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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Covid-19 variant B.1.1.7 (UK) is associated with a slight increase in mortality.

With the knowledge that SARS-CoV-2 variants appearing in various parts of the world, the research and scientific communities have been attempting to understand more about the potential infectivity and mortality of these new coronavirus threats. In a study published this week in the *British Medical Journal*, researchers described early findings about the B.1.1.7 variant that has cropped up in the United Kingdom. Until now, there had been some data to support the idea that the variant was more contagious, but less was known about whether outcomes were worse, compared to the "original" or "wild type" strain that caused the pandemic in the first place.

Carried out in community testing centers in the U.K., the study examined a cohort of over 54,000 matched pairs of patients with SARS-CoV-2. What this means is that researchers identified around 54,000 patients with the B.1.1.7 variant and then found 54,000 other patients with the "regular" version of the virus. The investigators made sure that the matches were of similar age and came from similar locations in order to make the most reliable comparison.

The researchers were primarily concerned with the mortality difference 28 days after infection. Those infected with the B.1.1.7 variant cohort were, on average, 64 percent more likely to die. A notable caveat to this statistic, however, was that the results were gleaned from a period when hospital occupancy was particularly high (which is known to increase mortality overall), and this was a largely unvaccinated population. However, the baseline mortality in this cohort was still relatively low. Among those with the "original" virus, around 3 out of 1,000 people died; by comparison around 4 out of 1,000 died in patients with the B.1.1.7 variant. This comes out to a "case fatality rate" of 0.3 or 0.4 percent respectively. While that sounds low, the average age of this cohort was 46. As expected, the study showed that older age was correlated with increased mortality. Also interestingly, the hazard ratio between the two cohorts remained similar between days 0 and 14. The mortality differences became noticeable between days 15-28.

There are a number of significant limitations to the study, though overall it was thoughtfully done. It should also be noted that while the overall risk of death in covid-19 patients in this cohort was relatively low, the difference was real. Fortunately, the SIREN study conducted in the UK shows promising data that the Pfizer-BioNtech vaccine is quite effective at preventing covid-19 illness even for those with the B.1.1.7 variant. In addition, Moderna-derived antibodies have also been shown to be still provide protection against the variant in lab tests.

—Joshua Niforatos, MD, MTS

POLICY BRIEFING

Combatting vaccine disparity in underserved communities.

As the initial growing pains of developing a national vaccine rollout fade in the United States, Black and Hispanic communities have increasingly become the focus of vaccine misinformation. While frontline workers have been waging a coordinated effort online against misinformation campaigns, prominent anti-vaccination advocates continue to produce false and misleading media that liken the vaccine to historical governmental experimentation. The reason

that anti-vaccination often "works" is that many people have a rational mistrust towards doctors and public health efforts. Meanwhile, vaccine hesitancy has also been high among rural White (i.e. often Republican) voters, who are often hard to reach and who do not have a great deal of interest in being "told" what to do or think, no matter how accurate or well-meaning those messages may be. In sum, vaccine hesitancy cuts across many demographic lines, and for varying reasons.

Fortunately, those working to combat misinformation are about to get a boost from the federal government. Announced on Monday, the US Department of Health and Human Services (HHS) has launched a $250 million effort to encourage covid-19 safety and vaccination in underserved communities. Called *Advancing Health Literacy to Enhance Equitable Community Response to COVID-19*, this initiative seeks to fund approximately 30 urban and 43 rural community projects for two years. The projects will be asked to create impact statements for their local population, and create and enact health literacy plans, "to increase the availability, acceptability and use of COVID-19 public health information and services by racial and ethnic minority populations and others considered vulnerable." Grants will range between $3 million and $4 million. Applications for project funding are due April 20. While these efforts will certainly help, hesitancy within these groups has been found to be decreasing, with access to supplies becoming the limiting factor. However, with President Biden announcing yesterday that all adults should have access to a coronavirus vaccine by May 1st, hesitancy may again be what keeps us from reaching herd immunity. *Various.*

—Brief19 Policy Team

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