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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

B.1.1.7, A new variant of covid-19, isn't kidding around. What we know about a fast-spreading mutant and its effect on children.

Viruses mutate by changing their genetic code. SARS-CoV-2, the virus that causes covid-19, is no exception. The CDC estimates that any particular SARS-CoV-2 strain will acquire a new mutation around every two weeks. Not all of these mutations to viral genes will be evident to scientists, however. That is, unless the mutations change the structure of the virus itself, altering its efficiency, infectivity, and the severity of disease it causes, no one is likely to notice or even care when they occur. But when a mutation does cause a noticeable change in how the virus operates, we become acutely interested in understanding it.

On December 20th, a "new" strain of the SARS-CoV-2 started making global headlines. Public Health England (an agency in the United Kingdom which carries out many of the functions that the US Centers for Disease Control and Prevention does in the US) emphasized that this new version of the virus does not seem to cause more severe disease nor higher mortality rates. The concern is that this variant spreads faster than the "usual" strain of SARS-CoV-2. It also appears that children are more susceptible to this iteration, which has ramped up concerns but in the UK and around the world.

The rate of transmission for this new mutant—known as B.1.1.7—is 71 percent higher than seen among typical other viral variants of SARS-CoV-2. This is likely due to the strain's enhanced ability to find and enter human cells.

Children have never been immune to the novel coronavirus, but when kids come into contact with it, the virus less frequently enters the lungs and causes less significant disease, owing to differences between the respiratory tracts (as covered in *Brief19*) and lungs of children and adult. Changes in B.1.1.7 viral variant apparently make it easier for the virus to circumvent the advantages children have had in staving off clinical impactful covid-19 disease. The concern is that this new virus could cause symptoms and complications more frequently, though that has not yet been determined.

While the B.1.1.7 variant has been most closely tracked in the United Kingdom so far, is probably already in the United States. It started spreading back in September, though researchers did not begin to understand its enhanced features until more recently.

Before you panic, it is important to remember sly mutations like this are a typical part of the viral playbook. Also, the vaccines being rolled out were developed to account for the likelihood that small shifts in viral proteins would occur. Therefore, the current versions of the vaccines are likely to retain their ability to neutralize the virus and prevent most disease. However, this strain may yet change how most people view children as viral vectors and force policymakers to reassess safety in schools. One thing is certain: no mutation can evade the effect of the simple public health measures that experts have been emphasizing. Make it your New Year's Resolution to maintain safe physical distancing, wash your hands, and wear a mask. These precautions can still outsmart this prevalent pathogen, no matter how many mutations it accrues. *—Joanna Parga-Belinkie, MD*

POLICY BRIEFING

Stimulus bill signed into law. Pandemic emergency unemployment compensation had expired over the weekend.

The United States Congress has essentially been deadlocked on a new round of coronavirus stimulus since July, when the Republican-controlled Senate passed its version that was just slightly smaller than the Democrat-controlled House-proposed package (the $2 trillion difference make sound like a lot, but in the context of the US economy and the pandemic's effect on economic productivity, even that amount of money almost amounts to a rounding error). The drama ended on Sunday evening.

In recent weeks the sides appeared to be working towards reconciliation, with compromises resulting in unemployment benefits and stimulus checks ($300 and $1200, respectively) favored by the Democrats as well as protections for large businesses championed by the Republicans. As this process approached finalization, however, President Trump began tweeting his desire for larger stimulus checks, to the tune of $2000 over the opposition of many of his Republican allies trying to balance fiscal restraint with the needs of the moment.

A strange alliance began to brew. Democrat lawmakers quickly got on board with Trump's request, drafting an amendment to the bill with new language to reflect the increased disbursement. On Thursday, Democrats were unsuccessful in an attempt to pass the changes by "unanimous consent."

Speaker Pelosi set a formal vote for the measure on Monday in the Democrat-controlled House, while Republican Senators largely remained silent on the issue. Complicating matters was the fact that Trump is at once a lame-duck President with less than a month remaining in office, all the while embodying what has become of the modern Republican party. He is at his weakest point—and yet the specter of a 2024 run likely remains on the minds of his allies and foes alike.

Amidst this new delay, millions of Americans reliant on Pandemic Unemployment Assistance and Pandemic Emergency Unemployment Compensation saw those benefits expire over the weekend. Even with renewal, required re-enrolling may result in weeks of delays as the application process once again goes into gear.

With an impasse developing, President Trump unexpectedly backed down on Sunday night. He signed the original text with the lower stimulus checks in place, passing it into law. *Various*.

—Brief19 Policy Team

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