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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Kids and seroprevalence: good news or a double-edged sword?

Let's imagine two situations. In the first, kids don't get SARS-CoV-2 very often and they don't spread it much. In the second, kids get the novel coronavirus more often than we currently realize, don't get too sick from it, but in fact do spread it more often than we have appreciated. Which is better? On the face of it, the first one. It means that we do not need to factor kids into our models for reaching herd immunity as heavily. But it also implies that kids remain a potential target for future variants. If it's the case that more kids have been infected with SARS-CoV-2 than we initially thought, the affected children are likely to have some degree of immunity, which may help them stave off infections, at least in some degree, from infection by one of the many emerging variants being tracked today. So, perhaps, the best-case scenario is a combination of the two scenarios: that kids have been infected a great deal more than measured, that they do not frequently develop serious covid-19, and they do not spread the virus to other higher risk individuals.

A [new study](#) published in *Morbidity and Mortality Weekly Report*, the primary public-facing medical journal of the US Centers for Disease Control and Prevention, gives new insights that may help us tease some of this out. Researchers in Mississippi tested blood samples from 1,630 children under 18 years of age, from May through September of 2020. The blood samples were obtained for unrelated reasons but were kept in storage so that they could be tested later. The researchers then checked the samples for antibodies against SARS-CoV-2, to see how many of the samples showed direct evidence of a prior infection. Around 11 percent of the samples were positive for antibodies, though after adjusting for the fact that the ages and races of the samples did not reflect the actual population, the authors concluded that approximately 16.3 percent of children under 18 had evidence of a prior SARS-CoV-2 infection during the five-month period from which the samples were drawn.

The authors compared the rates of infection detected by these antibody tests to the number of contemporaneous infections (i.e. daily case counts based on the usual nasal swabs that most places use for diagnosing infections) that were reported by Mississippi State Department of Health (MSDPH). Early on, when nasal swab testing was abysmally low, the ratio of the number of infections detected by antibody results (i.e. this study) and those reported to the MSDPH was over 68; in June the ratio was over 33, over 20 in July, over 14 in August, and over 12 in September. That means that the gap between detected infections in real-time and those detected by antibody later is dropping but that daily testing in the community was still missing a large number of SARS-CoV-2 cases in the early fall, in Mississippi.

Of note, blood tests from Hispanic children accounted for 9 percent of infections, even though Hispanic people are less than 3 percent of the population of Mississippi; they also had the highest rates of test positivity (meaning that there were more positive tests, out of a relatively fewer number of samples). Also striking, Black children represented nearly 67 percent of the pediatric infections (though the test positivity was somewhat lower than among Hispanic children), and Black people are around 38 percent of the state's total population.

What does this say about herd immunity? Official data suggest that from May through September, around 100,000 coronavirus cases occurred among people of all ages. Since then, another 200,000 documented cases have occurred. Since the authors assume that around 16 percent of kids had been infected by the end of September, does this mean that half of the

population already there has some degree of protection? Possibly. If that's true, then fewer people will need to be vaccinated in order to achieve herd immunity, assuming antibodies acquired from natural infection are strong enough and do not wane in terms of their protectiveness. These data also imply that the rate of serious illness and fatality from pediatric infections is even lower than some have estimated.

On the other hand, these data imply that kids may be infected much more often than we realized. If that's true, kids might be contributing to spread (either at school or at home) in ways that contact tracing and other testing regimens have simply failed to capture. If jurisdictions are opening schools on the supposition that kids do not spread coronavirus, the validity of such policies could be affected by data such as these that tend to suggest that our ability to track this virus is far less advanced than we realize.

—Jeremy Samuel Faust MD MS

POLICY BRIEFING

Senate stimulus slimmer in some ways, fatter in others.

After a grueling stint in the Senate, including Senator Ron Johnson (R) forcing floor staff to [read](#) aloud every word of the 628 page proposed stimulus package, and Senator Joe Manchin (D) [wavering](#) on the degree of federal support for unemployment, the upper chamber of US Congress [voted](#) to pass its version of the next coronavirus stimulus package. The vote went strictly along party lines. While the House bill mirrored President Biden's [proposal](#), the Senate version has some key omissions that show ongoing divisions within the Democratic Party.

The Senate was able to pass the legislation via a simple majority (avoiding filibuster rules) using a technique called "[reconciliation](#)", wherein Congress can pass one fiduciary bill per fiscal year; under the relevant Senate rules, there is a fifty-hour time limit for debate, and no extensions are allowed. The chamber then begins a "[vote-a-rama](#)" that allows any Senator to propose any amendment without debate, with no limitations on the number of additions proposed; this process continues until an unanimous vote to cease is reached. In addition to new proposals, any Senator may object to inclusions deemed to not affect the level of spending or revenues, or which results in an incidental change under what is known as the "[Byrd Rule](#)." These are considered and adjudicated by the Senate [Parliamentarian](#), a non-political non-partisan appointee. Senators who object to the Parliamentarian's decision need sixty votes to overcome an item's removal.

For the stimulus bill, this mattered in several instances. First, one proposed inclusion in the package was an increase on the minimum wage to \$15 an hour by 2025; this fell victim to the Byrd Rule and the Parliamentarian. So did a section regarding a rail system in Silicon Valley, as did a transportation-related fund for a new bridge between New York and Canada.

But even on issues more directly related to the effects of the pandemic, keeping moderate Democrats onboard meant [tightening](#) the eligibility for direct stimulus checks. Federal unemployment aid was reduced from \$400 to \$300 to appease Senator Manchin, for example. But the Senate did not only take items away. They also voted to exempt student loan forgiveness from income tax consideration through 2025. Additionally, up to \$10,200 in unemployment assistance will likewise be exempt on 2020 income tax for households making less than \$150,000, and cover 100 percent of COBRA premiums through September. Now the package heads to the White House for the President's signature into law. *Various.* —*Brief19 Policy Team*