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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Persistence of antibodies among United Kingdom healthcare workers.

While safe and effective vaccines have been cause for hope that the dawn of a post pandemic era may be in sight, the question of how long our antibodies will last (whether attained via natural immunity or vaccine) remains largely unanswered. Case reports from both the United States and Hong Kong have reported individuals getting reinfected with SARS-CoV-2—typically after 90 days and often following fairly asymptomatic initial infections. Now, researchers in the United Kingdom have attempted to assess just how long we might maintain our immunity.

A longitudinal study was published in the *New England Journal of Medicine* last week which followed healthcare workers over a 31 week period between March and November. Only symptomatic individuals were included at the beginning of the study, but after a month, asymptomatic staff were also invited to join. Every two months the entire cohort received an antibody blood test in order to track whether immunity still persisted in each individual.

Of the 12,541 participants, 90.6 percent were initially seronegative, meaning they generated a negative antibody test. Of the remaining 9.4 percent, approximately two-thirds recalled having symptoms consistent with covid-19. The particularly good news was that of all the individuals who did have positive antibody tests, not a single one had a confirmed symptomatic infection for the following six months. These data suggest that we should have a good deal of faith that our antibodies will last at least that long, and possibly longer. This is also welcome news given that early in the covid-19 pandemic there were widespread fears that antibodies to SARS-CoV-2 were short-lived. Fortunately, the most dire of those fears have already been cast aside, as more reliable tests became standard and the detection of lasting antibodies became more routine.

Furthermore, knowing that there are already two vaccines with Emergency Use Authorization (which offer a stable controlled dose of antibodies which may in fact provide more robust immunity than infection itself), we may have even more success in our ability to provide sustainable immunity at the population level. Yes, case reports have suggested the possibility of reinfection. Mostly, reinfections have brought about mild illness. Only in extremely rare cases have reinfections caused more severe disease than the first bout. It is becoming increasingly clear that on the scale of almost one year of experience with covid-19, these reinfections (let alone serious life-threatening disease) appear to be significant outliers.

—Christopher Sampson, MD, FACEP