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## **BRIEF19**

*A daily review of covid-19 research and policy.*

### **RESEARCH BRIEFING**

#### **Improved methods for seroprevalence surveillance provide new and better answers.**

Since the outbreak of SARS-CoV-2, the virus that causes covid-19, there has been much discussion on just how many cases we may be missing. If we test too few people, we underestimate how many cases there are. It's also possible to over-estimate how many people have been infected—this can happen if volunteers for antibody blood testing are for some reasons more likely to have been exposed to the virus than the average person in that same area.

A collaboration between researchers at Yale University, Gallup Poll, and the Centers for Disease Control and Prevention sought to determine a more accurate number of previously infected people in Connecticut. Their [findings](#) were posted on medrxiv, a preprint server which hosts medical research manuscripts that have not yet undergone peer review.

The results indicate that as of June 1st, only 4 percent of Connecticut residents living outside of nursing homes/other long-term care facilities, assisted living, or prisons/jails had SARS-CoV-2 antibodies in their blood. The presence of antibodies suggests a previous infection and therefore some degree of immunity. Due to statistical wiggle room, the findings are 95 percent likely to be between 2 and 6 percent. The implication is that around 112,000 infections had occurred by June 1<sup>st</sup>, far more than the 42,000 detected by “traditional” PCR swabs.

Indeed, compared to “normal” PCR testing that tests for the virus’ DNA (which implies active or recent infection, though not necessarily contagiousness), this finding is substantially higher. But other groups, including the CDC, have suggested that the healthcare system has missed many more cases than appear to have been missed in Connecticut. This is concerning.

The interesting thing about this study, however, is its methods. To get better answers, the researchers did not test *more* people. Rather, they tested *intelligently*. Rather than relying on blood samples lying around the lab for other reasons, or volunteers who responded to a call for participants, the researchers went to great lengths to ensure that subjects in this study were representative of the at-large population of Connecticut (outside of the “congregant living” situations named above). They did this similarly to how pollsters carry out election polls. Random phone numbers were generated and volunteers literally cold-called people. Among those who were willing to participate (there was a small financial incentive), Black and Hispanic people were intentionally *over-sampled* so that the relatively smaller number of participants from these demographics would yield statistically usable results (if you researchers collect data from too small a number of people from a certain demographic, the statistics are usually impossible to be “confident” in). Among thousands of people called on the phone, hundreds of them eventually went to a nearby testing center to participate—enough to generate interpretable data. Among those reporting a fever during March-May, 32 percent were found to have antibodies for SARS-CoV-2. In participants without symptoms though, only 0.6 percent were found to have antibodies. In those reporting a previously positive covid-19 test through other means, all of them (11 people) had antibodies. This suggests that antibodies do not fade as quickly as some have feared (high quality tests are needed). However, these new data also imply that we have a long way to go before herd immunity is reached and that many people are still susceptible.

—Jeremy Samuel Faust MD MS

*Conflict of interest notification: I was not involved in this study but I have joined the authors of this study on a follow-up investigation. -JF.*

## **POLICY BRIEFING**

### **CMS to follow through on threat that hospitals must report data to HHS, not CDC.**

Last month *Brief19* featured an [update](#) about the Centers for Medicare and Medicaid Services (CMS) Administrator Seema Verma's threatening to withhold Medicare reimbursement if hospitals did not submit coronavirus data directly to the Department of Health and Human Services (HHS), a move that was highly [criticized](#) for removing the Centers for Disease Control and Prevention (CDC) from the process.

A new draft [letter](#) from CMS reveals the details of the new plan, requiring hospitals to provide daily accounts of the number of coronavirus cases and supply of remdesivir (the drug has some evidence to support of its use in covid-19 patients; it appears to shorten duration of hospital stays among those patients well enough to be sent home) directly into the HHS system. In addition, periodic updates on various hospital supplies are required for reporting. Failure to comply after repeated warnings will result in termination of the facility's Medicare agreement. This would have astronomical implications for any hospitals running afoul of the policy. While HHS claims the data is necessary for planning and mitigation purposes, hospitals have described the unfunded mandate with shifting reporting requirements as creating unnecessary stress and distraction. *Various*.

—Joshua Lesko, MD

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*Brief19 is a daily executive summary of covid-19-related medical research, news, and public policy.  
It was founded and created by frontline emergency medicine physicians with expertise in medical  
research critique, health and public policy.*