications in chronic kidney disease associated with type 2 diabetes                |
| asparaginase erwinia<br>chrysanthemi<br>(recombinant)-rywn | Rylaze       | 6/30/2021     | To treat acute lymphoblastic leukemia and lymphoblastic lymphoma in patients who are allergic to E. coli-derived asparaginase |



|                                   |             |           |                                                                                    |
|-----------------------------------|-------------|-----------|------------------------------------------------------------------------------------|
|                                   |             |           | products, as a component of a chemotherapy regimen                                 |
| aducanumab-avwa                   | Aduhelm     | 6/7/2021  | To treat Alzheimer's disease                                                       |
| ibrexafungerp                     | Brexafemme  | 6/1/2021  | To treat vulvovaginal candidiasis                                                  |
| olanzapine and<br>samidorphan >>> | Lybalvi     | 5/28/2021 | To treat schizophrenia and certain aspects of bipolar I disorder                   |
| infigratinib >>>                  | Truseltiq   | 5/28/2021 | To treat cholangiocarcinoma whose disease meets certain criteria                   |
| sotorasib >>>                     | Lumakras    | 5/28/2021 | To treat types of non-small cell lung cancer                                       |
| piflufolastat F 18                | Pylarify    | 5/26/2021 | To identify prostate-specific membrane antigen-positive lesions in prostate cancer |
| amivantamab-vmjw                  | Rybrevant   | 5/21/2021 | To treat a subset of non-small cell lung cancer                                    |
| pegcetacoplan                     | Empaveli    | 5/14/2021 | To treat paroxysmal nocturnal hemoglobinuria                                       |
| loncastuximab tesirine-lpyl       | Zynlonta    | 4/23/2021 | To treat certain types of relapsed or refractory large B-cell lymphoma             |
| dostarlimab-gxly                  | Jemperli    | 4/22/2021 | To treat endometrial cancer                                                        |
| drospirenone and estetrol<br>>>>  | Nextstellis | 4/15/2021 | To prevent pregnancy                                                               |
| viloxazine >>>                    | Qelbree     | 4/2/2021  | To treat attention deficit hyperactivity disorder                                  |
| dasiglucagon                      | Zegalogue   | 3/22/2021 | To treat severe hypoglycemia                                                       |
| ponesimod >>>                     | Ponvory     | 3/18/2021 | To treat relapsing forms of multiple sclerosis                                     |

|                                                 |            |           |                                                                                            |
|-------------------------------------------------|------------|-----------|--------------------------------------------------------------------------------------------|
| tivozanib >>>                                   | Fotivda    | 3/10/2021 | To treat renal cell carcinoma                                                              |
| serdexmethylphenidate<br>and dexmethylphenidate | Azstarys   | 3/2/2021  | To treat attention deficit hyperactivity disorder                                          |
| melphalan flufenamide<br>>>>                    | Pepaxto    | 2/26/2021 | To treat relapsed or refractory multiple myeloma                                           |
| fosdenopterin                                   | Nulibry    | 2/26/2021 | To reduce the risk of mortality in molybdenum cofactor deficiency Type A                   |
| casimersen                                      | Amondys 45 | 2/25/2021 | To treat Duchenne muscular dystrophy                                                       |
| trilaciclib                                     | Cosela     | 2/12/2021 | To mitigate chemotherapy-induced myelosuppression in small cell lung cancer                |
| evinacumab-dgnb                                 | Evkeeza    | 2/11/2021 | To treat homozygous familial hypercholesterolemia                                          |
| umbralisib >>>                                  | Ukoniq     | 2/5/2021  | To treat marginal zone lymphoma and follicular lymphoma                                    |
| tepotinib >>>                                   | Tepmetko   | 2/3/2021  | To treat non-small cell lung cancer                                                        |
| voclosporin                                     | Lupkynis   | 1/22/2021 | To treat lupus nephritis                                                                   |
| cabotegravir and rilpivirine<br>(co-packaged)   | Cabenuva   | 1/21/2021 | To treat HIV                                                                               |
| vericiguat >>>                                  | Verquvo    | 1/19/2021 | To mitigate the risk of cardiovascular death and hospitalization for chronic heart failure |

## Why Screening with FDA-approved Drug Library ?

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## Looking for candidate drugs in treatment of cancer and other disease

- Bortezomib is a novel therapeutic drug has shown promise for the treatment of multiple myeloma, yet its sensitivity and effectivity still have room for improvement.
- Dr Kong Sun-Young's lab performed a high-throughput cell-based screening using the compound library from SelleckChem and identified albendazole (drug for worm infestations) as a sensitizer for combination therapy with bortezomib in the treatment multiple myeloma.



Cancer Res, 2014, 74: 1702.

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## MEDPAGE TODAY®

### Daily Headlines

Thursday, July 22, 2021

#### GASTROENTEROLOGY

### FDA OKs First Drug for Symptoms of Rare Liver Disease in Kids



#### SPECIAL REPORTS

### Is the 'Open Notes' Rule as Good in Practice as It Is in Theory?



#### OPINION

### Gender Bias in the OR Is a Hazard to Patient Safety



#### PSYCHIATRY

### Drug Overdoses Spike; Shock Therapy Effective; Psychiatrist Charged for 'Pill-Mill'



#### RHEUMATOLOGY

### New-Onset IBD and IL-17 Inhibitors: What Is the Risk?



#### PSYCHIATRY

### Staying on Pimavanserin Cut Dementia-Related Psychosis Relapse



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#### SPECIAL REPORTS

### Prime Healthcare Settles Kickback Claims



NEUROLOGY

## Virtual Roller Coasters Link Migraine and Motion Sickness



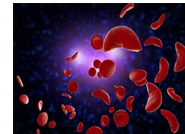
MEETING COVERAGE

## Acceptance of Vaginal Ring and Oral PrEP Increasing in Young African Women



ONCOLOGY/HEMATOLOGY

## Sickle Cell Disease Tied to COVID-19 Mortality, Hospitalizations



CARDIOLOGY

## Just How Much PCI Has Shifted to Outpatient Settings?



MEETING COVERAGE

## Novel Drug Helped HIV Patients Achieve Viral Suppression



MEETING COVERAGE

## Does COAPT Change the Need to Try Foundational HF Drugs in Functional MR?



ENDOCRINE SOCIETY

## Thyroid Storm's Impact on Length of Hospital Stay, Cost, Mortality

MEETING COVERAGE

## After Some Early Successes for Bicuspid TAVR, a Randomized Trial May Be Unlikely



ASCO

## David Cella, PhD, on RCC Patient-Reported Outcomes in the CheckMate 9ER Trial

PUBLIC HEALTH & POLICY

## Noncitizen Kids More Likely to Be Uninsured Than Siblings With Citizenship



PUBLIC HEALTH & POLICY

## More Coordinated Federal Help Needed to Battle Extreme Heat, Lawmakers Told



ENDOCRINE SOCIETY READING ROOM

## A Deep Dive Into Cardiovascular Events in Thyroid Storm

ASCO READING ROOM

## 'Relevant Information' for Clinicians on Benefit-Risk Profile in Advanced RCC



### Weekly Survey

## Mandatory Vaccination for Health Workers?

Infection prevention and epidemiology groups [issued a joint statement](#) saying that healthcare workers should be required to get a COVID-19 vaccine as a condition of employment [VOTE >](#)

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Subject : FDA Panel Backs Pfizer Booster for Select Groups

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**Breaking News Alert**

Friday, September 17, 2021

## FDA Panel Backs Pfizer Booster for Select Groups

Advisors overwhelmingly support authorization, but shot down full approval bid

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### Daily Headlines

Saturday, September 18, 2021

#### INFECTIOUS DISEASE

### FDA Panel Backs Pfizer Booster for Select Groups



#### NEUROLOGY

### ADEM After COVID-19 Vaccine: Case Report



#### INFECTIOUS DISEASE

### One COVID Vaccine Held Up Best Over Time, CDC Study Suggests



#### SPECIAL REPORTS

### What Happened to Variant-Specific COVID Vaccines?



#### PSYCHIATRY

### A Look at One State's Pandemic Overdose Deaths Shows Those Most at Risk



#### SPECIAL REPORTS

### Kentucky Hospital Can Deny Ivermectin to COVID Patient, Says Judge



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#### SPECIAL REPORTS

### There's a Workaround for a Common 'Open Notes' Criticism



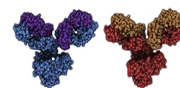
OB/GYN

## As Safety Data on HPV Vaccine Improves, Why Is Parental Hesitancy Going Up?



PUBLIC HEALTH & POLICY

## It's True: Biosimilars Save Money for Medicare



ENDOCRINOLOGY

## Some Reassurance on Cancer Risk With RAI Therapy for Hyperthyroidism



MEETING COVERAGE

## Extended Letrozole Reduced Recurrence Risk in Postmenopausal Breast Cancer



OB/GYN

## HHS Announces Actions in Response to Texas Law Banning Abortions After 6 Weeks



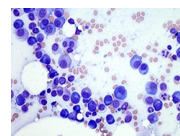
PSYCHIATRY

## Q&A: Loice Swisher, MD, on National Physician Suicide Awareness Day



ONCOLOGY/HEMATOLOGY

## VRD Consolidation Proves Beneficial in Newly Diagnosed Myeloma



MEETING COVERAGE

## Rechallenge With PARP Inhibitor Slows Relapsed Ovarian Cancer



AAD READING ROOM

## Amit Garg, MD, on Psoriasis Risk and Body Mass Index

ACR READING ROOM

## On IL-17 Inhibitors and Risk of Inflammatory Bowel Disease

ACR READING ROOM

# Inflammatory Bowel Disease: What Risk After IL-17 Inhibitor Initiation?

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## Weekly Survey

### Who Needs a Booster?

As the [White House, CDC, and FDA wrestle](#) over which Americans need COVID booster shots, we're turning the question over to you [VOTE >](#)

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**Breaking News Alert**

Friday, October 15, 2021

## FDA Panel Endorses Booster for All J&J Recipients

Committee advises booster at least 2 months following initial Johnson & Johnson shot

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**August 24, 2021**



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## **TODAY'S NEWS** [view all news »](#)

### **FDA Paves Way for College Vaccine Mandates**

Institutions may feel more empowered to enact COVID-19 vaccine mandates now that Pfizer's FDA approval levels it with other required vaccines -- and some colleges have already taken action. »



### **Seeing Themselves Out**

More professors quit over face-to-face teaching mandates. »



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## Students Support Mask, Vaccine Mandates -- but Not Parties

Two new polls find students overwhelmingly support vaccine and mask mandates at their institutions and are hesitant about returning to normal college life. »



## Law Makes Textbook Prices Transparent to Ore. Students

Starting next year, Oregon's public colleges will be required by law to disclose textbook prices before students enroll in classes. »



**New Presidents or Provosts: American International College, Delta College, Georgia State U, Kean U, Montclair State U, Salem Academy and College, Syracuse U, Temple U, U of Cincinnati**



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### University of Toronto • Toronto, ON

Senior Manager, Caretaking and Waste Management Date Posted: 08/23/2021 Req ID: 3551 Faculty/Division: UofT Mississauga Department: UTM: Facilities, M [Details »](#)



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**University of Toronto • University of Toronto Mississauga (UTM)**

Issues and Media Relations Strategist Date Posted: 08/23/2021 Req ID: 12685

Faculty/Division: University of Toronto Mississauga (UTM) Department: UTM: [Details »](#)

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**Date : 9/29/2021 12:34:48 PM**  
**From : "Evelyn Jones" evelyn.jones@info.greycompliance.com**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : FDA Regulations for Environmental Monitoring (EM) Program**

Hi Gillian,

Are you in compliance with the FDA regulations for Cleaning Validations of your manufacturing equipment?

Upon completion of this training, you will be able to Describe how Clean room Environmental Monitoring (EM) Program fits into the Regulations.

**Course outline:**

- Applicable Regulations
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  - Role of Clean room Environmental Monitoring Program?
- Basics of Setting a Robust and Effective EM Program
  - Key Considerations
  - Relevant Material Verification Processes
  - Steps and Content of an EM Program Testing Procedure
- Processing a Completed Environmental Monitoring Test Media
  - Sample Handling and Incubation
  - Documentation and Data Management of EM Test Results
  - What is the EM Test Data used for?
  - Retention of EM Test Results - Interpretation of EM Test Results
- Basics of Designing an Effective and Compliant EM Trend Reports
  - Types; Content
  - Using Trend Report as a Critical Tool and Quality Metrics
- Basics of Designing an Effective and Compliant EM Excursion Program
  - Types; Content
  - Handling EM Excursion Investigation
  - Handling Impacted Manufactured Batches
  - Disposition of Affected Products with Failed Clean room EM Test Results

- Corrective and Preventative Action (CAPA)
  - Relationship between CAPA and EM Test Data Excursion Investigations

**Topic:** FDA Regulations for Environmental Monitoring (EM) Program

**Date:** 5<sup>th</sup>-October-2021, Tuesday

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**Joy L. McElroy:** With 10 years of experience as a consultant, and over 20 years total experience in the pharmaceutical and biotech industries, Joy L. McElroy specializes in Quality Assurance, Process and Cleaning Validation, and Equipment Qualification. In 2013 Joy started her own company, Maynard Consulting Company, which provides top engineers, auditors, and validation specialists to pharmaceutical, biotech and medical device clients across the United States, Canada, and the world.

**Warm Regards**

Evelyn Jones

Training Manager

Tel No.: 1-888-844-8963

This email was sent by: **Greycompliance**  
30 Wall Street, 8th Floor, New York, NY, 10005, USA

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**Date : 9/8/2021 10:35:42 AM**  
**From : "Axios Events" events@axios.com**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : Friday | Former FDA Comm. Scott Gottlieb & Walgreens Chief Medical Officer discuss the stakes for vaccinations**



Vitals "Check-Up"

REGISTER

Join Axios for a Vitals "Check-Up" event on what's working to get Americans vaccinated against COVID-19. We'll take a look at how the first FDA approval of the COVID-19 vaccine and the rise of mandates in businesses and schools have impacted vaccination rates and how public health officials plan to keep the momentum going as booster shots begin this fall.

Axios Health Care Reporter Caitlin Owens and Health Care Editor Tina Reed will host one-on-one conversations with:

• **Scott Gottlieb, M.D.**

Author, *Uncontrolled Spread: Why COVID-19 Crushed Us and How We Can Defeat the Next Pandemic*

Fellow, American Enterprise Institute

Former Commissioner, U.S. Food & Drug Administration

• **Kevin Ban, M.D.**

Chief Medical Officer, Walgreens

**Event Details:**

Friday, September 10, 2021

12:30 pm - 1:00 pm ET

Register to receive the livestream link prior to the event.

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Date : 9/3/2021 8:33:50 AM  
From : "OhioHealth" wecare@ohiohealth.com  
To : "Ice, Gillian" iceg@ohio.edu  
Subject : From viruses to vows to vaccines

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### Sexual violence support is a call away

Fall semesters are starting, and many students are on their own for the first time at college. It's also a time when campus sexual assaults increase. With 26.4% of female and 6.8% of male undergraduate students [experiencing sexual assault while in college](#), it's important to know there's a place to turn for reporting and help. Anyone can call the [Ohio Sexual Violence Helpline](#) at [\(844\) 644-6435](#) for 24/7 confidential support. Reach out yourself or share this resource with those in need.

KNOW YOU'RE NOT ALONE

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### Make it a double!

COVID-19 and flu vaccine recommendations have received a welcome change — you can now get both vaccines within days of each other, even at the same visit! Whether or not you are fully vaccinated against COVID-19, now is the best time to build up your immunity. Your OhioHealth Physician Group primary care physician is a great source of information, and an even better place to get both shots. [Schedule a visit](#) with them today. In the meantime, find out more from OhioHealth system director of Infectious Diseases [Joe Gastaldo, MD](#).

WATCH THE VIDEOS



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#### Admittedly in love

COVID-19 continues to halt milestones and impact the lives of our patients. But when one patient realized the virus might keep him from taking his vows, OhioHealth associates took action. With a private hospital ceremony and a new appreciation for life, this groom is now the best man for sharing support of the vaccine.

FEEL THE LOVE

---

#### Take a break for this brittle

Crumble some healthy crunch into your favorite salad, yogurt or oatmeal. This homemade seed brittle is sure to send your tastebuds soaring. It only takes minutes to prepare, and comes highly recommended by OhioHealth registered dietitian and nutritionist Jenny Pitcher.

GET MUNCHING

QUICK UPDATES

+

The FDA has **fully approved** the Pfizer COVID-19 vaccine.

+

OhioHealth offers **COVID-19 vaccines** and **tests** at several locations.

+

OhioHealth Urgent Care and Emergency Care locations are experiencing very high volumes of in-person visits. If you have COVID-19 concerns, you can also try an **urgent care video visit**, or call your **OhioHealth Physician Group Primary Care** provider.

+

Masks are required for all people at every OhioHealth location, no exceptions.

+

We have made adjustments to our **visitor policy** due to COVID-19 concerns.

Everyone can use a healthy dose of good advice.  
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Date : 8/24/2021 6:05:37 PM

From : "CVS Pharmacy" pharmacy@pharmacy.cvs.com

To : "Ice, Gillian" iceg@ohio.edu

Subject : Full FDA Approval for Pfizer-BioNTech COVID-19 Vaccine.

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**Stay informed with COVID-19 news and updates**

# FDA fully approves Pfizer-BioNTech COVID-19 vaccine

Man in a face covering looking down at the CVS bandage being applied to his arm after being vaccinated

After detailed review of clinical trials, the FDA advises that the Pfizer-BioNTech vaccine is safe and effective in preventing serious illness caused by COVID-19, and is fully approved for ages 16 and older.

Emergency use authorization continues for those ages 12 to 15, as well as an additional dose for select immunocompromised individuals.

Walk in\* or schedule your COVID-19 vaccine today.

[Get a COVID-19 vaccine](#)

**Learn more about full FDA approval**

Dr. Sree Chaguturu

**FDA approval**

## vs. Emergency Use Authorization

Dr. Sree Chaguturu, SVP, CVS Health® & Chief Medical Officer, explains differences between Emergency Use Authorization and full FDA approval of the Pfizer-BioNTech COVID-19 vaccine.

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Icon of a  
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**\*FOR WALK-INS:** Pending vaccine availability.

**\*FOR VACCINATION RECORDS:** Your vaccination record summaries may not include complete information or serve as proof of vaccination in some states. If you gave contact information for your primary care provider (PCP), they'll have a record of your vaccinations. Some states may also keep a record. You may also call CVS Pharmacy® to request a copy or ask questions.

**Date : 8/23/2021 5:49:50 PM**  
**From : "Katelyn Jetelina from Your Local Epidemiologist"**  
**yourlocalepidemiologist@substack.com**  
**To : "Ice, Gillian" iceg@ohio.edu**  
**Subject : Full FDA approval: What will this change? A lot.**

## **Full FDA approval: What will this change? A lot.**

Katelyn Jetelina  
Aug 23 5:49 PM

Today the FDA granted full approval to Pfizer/BioNTech's COVID19 vaccine for people 16 and older. The FDA [press release](#) highlighted the rigor this entails:

“The public can be very confident that this vaccine meets the high standards for safety, effectiveness, and manufacturing quality the FDA requires of an approved product.”

The vaccine also continues to be available under emergency use authorization (EUA) for 12-15 year olds and for the third dose among immunocompromised individuals.

This only confirms what we've known for months: the vaccine is safe and effective.

**Nonetheless, this. is. worth. celebrating.**

This is the first mRNA vaccine to be fully approved. And it's been a long scientific road to get here. The work began in [1961](#), when mRNA was first identified as an integral part of our human body.

Then, in the 1990's, Dr. Katalin Karikó, a Hungarian-born scientist, discovered that mRNA could possibly be used for vaccines. For decades she had convince people to fund her research, which was more than difficult. But her perseverance, leadership, and collaborative spirit prevailed and research resulted in the COVID19 Pfizer/BioNTech vaccine we are using today. (Read more about this story [here](#); it's fascinating. I hope she's celebrating with a glass or five of wine).

Before the pandemic, there were (and currently are) many clinical trials testing the applicability of new class of treatments for cystic fibrosis, heart disease, genetic conditions, cancers, diabetes, the flu, and even seasonal allergies. It's not an understatement to say that mRNA biotechnology will be a game changer for the human race.

Hou, X., Zaks, T., Langer, R. *et al.* Lipid nanoparticles for mRNA delivery. *Nat Rev Mater* (2021). <https://doi.org/10.1038/s41578-021-00358-0>

Once the pandemic hit, scientists quickly leveraged this groundwork and adapted it for a COVID-19 vaccine. [Speed did not mean rushed](#). It meant leveraging a whole lot of smart people (scientists and clinical trial volunteers), money, and decades of previous work to get us a vaccine. And we did it in 9 months.

Figure created by Dr. Eric Topol, source: Twitter

Pfizer was granted Emergency Use Authorization (EUA) by the FDA in December 2020 after accumulating the required 2 months of Phase III data. It was under the assumption that they would apply for a full licensure once they had 6 months of follow-up data (showing vaccine longevity, continued safety) and necessary documents (like manufacturing processes).

On May 7, 2021 Pfizer submitted their application for full approval. Today, the FDA fully approved the vaccine for those aged 16+ years old.

**So, what does full approval change?**

We should see a cascade of events.

***First, we should expect an uptick in vaccinations.*** According to the Kaiser Family Foundation, 3 out of 10 (32%) unvaccinated adults said they were more likely to get the vaccine if the FDA granted full approval. After crunching the numbers (209,128,094 18+ year olds in the United States and 70.8% vaccinated), we should see 6.2 million adults in line to get a vaccine.

***Second, clinicians now have the autonomy to prescribe off-label.*** Clinicians now have the decision-making power to recommend the vaccine to children aged 11 and younger. I'm sure pediatricians were inundated with phone calls today. Thankfully t

he American Academy of Pediatrics was quick to react and released a [statement](#) today discouraging this practice:

“The clinical trials for the COVID-19 vaccine in children ages 11 years old and younger are underway, and we need to see the data from those studies before we give this vaccine to younger children. The dose may be different for younger ages. The AAP recommends against giving the vaccine to children under 12 until authorized by the FDA”.

***Third, the private and public sectors will likely ditch the carrot approach. The stick will be coming.*** A full approval means that employers, insurance companies, businesses, and maybe even hospitals may start getting braver with requirements:

- Many **employers** were hesitant to require vaccination under EUA. The legality of was in bit of uncharted waters. In June 2021, the Equal Employment Opportunity Commission [issued guidance](#) stating that employers can mandate COVID-19 vaccinations for employees who *physically* enter the workplace without running in anti-discrimination laws. But they also said “it’s beyond the EEOC’s jurisdiction to discuss the legal implications of EUA or the FDA approach” and employers needed to consider religious and disability-related objections and [explore reasonable accommodations](#). Employers did succeed in vaccine mandates under EUA, though. Houston Methodist hospital was one of the first in the nation to mandate COVID19 vaccines for their employees. This prompted 117 employees (out of 26,000) to file a lawsuit. But, a federal judge said the employees’ claim was “false” and “irrelevant” and that it “will make it safer for their workers and the patients in Methodist’s care.”
- **Health insurers** may start thinking about higher premiums for unvaccinated people. In June and July 2021, there were [113,000](#) preventable COVID-19 hospitalizations among the unvaccinated. In two months, this cost the US healthcare system \$2.3 billion. That’s not a small bill.
- Full FDA approval will surely bring an interesting debate among other businesses too:



- Businesses may start requiring proof of vaccination for customers. San Francisco is already [requiring](#) proof of vaccination to enter bars.
- What about triage-making decisions? This debate came to the limelight last week when Dallas clinicians were [discussing](#) a tough scenario: If there is only one ICU bed left, does it belong to the person in a car accident? Or does it belong to the unvaccinated person who needs to be intubated because they didn't take an effective and safe preventative measure? I doubt it will ever come to this, but an interesting debate to bring back to the classroom.

**Bottom Line:** The first full approval of mRNA biotechnology is a game changer. Both for scientific discovery and for getting us one step closer to ending this pandemic.

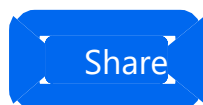
Cheers, YLE

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**Date : 7/13/2021 4:18:29 PM**

**From : "Leatherwood, Carly" leatherc@ohio.edu**

**To : "Ice, Gillian" iceg@ohio.edu, "Erlewine, Meredith" erlewinem@ohio.edu**

**Subject : FW: FDA J&J Vaccine Warning**

Please see below – from the Post. I could use some thoughts on response.

Dear Carly,

I hope that this email finds you well. I was just reaching out regarding the warning that the FDA recently released about the small risk of developing a rare autoimmune disorder as a result of taking the Johnson and Johnson vaccine. Is Ohio University still offering the Johnson and Johnson vaccine right now? If so, is it at all concerned about the new risks that have been raised?

Best,

[Redacted Signature]

Reporter for The Post

[Redacted Contact Information]

**From:** Patt, Tyce <tp335118@ohio.edu>

**Sent:** Friday, September 3, 2021 12:09 PM

**To:** Ice, Gillian <iceg@ohio.edu>

**Subject:** Increasing myocarditis risk with vaccination

Are you aware Public Health Ontario issued a report the other day detailing how there have been 202 ER visits for myocarditis/pericarditis caused by vaccines, with 142 requiring hospitalization. 32 of these were in 12-17yrs. 75 in 18-24yrs.

<https://www.publichealthontario.ca/-/media/documents/ncov/epi/covid-19-myocarditis-pericarditis-vaccines-epi.pdf>

This is a clearly an increasing threat. It is unethical for any health official to push much less mandate a medical treatment without making sure the patient is FULLY aware of this risk. This side effect is disproportionately effecting healthy college aged people.

A study released last month by the Centers for Disease Control and Prevention showed 9,246 adverse events reported among adolescents aged 12 to 17, including 863 serious events, 14 deaths and 397 reports of myocarditis.

<https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e1.htm>

A higher-than-usual number of cases of a type of heart inflammation has been reported following Covid-19 vaccination, especially among young men following their second dose of an mRNA vaccine, the Centers for Disease Control and Prevention said Back in June.

<https://www.nbcnews.com/health/health-news/evidence-grows-stronger-covid-vaccine-link-heart-issue-cdc-says-n1270339>

Back in June the FDA officially added warning to Moderna and Pfizer COVID-19 vaccines about Heart Inflammation. Because this is a known side effect.

<https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-june-25-2021>

The university decided the best way to inform students and faculty of this known risk was by hiding it and providing out dated inaccurate facts on the Ohio U vaccine FAQs.

The first bold face lie on Ohio University's website is

**"There have been no reported deaths associated with vaccine-related myocarditis and pericarditis"**

New Zealand reported its first recorded death linked to the Pfizer COVID-19 vaccine, the health ministry said on Monday, after a woman suffered a rare side-effect leading to inflammation of the heart muscle.

The next piece of medical misinformation is

**"CDC researchers estimate that out of a million second doses given to boys ages 12 to 17, the vaccines might cause a maximum of 70 myocarditis cases, but would prevent 5,700 COVID-19 infections, 215 hospitalizations, and two deaths."**

We already know much less than a million doses led to much more than 70 myocarditis cases. The CDCs "estimate" is so poor it's dangerous. We also know before a single vaccine was administered Dr. Fauci said Early COVID-19 vaccines will only prevent symptoms, not block the virus. Why does the school continue to spread misinformation that the vaccine "would prevent 5,700" infections when "top infectious disease expert" said himself it doesn't block the virus only prevents symptoms? Flash forward to now and every study on delta also shows vaccines are not stopping transmission.

The University's neglect to provide accurate updated information while further coercing people to take vaccine continues to put students and faculty at risk. It's begun to seem like administration will not care until they are held liable for a tragedy. We have an opportunity to protect those at risk of heart inflammation and other symptoms now. If the university continues to ignore and spread misinformation about these effects it runs the risk of letting a these effects unknowingly harm a bobcat.

I understand the relief funding from the state for mandating vaccines was more important to you than these risks and students

medical choice and freedom. All I ask is that you at least accurately inform students and staff about these risks.

**From:** [REDACTED]  
**Sent:** Monday, August 23, 2021 11:32 AM  
**To:** Ice, Gillian <iceg@ohio.edu>  
**Subject:** Vaccine Mandates

Hi Gillian,

My name is [REDACTED] and I'm a writer for The New Political here on campus. I was wondering if the university has plans to mandate the Pfizer vaccine for unvaccinated students now that it has full FDA approval.



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**From:** "Patt, Tyce" <tp335118@ohio.edu>  
**Date:** October 8, 2021 at 11:04:23 PM EDT  
**To:** "Ice, Gillian" <iceg@ohio.edu>  
**Subject: Re: Increasing myocarditis risk with vaccination**

Gillian, I appreciate your effort to find one small study that isn't peer-reviewed. There are just a few problems. Patients were excluded for any prior cardiovascular condition. we know cardiovascular diseases affect nearly half of American adults. <https://pubmed.ncbi.nlm.nih.gov/30700139/>  
A 2009 study found children ages one cardiovascular risk factor is present in 21.96% children, two risk factors had 11.68% children, while 7.94% children had three or more cardiovascular risk factors. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5632499/> Obviously this excluded group is the group most at risk of the adverse side effect. Has the University made any effort to warn students with cardiovascular conditions about this risk? Inclusion criteria also included a first COVID-19 diagnosis during the April 1, 2020 - March 31, 2021 time period. excluding anyone that hasn't been exposed to COVID, and anyone who wasn't first exposed to it in that time window. According to the CDC Since April 2021, increased cases of myocarditis and pericarditis have been reported in the United States after mRNA COVID-19 vaccination (Pfizer-BioNTech and Moderna), particularly in adolescents and young adults. There has not been a similar reporting pattern observed after receipt of the Janssen COVID-19 Vaccine (Johnson & Johnson).

The U.S. Centers for Disease Control (CDC) estimates the population-wide incidence to be .48 cases of post-vaccination myocarditis per 100,000 persons, but a new 2 day old New England Journal of Medicine study indicates the population-wide incidence to be 2.13 cases per 100,000 persons, or more than 4x higher  
<https://www.nejm.org/doi/full/10.1056/NEJMoa2110737>

In addition:

Swedish health authorities on Wednesday suspended the use of Moderna's COVID-19 vaccine for those ages 30 and under because of the increasing myocarditis risk  
<https://apnews.com/article/coronavirus-pandemic-business-denmark-public-health-health-453163d8f93618fde90c06d3474921a0>  
Finland on Thursday paused the use of Moderna's COVID-19 vaccine for younger males due to reports of myocarditis  
<https://www.reuters.com/world/europe/finland-pauses-use-moderna-covid-19-vaccine-young-men-2021-10-07/>  
In Denmark, people under the age of 18 won't be offered the Moderna vaccine because of the cardiovascular risk in young people

Iceland: Suspended use of Moderna in all age groups citing the slight increased risks of cardiac inflammation  
<https://www.ndtv.com/world-news/iceland-suspends-moderna-covid-19-vaccine-over-heart-inflammation-fears-2569203>

Norway: Is recommending against Moderna in people under 18 because of its association with myocarditis and endocarditis.  
<https://www.fdanews.com/articles/204742-norway-sweden-suspend-moderna-covid-19-vaccine-for-young-adults-over-side-effects?v=preview>

The decision only applies to the Moderna vaccine, however reports of myo/pericarditis on VAERS following the Pfizer vaccine are currently 287% higher than Moderna.

I noticed your response to my warnings was to completely remove the warning of adverse reactions from the FAQ instead of updating it to make it accurate. You'll be glad to know the previous inaccurate version is saved and also available here to view <https://web.archive.org/web/20210827131703/https://www.ohio.edu/coronavirus/faq>

Will the University make any further attempt to inform the students they are requiring to take these vaccines of these risks? Or does the university hope to avoid all liability by ignoring the data and using "negligence" as an excuse in the event something does happen to a student or faculty as a result of the University's vaccine mandate?

The Universities own data as you've cited shows at least 98.9% at Ohio University have been unaffected by COVID. Yet 100% of students and staff have to be affected by the schools unscientific mandates. COVID is not the only thing that harms people at Ohio University yet Ohio University continues to have a policy that would make you think it is.

It's sad that you'd be willing to spread medical misinformation by saying "Vaccines were designed to prevent severe disease" The CDC even admits "Vaccines prevent diseases that can be dangerous, or even deadly. Vaccines greatly reduce the risk of infection by working with the body's natural defenses to safely develop immunity to disease". Do you think you trying to redefine what a vaccine is supposed to do encourages me to get a vaccine or further adds to my skepticism?  
It's not hard to tell where all your misconceptions and falsehoods are coming from. Lets look at what the Director of the CDC had to say: "Vaccinated people do not carry the virus — they don't get sick," Dr. Rochelle Walensky, director of the CDC, Said in April. That's "not just in the clinical trials, but it's also in real-world data." in August she said Our vaccines are working exceptionally well," "They continue to work well with delta with regard to severe illness and death, but what they can't do anymore is prevent transmission." I can't blame you for not understanding how these things are supposed to work when the people telling you these falsehoods are going from saying vaccinated people can't carry COVID to saying vaccines do not prevent transmission in just a matter a months.

I can however blame you for blatantly ignoring studies and data while focusing on claims and opinions made by bureaucrats. You claim "vaccines in combination with other public health measures remain our best strategy for beating the pandemic and getting back to some sort of normal. " A recent peer reviewed study from Harvard tells a much different story. This is currently the largest study on how vaccines affect transmission in the United States according to the study "Increases in COVID-19 are unrelated to levels of vaccination across 68 countries and 2947 counties in the United States" <https://link.springer.com/article/10.1007%2Fs10654-021-00808-7>

Antibody levels decrease rapidly after two doses of the Pfizer coronavirus vaccine, a study by researchers at the Sheba Medical Center published Wednesday in the New England Journal of Medicine showed. The research also showed the probability that different groups of individuals – based on age and general health status – will find themselves below a certain antibody threshold after a period of six months.

<https://www.nejm.org/doi/full/10.1056/NEJMoa2114583>

We also know natural Immunity provides better protection from symptoms than the COVID vaccines from a multitude of studies. "natural immunity was 27 times more effective than vaccinated immunity in preventing symptomatic infections." <https://www.medrxiv.org/content/10.1101/2021.08.24.21262415v1>

UK's Data shows COVID infection rates among the fully vaccinated are now higher than those of the unvaccinated in all age cohorts  $\geq 30$   
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1023849/Vaccine\\_surveillance\\_report\\_-\\_week\\_40.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1023849/Vaccine_surveillance_report_-_week_40.pdf)

So we know vaccines wont stop transmission, so we know zero COVID through vaccines is not a viable way to return to normal. But lets dig deeper.

From February 1 through August 2, Britain recorded 742 deaths from the delta variant. Of these, 402 were fully vaccinated while 79 had received just one shot. The remaining 253 cases were unvaccinated. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1009243/Technical\\_Briefing\\_20.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009243/Technical_Briefing_20.pdf)

According to the Office of National Statistics Deaths among Teenage Boys have increased by 63% in the UK since they started getting the Covid-19 Vaccine. This same troubling pattern can be seen almost everywhere in the world.  
<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales>

Just days ago John Hopkins announced more people have died from COVID in 2021 than in 2020. A clear indicator the vaccine IS NOT reducing or preventing deaths or hospitalizations from COVID. <https://coronavirus.jhu.edu/map.html>

So we know vaccines wont stop hospitalizations or deaths. So could you just help me understand how this is our best option at returning to normal? Can you explain to me how COVID is not endemic in your opinion?

Knowing this how could you possibly claim mandating the COVID vaccine is an appropriate public health measure? I am aware other vaccines have been required in our country. Believe it or not I have those vaccines. I am also aware all my other vaccines went through YEARS of clinical trials before they were approved much less required for anything. I am also aware all those vaccines combined havent even had 10% of the amount of adverse reactions as the COVID vaccines according to the CDC. I am also aware that Ohio University did not make me pick a pathway for any of those other vaccines. I am also aware I wasnt required to test for any of the diseases those vaccines protect against. I am also aware all those vaccines prevent the spread of what they were made for unlike the COVID vaccines as you kindly admitted.

I am not sure why people pushing the vaccine on others continue to think others getting vaccinated and. other schools mandating vaccines is a reason for other people to get vaccinated. It seems pretty simple if everyone jumped off a bridge would I just because everyone else is doing it? obviously not. If other universities mandated jumping off a bridge do you also think that would be a valid reason to mandate jumping off bridges at Ohio University? Obviously not, Yet this isn't so obvious for the university when it comes to COVID. I guess this shouldnt be surprising at a campus that encourages so much groupthink.

I see my previous email struck a nerve as im sure this one will. I am actually glad you retaliated by looking up my medical information and asking me to get a COVID test. You'll be happy to hear I defied all odds and I am still negative despite being unvaccinated. [https://api.vaulthealth.com/documents?document\\_type=covid\\_result&order\\_id=T3JkZXJOb2RIOjY0NDEyODU=&t=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJleHAiOiJlE2MzQzNDU3NDgsImhhdCI6MTYzMzc0MDk0OCwic3VlIjoiyWI4NmE2MDI0MjkxNDE1M2lwYjE1MWY0ZGYwYzUyZjMiLCJ0b2t1bl90eXBIIjoIQUNDRVNTIiwicnAiOiIvZG9jdW1lbnRzP2RvY3VtZW50X3R5cGU9Y292aWRfcmVzdWx0Jm9yZGVyX2lkPVQzSmtaWEpPYjJSbE9qWTB0REV5T0RVPSJ9.It6Bx5aPwiaJVxawgGhMr-M3R8isdZVbOrHgi1cePKc](https://api.vaulthealth.com/documents?document_type=covid_result&order_id=T3JkZXJOb2RIOjY0NDEyODU=&t=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJleHAiOiJlE2MzQzNDU3NDgsImhhdCI6MTYzMzc0MDk0OCwic3VlIjoiyWI4NmE2MDI0MjkxNDE1M2lwYjE1MWY0ZGYwYzUyZjMiLCJ0b2t1bl90eXBIIjoIQUNDRVNTIiwicnAiOiIvZG9jdW1lbnRzP2RvY3VtZW50X3R5cGU9Y292aWRfcmVzdWx0Jm9yZGVyX2lkPVQzSmtaWEpPYjJSbE9qWTB0REV5T0RVPSJ9.It6Bx5aPwiaJVxawgGhMr-M3R8isdZVbOrHgi1cePKc)

a mandate for any individual to be tested against COVID-19 for employment or participation at a university or other institution violates federal law. All COVID-19 tests, whether polymerase chain reaction (PCR), antigen tests or others, are authorized, not approved or licensed, by the federal government.  
Federal law states:

Title 21 U.S.C. § 360bbb-3(e)(1)(A)(ii)(I-III) of the Federal Food, Drug, and Cosmetic Act states:



individuals to whom the product is administered are informed—  
(I) that the Secretary has authorized the emergency use of the product;  
(II) of the significant known and potential benefits and risks of such use, and of the extent to which such benefits and risks are unknown; and  
(III) of the option to accept or refuse administration of the product, of the consequences, if any, of refusing administration of the product, and of the alternatives to the product that are available and of their benefits and risks.  
EUA products are by definition experimental and thus require the right to refuse.

The Vault PCR test is indeed Emergency Use Authorized and not approved. This will serve as my notice that I will not be taking anymore "required" COVID tests. As you know in 5 days on October 13th it will be ILLEGAL for Ohio University to require unvaccinated students to asymptmatically test weekly without also having vaccinated students test weekly. The University knows this date is approaching yet has still not updated its policy to remove this blatant discrimination. Maybe the university will make vaccinated students start testing weekly. That'll sure encourage students to wear their masks and continue listening to your "health advice".

Best, Tyce Albert

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**From:** Ice, Gillian <iceg@ohio.edu>  
**Sent:** Monday, October 4, 2021 9:53 AM  
**To:** Patt, Tyce <tp335118@ohio.edu>  
**Subject:** RE: Increasing myocarditis risk with vaccination

Tyce, I apologize for not responding sooner – we had the largest spike in cases in the last month than we’ve ever experienced on campus and in Athens and I was overwhelmed. Thank you for sharing your perspective below. We are, of course, monitoring this research closely but to date, the rates of myocarditis remain higher among people who get COVID than those who receive the vaccine. A recent study found that the estimated rate of myocarditis among those with COVID is six times that of those who received the vaccine. <https://pubmed.ncbi.nlm.nih.gov/34341797/>

COVID has already harmed many at Ohio University and vaccines in combination with other public health measures remain our best strategy for beating the pandemic and getting back to some sort of normal.

Vaccines were designed to prevent severe disease, hospitalization and death and they continue to do so well. They also do reduce transmission, although like all vaccines are not 100% effective. Our own data show that people who are unvaccinated on campus are 3.9x as likely to get infected than those with the vaccine.

I don’t know where you got the idea that we received funding from the state for mandating vaccines. That is certainly not true. We are requiring vaccines because it is an appropriate public health measure. Not only have we had required vaccines in this country for a very long time, we are not alone in requiring vaccines. Most IUC schools require the COVID vaccine and an increasing number of business also require it.

I notice that you have not selected a pathway and you have not tested at Vault. In doing so, you are in direct violation of the university policy has laid out in the Presidential Health directives. Please complete the Pathway immediately and if you are not vaccinated, get tested this week.

Dr. Ice

Gillian H. Ice, Ph.D., M.P.H.  
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**From:** Patt, Tyce <tp335118@ohio.edu>  
**Sent:** Friday, September 3, 2021 12:09 PM  
**To:** Ice, Gillian <iceg@ohio.edu>  
**Subject:** Increasing myocarditis risk with vaccination



Are you aware Public Health Ontario issued a report the other day detailing how there have been 202 ER visits for myocarditis/pericarditis caused by vaccines, with 142 requiring hospitalization. 32 of these were in 12-17yrs. 75 in 18-24yrs.

<https://www.publichealthontario.ca/-/media/documents/ncov/epi/covid-19-myocarditis-pericarditis-vaccines-epi.pdf>

This is a clearly an increasing threat. It is unethical for any health official to push much less mandate a medical treatment without making sure the patient is FULLY aware of this risk. This side effect is disproportionately effecting healthy college aged people.

A study released last month by the Centers for Disease Control and Prevention showed 9,246 adverse events reported among adolescents aged 12 to 17, including 863 serious events, 14 deaths and 397 reports of myocarditis.

<https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e1.htm>

A higher-than-usual number of cases of a type of heart inflammation has been reported following Covid-19 vaccination, especially among young men following their second dose of an mRNA vaccine, the Centers for Disease Control and Prevention said Back in June.

<https://www.nbcnews.com/health/health-news/evidence-grows-stronger-covid-vaccine-link-heart-issue-cdc-says-n1270339>

Back in June the FDA officially added warning to Moderna and Pfizer COVID-19 vaccines about Heart Inflammation. Because this is a known side effect.

<https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-june-25-2021>

The university decided the best way to inform students and faculty of this known risk was by hiding it and providing out dated inaccurate facts on the Ohio U vaccine FAQs.

The first bold face lie on Ohio University's website is

**"There have been no reported deaths associated with vaccine-related myocarditis and pericarditis"**

New Zealand reported its first recorded death linked to the Pfizer COVID-19 vaccine, the health ministry said on Monday, after a woman suffered a rare side-effect leading to inflammation of the heart muscle.

The next piece of medical misinformation is

**"CDC researchers estimate that out of a million second doses given to boys ages 12 to 17, the vaccines might cause a maximum of 70 myocarditis cases, but would prevent 5,700 COVID-19 infections, 215 hospitalizations, and two deaths."**

We already know much less than a million doses led to much more than 70 myocarditis cases. The CDCs "estimate" is so poor it's dangerous. We also know before a single vaccine was administered Dr. Fauci said Early COVID-19 vaccines will only prevent symptoms, not block the virus. Why does the school continue to spread misinformation that the vaccine "would prevent 5,700" infections when "top infectious disease expert" said himself it doesn't block the virus only prevents symptoms? Flash forward to now and every study on delta also shows vaccines are not stopping transmission.

The University's neglect to provide accurate updated information while further coercing people to take vaccine continues to put students and faculty at risk. It's begun to seem like administration will not care until they are held liable for a tragedy. We have an opportunity to protect those at risk of heart inflammation and other symptoms now. If the university continues to ignore and spread misinformation about these effects it runs the risk of letting a these effects unknowingly harm a bobcat.

I understand the relief funding from the state for mandating vaccines was more important to you than these risks and students medical choice and freedom. All I ask is that you at least accurately inform students and staff about these risks.