<u>BRIEF19</u>

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

Did stay-at-home orders help prevent covid-19 hospitalizations? A [paper](#) in *JAMA* attempts to address this question. Researchers from University of Minnesota looked at hospitalizations of U.S. states with and without stay-at-home orders. These researchers created a covid-19 hospitalization tracking [website](#) from each state's department of health website and updated it daily. Four states were included in the study. Hospitalization growth rates deviated (i.e. rose significantly less) after stay-at-home orders were placed. These authors suggest that stay-at-home orders resulted in significantly fewer covid-19 hospitalizations. While the results of this study make intuitive sense, the study has substantial limitations. The most crucial problem with the study is that the complexities of disease spread for an emerging infectious disease is unlikely to be fully understood simply by picking a before-and-after date of a certain policy and then trending hospitalization rates. There are likely many confounding factors that lead to decreased hospitalizations. For example, in some states, political biases may have meant that residents were less or more likely to adhere to social distancing, and other actions that can slow down the spread of disease such as the wearing of face masks. Previous reports also suggest that the rate of emergency room visits declined by 42 percent during the pandemic, so it possible that people lower hospitalization rates reflected "hospital-phobia" rather than a lower number of cases.   *–Joshua Niforatos, MD*

Contact tracing in Italy identifies high rate of asymptomatic SARS-CoV-2.
In study appearing on a [preprint website,](#) researchers in Italy describe the results of contact tracing performed on 5,484 individuals who had sustained close contact with someone known to be infected with SARS-CoV-2. The researchers monitored the contacts for the development of symptoms and tested them for active infection (RT-PCR testing), the evidence of prior infection (antibody tests), or both. Tests for longer lasting antibodies (Immunoglobulin G) were conducted 15 days after a confirmed infection. 51.5 percent of the close contacts were found to have active or recent infection. Most of these infections (67 percent) were detected by antibody, not by active infection. Remarkably, only 31 percent of the infected contacts had symptoms. It is important to note, however, that symptoms were defined as the presence of a fever or respiratory symptoms. In contrast, some other studies have counted any symptom (such as nausea, sore throat, or diarrhea) as "symptomatic infection," even though many of these common symptoms are not commonly associated with covid-19 by the public and may go untested. Therefore, it is more accurate to say that only 31 percent of SARS-CoV-2 infected persons demonstrated classic symptoms. While this distinction may seem semantic, it does have an impact on how we think about disease severity. Additionally, the rate of symptomatic infection rose precipitously with age. Among patients aged 0 to 19, only 18 percent of cases were considered symptomatic. The fraction of symptomatic cases rose from 22 percent to 35 percent in subjects aged 20 to 79. Patients over 80 years old had classic symptoms around 65 percent of the time. Critical illness was also tracked. No critical cases occurred in patients under 20. Patients aged 20 to 59 became critically ill between 0.4 percent and 0.8 percent of the time; The rate of critical illness among those 60 to 79 years old was 4.3 percent and 18.4 percent among those over 80 years old. Some potentially important information about antibody testing was also discovered here; 295 out of 300 patients with a positive RT-PCR for active infection also tested positive for antibodies. Some emerging data elsewhere has found lower

rates. It may be that antibody levels just drop to below detectable levels in many patients, especially asymptomatic cases. However, while those levels may be below the detection limits of the tests in use, that does not mean the body does not have a small but sufficient quantity of antibodies able to stave off repeated or serious re-infection.   *–Jeremy Samuel Faust MD, MS*

POLICY BRIEFING

Medicare and Medicaid data show covid-19's impact. On June 22, The Center for Medicare and Medicaid Services (CMS) renewed its call for a shift in the way healthcare providers and hospitals are reimbursed for healthcare. Traditionally, Medicare has operated on a fee-for-service model. But over the past decade, efforts have been made to move towards models which reward providers for the value of the care they provide instead of merely the quantity of care they provide. The federal agency, which has an annual budget of approximately $1 trillion, also released data that show the effects of the covid-19 pandemic on Medicare beneficiaries. Medicare is the national insurance program which covers persons over age 65 or those who are disabled or have end stage kidney disease or amyotrophic lateral sclerosis (ALS, commonly known as Lou Gehrig's disease). The announcement affirmed the Trump administration's previously stated commitments to providing value-based care to Medicare enrollees. Specifically the new data encompasses all coronavirus diagnoses and hospitalizations among Medicare beneficiaries between January 1 and May 16, 2020, and includes demographic data broken down by state, race and ethnicity, age, gender, urban and rural locations, as well as among individuals with dual eligibility for both Medicare and Medicaid, the US federal and state program that covers some individuals including some who are unable to afford health insurance and those with certain disabilities. The newly published data confirm what has been previously widely reported in the media and here in *Brief19*: that elderly and those with chronic health conditions are far more likely to suffer serious consequences from SARS-CoV-2 infection and resultant covid-19 disease. These data also further expose glaring health outcome disparities that disproportionately affect racial and ethnic minorities and low-income populations. According to the published figures, nearly 175 Medicare beneficiaries per 100,000 were hospitalized due to covid-19 and an additional 343 beneficiaries per 100,000 were diagnosed with infections but did not require hospitalization. Individuals dually enrolled in Medicare and Medicaid, were also disproportionately likely to be infected with the coronavirus. In fact, among dually covered patients on dialysis in the US, nearly 4 percent have been diagnosed with coronavirus already. Additionally, Black patients were found to have the highest rate of covid-19 infection at 1,107 cases per 100,000 people, followed by Hispanic and Asian people (692 and 455 per 100,000 respectively). White enrollees had the lowest rates, at 417 per 100,000 people. Females were also somewhat more likely to have been infected, though in many other studies, males have been over-represented among the more serious cases. *Centers for Medicare and Medicaid Services.*   *–Jordan M. Warchol, MD, MPH and Joshua Lesko MD*

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 policy, and public policy.