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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

SIREN study includes data suggesting Pfizer/BioNtech vaccine prevents many infections.

Just over two months removed from the US Food and Drug Administration's Emergency Use Authorization approvals of both the Pfizer/BioNtech and Moderna vaccines, promising new data on vaccine effectiveness has been made public. Published Monday as a preprint in [The Lancet](#), researchers involved in the SIREN study evaluated the efficacy of the Pfizer vaccine among healthcare workers (HCW) receiving frequent asymptomatic testing. SIREN is a multicenter prospective cohort study that took place in publicly funded hospitals in the United Kingdom.

Over 20,000 HCW and staff from 104 hospitals were followed between December 8th and February 5th. Thirty-five percent of the vaccine recipients had a previously documented SARS-CoV-2 infection by PCR or antibody testing. Notably, an overwhelming majority of the participants were female and white (84 and 89 percent, respectively). A documented 5,874 had prior medical conditions, most commonly asthma, obesity, or diabetes. By the end of the study period, 89 percent of the participants had received at least one vaccine dose, while just eight percent had received both.

Promisingly, the data showed that after 21 days, just a single dose of the Pfizer/BioNtech vaccine was 72 percent effective at preventing not just covid-19 but SARS-CoV-2 infection itself; the vaccine was 86 percent effective in decreasing infection seven days after the second dose. These data are specific to the individuals who had *not* gotten sick before. At the time of the preprint, no data was available for those with previously documented infections. More good news: this cohort of patients was vaccinated when the B.1.1.7 variant of SARS-CoV-2 was dominant throughout the UK; it seems that the vaccine is highly effective against that more infectious strain as well.

One discouraging piece of data did come out of this study too, however, with respect to those who were less likely to receive a vaccine. Individuals less likely to get a shot were noted to be female, under 35 years old, self-identified as Black or Asian and living in socio-economically depressed areas. This is a reflection of systemic disparities, which reflect some of the same inequalities seen among those that have been more affected by covid-19 around the globe.

Nevertheless, these data add to the mounting evidence that the vaccines not just prevent symptomatic disease, but also infection, and therefore contagion. What remains unknown is whether the 86 decrease is the ceiling for decreasing infection, or whether further out, the number may rise. Also unknown is whether the vaccines decrease the degree to which those who become infected are contagious. If the vaccines also limit contagion, the end of this crisis could be within our grasp, were enough vaccines to be available, and enough people were willing to take them.

—Joshua Niforatos, MD, MTS

POLICY BRIEFING

New guidelines for payment protection program.

The Paycheck Protection Program (PPP) is a program that was [created](#) under the Coronavirus Aid, Relief, Economic Security (CARES) Act that aimed to help small businesses through the turmoil of covid-19. While its rollout has been far from perfect, it has maintained

bipartisan support, and President Biden has announced changes to the qualifications to straighten out the ship.

Unfortunately, since the earliest days of the PPP, large conglomerates found ways to use their corporate structures to qualify for payouts, with \$243.4 million of the initial \$349 billion [going](#) to publicly-traded companies. While many of these entities elected to [return](#) the ill-gotten funds after being publicly identified, not all did. Despite the problems in vetting applicants in this first-come, first-served program, its filing deadline was [extended](#) due to unused funds, and additional stimulus packages continued to refill the coffers. Further, though the House and Senate were very much divided on the size and content of subsequent stimulus packages, both parties have supported the PPP and it continues to disburse loans.

Starting this week, President Biden is charting a new course, having [announced](#) that for the next two weeks, the only businesses that can apply for funding are those with fewer than twenty employees. Specific pools will be set aside for sole ownership entities as well as businesses owned by women and people of color. The new guidelines will also [include](#) legal US residents who are *not* citizens, a group that was excluded under the previous application cycles. Also included are felons whose charges do not include fraud. In addition, those with student loan debt delinquency will no longer be disqualified. *Various.*

—*Brief19 Policy Team*

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