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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Moderna mRNA vaccine shows durable antibody response six months later.

Early in the pandemic, some people were concerned that the antibodies generated in response to natural coronavirus infection would fade rapidly, raising the specter of a never-ending crisis in which repeat infections were common. Mostly, these fears came out of reports stemming from antibody tests that we now know were not adequately vetted. While repeat infections have been reported widely, they remain rare occurrences. But what about antibodies our bodies make in response to vaccination?

Now, months removed from the initial dissemination of the two approved mRNA vaccines (from Pfizer/BioNTech and Moderna) and the groundbreaking clinical trials for each which have finally begun to turn the tide of the pandemic, new data suggests that the Moderna vaccine provides persistent immunity at least six months after inoculation. A research letter, which was published in *The New England Journal of Medicine* yesterday showed significant evidence for the durability of neutralizing antibodies elicited by the vaccine.

Blood taken from a group of 33 individuals enrolled in Moderna's clinical trials were evaluated 180 days after receiving their second dose and tested for antibody activity against SARS-CoV-2. In all age groups, antibody levels were orders of magnitude above the detectable limit six months out, and the blood taken from the vaccine recipients was also able to neutralize live virus at that time as well. It does appear, however, that antibody activity was slightly lower for individuals over 56 years of age.

The takeaway here that we know the Moderna covid-19 mRNA vaccine maintains efficacy six months after the second dose. Research is ongoing about just how long that immunity will last, whether any of the newer variants muddy this picture, and whether or not we will eventually require a booster shot at some point down the road.

—Joshua Niforatos, MD, MTS

POLICY BRIEFING

Federal bailout money disproportionately benefited wealthy hospital systems.

At the beginning of the pandemic, it seemed that hospitals might be immune to the economic downturn felt across the world. Many observers assumed that patient volumes in emergency rooms and inpatient hospital wards would be higher than ever, leading to sustained—if not increased—revenues. The harsh reality soon set in, however, as cancelled clinic appointments, surgeries, and elective procedures caused hospital systems to hemorrhage money. Because of this financial hardship experienced by the very institutions who were tasked with treating sick covid-19 patients, many received federal bailout money. Naturally (to no one's surprise), some hospitals benefited more than others.

Like many businesses large and small, hospitals around the country faced difficult decisions about whether to lay off or furlough employees as revenue fell. Then the federal government stepped in and sent relief funds to many of those hospitals. The upshot is that some—many of the nation's wealthiest health systems—are now flush with cash, while others remain near insolvency.

Outlined in reporting by *Kaiser Health News*, the degree of discrepancy was a result of the uneven distribution of funding as determined by the US Department of Health and Human Services (HHS) during the earlier days of the pandemic. Instead of assessing which hospitals were the neediest, relief was provided based on hospitals' typical yearly revenue. This favored those systems who care for a greater proportion of privately insured patients. In other words, the hospitals that are always short on cash because they take care of uninsured and underinsured patients, suffered even more during the covid-19 pandemic. While some hospital systems are returning their surplus cash to the Federal Treasury, others are retaining it with the expectation that further costs will be incurred as the pandemic drags on.

The current administration, HHS, and Congress will continue to review these programs. But it comes as no surprise that the wealthy hospital systems have emerged from the darkest days of the pandemic, while many public city and rural hospitals—the very institutions that treat the populations most affected by covid-19—will continue to struggle.

—Fred Milgrim, MD

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