

Outbreak Breakdown

November 20, 2020

Note to Our Readers: This is our 29th and final edition of the *Outbreak Breakdown*. We launched this newsletter in April to aggregate and distill key pandemic developments for AdvaMed work groups that we support, with a focus on science, data, and public health. Although we are in a phase of the pandemic that may prove to be the most challenging yet, the pace of those developments has slowed and we continue to have other pressing obligations to serve our member companies across numerous areas of work, both on COVID-19 and other medtech priorities. We hope you have found the newsletter interesting and useful. We will continue to track the topics we have covered over the last 8 months so please don't hesitate to reach out to discuss any issues of interest.

Andy and Kristina

I want to especially acknowledge Kristina's contributions to the *Outbreak Breakdown*. She has brought her public health expertise to bear on producing incisive analyses of the headlines of the week, as well as developing our resource guide to pandemic models and trackers. Kristina also has been keeping the AdvaMed team apprised of key scientific developments in pandemic response, and she is a great asset for AdvaMed and our members.

Andy

This weekly report is provided as an informal information resource for certain AdvaMed member work groups. Content is provided by staff and is not to be construed as conveying AdvaMed viewpoints or endorsement. Newsletter Editors, [Andy Fish](#), Chief Strategy Officer and [Kristina Shultz](#), Manager, Strategy & Policy. Inquiries about AdvaMed's COVID-19 response can be directed to [Chris White](#), AdvaMed COVID Action Team Leader, COO & General Counsel.

AdvaMed Resources:

[COVID-19 Diagnostic Supply Registry](#)

[PPE Sourcing Program](#)

[MedTech Responds](#)

Some Things Completely Different

It was a [fruitful](#) week for those seeking non-pandemic news. Actual voter fraud was detected and rejected in New Zealand's hotly contested [Bird of the Year election](#), while in other aerial news one of the world's [most daring flying humans](#) met an untimely end. We learned about [lightning superbolts](#), are looking forward to the [smells of Old Europe](#), and contemplated the similarities of the [universe and the human brain](#) (also see [dark fluid](#)).

Pandemic Snapshot

Global: Current Cases: [57,319,700](#) Deaths: [1,367,200](#)

- New case rates are [falling across Europe](#) for the first time in months, indicating that the new restrictions put in place across much of the continent are working to slow transmission.
- Mexico, which experienced a surge in cases in early October, has now reported [decreasing daily incidence](#) for 7 consecutive days.

- Like the U.S. and many other countries in the Northern Hemisphere, Canada is also experiencing a significant surge in cases. Incidence [increased 53%](#) over the past 2 weeks. While cases were already beginning to increase earlier in the fall, it appears that [Canada's Thanksgiving celebrations](#) in mid-October contributed significantly to the increase in new infections, despite new restrictions put in place around the same time.
- This [University of Oxford tool](#) tracks government responses to COVID-19 using 18 indicators (such as school closures and travel restrictions) for more than 180 countries. The tool also provides data for every U.S. state.

United States: Current Cases: [11,801,500](#) Deaths: [252,373](#)

- Cases are increasing exponentially in many regions of the country and have now been increasing for 10 consecutive weeks, with no evidence that they are nearing or have reached a peak. Yesterday, more than 187,000 new cases were reported – just 15 days after the first day of >100,000 new cases.
- Testing is still increasing – there were 10% more tests performed this past week than the week prior – but not at nearly the same rate that cases are increasing, indicating that the increase in cases represents increased transmission, not increased testing.
- Hospitalizations soared past the previous record of 59,924 (set on April 15). As of Thursday, there were 80,698 people hospitalized with COVID-19 – a 24% increase from the previous week. Hospitalizations lag behind cases by about 12 days, so people who are newly hospitalized today – November 20 – reflect new cases recorded around November 8. In that time period, cases have risen by more than 70% so it's very likely hospitalizations will continue to increase substantially over the next 12-day period.
- This week, the U.S. recorded the 250,000th death from COVID-19. Daily deaths are approaching 2,000 per day. The last time over 2,000 deaths were reported in a single day was on May 7. Deaths lag behind cases by a few weeks and are likely now reflecting new cases discovered in mid-to-late October. This past week, deaths increase by 15% over the week prior.
- Further analysis of this week's metrics is available in this [COVID Tracking Project report](#).
- This [New York Times analysis](#) tracks policy responses to the pandemic and charts the number of new cases and hospitalizations in each state relative to the state's recent containment measures. The analysis shows the increasingly clear relationship between policies and the severity of the outbreak in any given state.

[Johns Hopkins Daily COVID-19 Situation Reports](#)

[AdvaMed COVID-19 Modeling & Data Visualization Resources](#)

News & Insights

Vaccine Trial Results: Moderna announced Monday morning that its SARS-CoV-2 vaccine [reduced the risk of COVID-19 disease by 94.5%](#) in an interim analysis of its Phase III clinical trial data. The vaccine candidate appears to have been effective in preventing severe disease in participants and appeared protective of older populations and people from racial and ethnic minority groups. Moderna expects the trial to be completed and a final analysis performed in the coming weeks.

On Wednesday, Pfizer announced that in a final analysis of its Phase III clinical trial data, its vaccine candidate, developed in partnership with BioNTech, [demonstrated 95% efficacy](#) in preventing COVID-19 disease. In a press release, Pfizer stated that its vaccine candidate is effective at preventing severe

disease and protecting older populations (94% effective in people over 65) and people from racial and ethnic minority groups. Pfizer submitted data to the FDA today to [apply for emergency use authorization](#).

Both vaccines appear to be well-tolerated with minimal side effects. See this [FAQ from the Washington Post](#) for more details on the two vaccine candidates. The New York Times wrote this week about the challenges of [manufacturing vaccines at the massive scale](#) needed to address this crisis.

Healthcare Worker Shortages: In addition to a shortage of hospital beds and equipment, hospitals are also struggling with shortages of healthcare workers to care for the influx of COVID-19 patients. Data from the Department of Health and Human Services (HHS), obtained and analyzed by *The Atlantic*, showed that [almost a quarter of all hospitals](#) reported staffing shortages in the past week.

Many hospitals are short-staffed because their workers either have COVID-19 or have another illness and need to stay home from work until COVID-19 can be ruled out. Last week, the governor of North Dakota announced that hospital staffing shortages were so severe that some healthcare workers who have COVID-19 but are asymptomatic [may continue working](#).

On Tuesday, the Mayo Clinic announced that [900 staff members have contracted COVID-19](#) in the past two weeks. The vast majority (93%) of those people contracted the virus in their communities – not in their workplace.

CDC Media Briefing: The Centers for Disease Control and Prevention (CDC) held its [first media briefing in months](#) yesterday. [In the briefing](#), CDC officials urged people to avoid traveling for Thanksgiving and noted their alarm at the “exponential” increase in infections, hospitalizations, and deaths seen over the past few weeks.

Home Test Kit EUA: This week the FDA granted Emergency Use Authorization (EUA) to the first [completely at-home SARS-CoV-2 diagnostic test kit](#). The test kit, developed by [Lucira Health](#), comes with a nasal swab, a test tube with reagents, and a small test machine and delivers a result in 30 minutes. The test must be prescribed by a healthcare provider.

WHO Update to Remdesivir Guidance: WHO [no longer recommends the use of remdesivir](#) in people hospitalized with COVID-19. In a [review published in The BMJ](#), an expert panel concluded that remdesivir did not improve survival rates for patients and had no meaningful impact on other outcomes, such as the need for mechanical ventilation or time to improvement. Remdesivir was authorized for emergency use in the U.S. this past spring and received FDA approval [in October](#).

[U.S. Colleges Have Reported Over 320,000 Virus Cases, One-Fifth of Them in the Last Month](#) | New York Times, November 20

[Do Digital Contact Tracing Apps Work? Here’s What You Need to Know](#) | Technology Review, November 20

[Virus Surges Complicate the Distribution of Scarce COVID-19 Treatments](#) | The Verge, November 19

[The End of the Pandemic Is Now in Sight](#) | The Atlantic, November 18

[Can You Get COVID-19 On an Airplane? Year, Probably.](#) | WIRED, November 18

[The Vaccines Will Probably Work. Making Them Fast Will Be the Hard Part.](#) | New York Times, November 17

[Doctors Apply COVID-19 Lessons Learned as U.S. Cases Surge](#) | Wall Street Journal, November 17

[Pfizer Launches COVID-19 Vaccine Delivery Trial in Four US States](#) | The Guardian, November 17
[Immunity to the Coronavirus May Last Years, New Data Hint](#) | New York Times, November 17
[Europe Got COVID Largely Under Control in the Summer. What Went Wrong?](#) | Wall Street Journal, November 16
[Doctors Are Calling It Quits Under Stress of the Pandemic](#) | New York Times, November 15
[Why People Don't Trust Contact Tracing Apps, and What to Do About It](#) | Technology Review, November 12

More News

[MIT Technology Review Coronavirus Coverage](#)
[Tulane Outbreak Daily](#)
[Prevent Epidemics Weekly Science Review](#)
[Helio COVID-19 Resource Center](#)
[Johns Hopkins Novel Coronavirus Research Compendium](#)