Outbreak Breakdown
June 27, 2020

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. AdvaMed's COVID-19 response is led by Chris White, AdvaMed COVID Action Team Leader, COO & General Counsel. Newsletter contacts: Andy Fish, Chief Strategy Officer and Kristina Shultz, Manager, Strategy & Policy.

AdvaMed Notes

Advances in Surgery Webinar: AdvaMed President & CEO Scott Whitaker participated in a webinar, hosted by Advances in Surgery, entitled, "Collaborating to Shape the Next Normal in Surgery."

Senate HELP Hearing: The U.S. Senate HELP Committee has scheduled a hearing on Tuesday, June 30th, entitled "COVID-19: Update on Progress Toward Safely Getting Back to Work and Back to School", at which it will hear testimony from key Administration officials.

PPE Sourcing: As reported previously, AdvaMed has established a PPE Sourcing Program to assist member companies with securing PPE supplies.

MedTech Responds: Comprehensive information on AdvaMed's COVID-19 response and resources is available here. A list of upcoming meetings and webinars that may be of interest to AdvaMed members is available here.

Something Completely Different

In Spain, the Uceli Quartet performed to a live audience consisting entirely of potted plants. No word on whether an audience with plenty of thyme on its hands appreciated the thoughtful selection of Puccini's "Chrysanthemums". Florida residents may be jealous, as it will be harder for them to get potted now that their bars were ordered today to stop serving alcohol.

Headlines

Tulane Outbreak Daily
Johns Hopkins Daily COVID-19 Situation Reports

Fauci Says Young People Driving "Paradigm Shift" In Virus Pandemic | CBS News, June 26
It's Not Just the Lungs: The COVID-19 Virus Attacks Like No Other 'Respiratory' Infection | STAT News, June 26
The Trump Administration Is Eyeing a New Testing Strategy for Coronavirus, Anthony Fauci Says | Washington Post, June 26
How the Virus Won | New York Times, June 25
As Wave of COVID-19 Cases Crashes, a Surge in Other Health Conditions Looms | STAT News, June 25
Texas Pauses Reopening, as CDC Says Millions More May Have Had Coronavirus | Wall Street Journal, June 25
As Virus Surges, Younger People Account for 'Disturbing' Number of Cases | New York Times, June 25
CDC Broadens Guidance on Americans Facing Risk of Severe COVID-19 | STAT News, June 25

When COVID-19 Hits the Brain, It Can Cause Strokes, Psychosis and a Dementia-Like Syndrome, New Survey Shows | STAT News, June 25
Americans Face New Virus Limbo as Some Reopenings Are Halted | New York Times, June 24
Virus Gains Steam Across Latin America | New York Times, June 23
How Viral Pandemics Emerge – and Why COVID-19 Won't Be the Last | Forbes, June 23
In Poor Countries, Many COVID-19 Patients Are Desperate for Oxygen | New York Times, June 23
'Mini Organs' Reveal How Coronavirus Ravages the Body | Scientific American, June 22
What a Negative COVID-19 Test Really Means | The Atlantic, June 21
CDC Coronavirus Test Kits Were Likely Contaminated, Federal Review Confirms | Washington Post, June 20
Younger Adults Are Increasingly Testing Positive for the Coronavirus | NPR, June 19

Pandemic Outlook

Global: As of today, there are more than 9.7 million cases worldwide, and more than 493,000 people have died. Johns Hopkins included this timeline in its June 24 Situation Report, illustrating the trajectory of the pandemic and its acceleration over time:

Zero cases to 1 million cases: ~100 days
1 million to 2 million cases: 12 days
2 million to 3 million cases: 13 days
3 million to 4 million cases: 12 days
4 million to 5 million cases: 11 days
5 million to 6 million cases: 10 days
6 million to 7 million cases: 8 days
7 million to 8 million cases: 8 days
8 million to 9 million cases: 6 days

United States: Cases continue to surge across many states in the U.S. As of today, there are more than 2.4 million cases in the U.S. and over 125,000 people have died, representing approximately one quarter of all cases and deaths worldwide. On Wednesday and Thursday, the U.S. reported its highest-ever daily new cases (36,965 cases and 41,113 cases, respectively). Some of the states experiencing the greatest increases in new cases are pausing reopening, including local moratoriums in Texas on elective medical procedures and bar restrictions in Florida.

COVID Exit Strategy continues to track individual states' progress towards meeting CDC's recommended reopening criteria and key metrics, including case counts and test positivity.

Johns Hopkins released a timeline tool that shows how cases and deaths changed in response to major restrictions and reopenings for each state over the same time period.

It's Been a Week

Against a backdrop of rising COVID-19 cases in a majority of states, and a week in which the highest daily new case numbers of the pandemic were reported, Administration officials took to the White House podium and House of Representatives witness chairs to provide updates on the pandemic and the public health response. At the House hearing, officials emphasized a commitment to doing more testing. In the first media briefing held by the White House Pandemic Task Force in some time, Ambassador Deborah

Birx, Coronavirus Response Coordinator, reported that there are 16 states of particular concern because they have both rising case rates and rising test positivity. Officials also noted that a declining mortality rate is a positive development, with rising case rates occurring predominantly in younger people, but worries persist that this is an indication of widespread asymptomatic transmission among younger people and a precursor to a future rise in mortality**.** NIH's Dr. Anthony Fauci also said this week that in consideration of the continued challenges in getting a handle on asymptomatic transmission, the Administration is considering a "pooled testing" approach.

ICYMI

COVID-19 Modeling & Data Visualization Guide: We have compiled this informal guide to prominent COVID-19 pandemic modeling and data visualization initiatives and are updating it from time to time.

CDC Briefing: CDC held a press briefing on Thursday during which Dr. Robert Redfield reported that the true number of cases in the U.S. may be as high as, or higher than, 20 million. CDC estimates that testing over the past few months has likely only detected 1 in every 10 infections, meaning that between 5-8% of the U.S. population has been exposed. This still leaves the vast majority of the population susceptible to infection. Dr. Redfield indicated that CDC's estimate is based on results from seroprevalence studies and other surveillance measures.

Shifting Age Distribution: COVID-19 incidence is increasing across the U.S. as states reopen and individuals resume many of their normal activities, yet deaths are steadily decreasing. This is likely explained in part by the shifting age distribution of new cases. An increasing proportion of new cases are in young people in their 20s, 30s, and 40s, while new cases among the elderly are decreasing. The factors contributing to this shift are likely a combination of changes in behavior, as more young people resume social activities following the relaxation of distancing restrictions and more elderly people take precautions to protect themselves; and an increase in testing. Earlier in the pandemic, testing was limited to the most severely ill, who were disproportionately older in age. Now, testing is more widely available and can be accessed by those who have more mild symptoms. However, rising test positivity indicates that the increase in cases in most states is not solely due to an increase in testing.

While younger people are less likely to experience severe illness as a result of COVID-19, they can still become very sick and require hospitalization. They are also more likely to be asymptomatic and unknowingly transmit SARS-CoV-2 to people who may be at higher risk of severe illness and death. There is growing concern that younger people may be driving the expanding outbreaks in many states, in part because they feel the risk to themselves is low – however, the risk to others remains very high.

SARS-CoV-2 in Wastewater: Cities around the world have begun looking to wastewater samples for clues as to when SARS-CoV-2 first appeared. Earlier this week, Italian officials reported preliminary findings that SARS-CoV-2 was present in wastewater samples taken on December 18 in Milan and Turin, indicating that the virus may have been circulating outside of China before the first cases were reporting in Wuhan in December. While the virus may have been present outside of China in late 2019, it's unclear whether those cases were the source of the large outbreaks that followed or if there were later introductions of the virus that resulted in widespread transmission.

Regular testing of wastewater may be able to serve as an early warning system to indicate where outbreaks are occurring before they can be detected through diagnostic testing. Viral shedding can begin shortly after infection and before symptoms develop (if they develop at all). Detecting viral

particles in sewage may be able to provide a more accurate picture of the prevalence of SARS-CoV-2, especially given the high rate of asymptomatic infections that are unlikely to be identified otherwise. Widespread wastewater testing is not typically used as a means of disease surveillance, so it will take additional research and resources to develop this capability.

Johns Hopkins Serosurvey Guidance: Last week, the Johns Hopkins Center for Health Security published a report providing recommendations for a national strategy for SARS-CoV-2 seroprevalence studies.

Research Roundup

Prevent Epidemics Weekly Science Review
Helio COVID-19 Resource Center

COVID-19 and Pregnancy: The latest edition of CDC's Morbidity and Mortality Weekly Report (MMWR) provides new information on the risks associated with COVID-19 in pregnant women. CDC reports that pregnant women with COVID-19 are at higher risk of severe illness and are more likely to require hospitalization and mechanical ventilation. Pregnancy was not associated with an increased risk of death, however. The study had one major limitation – it was unclear whether hospitalizations of pregnant women were due to labor and delivery or because of COVID-19 symptoms, which may have significantly inflated the number of hospitalized women. Researchers did not investigate the potential impact of COVID-19 infection on birth outcomes (e.g. preterm birth or pregnancy loss).

Inhaled Remdesivir: On Monday, Gilead Sciences announced that it received authorization from FDA to initiate a clinical trial investigating the use of inhaled remdesivir to treat COVID-19. Remdesivir is currently allowed to be used intravenously under an EUA; however, earlier clinical trial results indicated that it may be most effective in treating earlier stages of the disease. An inhaled formulation, which would be administered using a nebulizer, would allow the drug to be used outside of hospital settings and in earlier stages of the disease.