

BRIEF19

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

Failure to launch: New York data on hydroxychloroquine use shows no benefit. A large new study released on [May 7th](#) in the *New England Journal of Medicine* adds to our understanding that these medications appear to have no substantial impact on improving outcomes for patients with covid-19. In the observational study in a major New York City hospital, patients who were hospitalized were given HCQ if the patients had oxygen levels of 93% or lower at the time of admission, if the treating doctor deemed it appropriate. Of the 1376 patients who met eligibility, 59% received HCQ. The primary goal of the study was to determine whether patients who received HCQ had better odds of avoiding death or mechanical ventilation. The authors also looked at how long it took for these events to occur in order to determine whether HCQ prolonged life or helped patients stay off of mechanical ventilators for longer than those who did not. Almost half of the patients who received HCQ did so within the first 24 hours of hospitalization and 86% by 48 hours. There was no observed difference between patients who did or did not receive HCQ. Of note, the protocol initially advised co-prescribing azithromycin, but that suggestion was removed during the study. The results indicate that 32% of patients who received HCQ died vs. only 15% in those who did not. However, once correcting for the observation that the patients who received HCQ were somewhat more ill at the start of the study than those who did not, the numbers indicate that there was no difference in patients who received HCQ and those that did not. This indicates that HCQ likely confers no benefit. While this study did not assess the cardiac complications that HCQ is known to cause in some patients, the authors note that other studies have been halted over such safety concerns. These data are compelling, but more definitive answers will come from randomized controlled trials, currently underway. However, HCQ is now in shortage across the United States, making it difficult for patients in whom the drug has been shown to have benefit—including lupus and rheumatoid arthritis—to obtain their usual medications. This highlights the unintended dangers that can emerge when highly influential public figures opine on medical therapies without a proven benefit for covid-19. *Abbreviated from Brief19 for [7 May 2020](#). –Jeremy Samuel Faust, MD, MS*

Obesity appears to be a risk factor for disease severity in younger patients. A

[correspondence](#) in *The Lancet* describes the growing number of younger patients affected by covid-19 in the United States and an association between obesity and more serious illness. Is obesity also a risk factor? The researchers reviewed the existing medical literature, including the largest intensive care unit study to-date, which analyzed 1591 covid-19 patients in Italy. The average age of these patients was 63 years; only 13% of patients were younger than 51. In that study, as well as reports from China, the most common chronic medical condition among patients with severe/critical covid-19 were high blood pressure, heart disease, type 2 diabetes, and emphysema. However, obesity is much less common in countries that were hit by covid-19 early in the pandemic. In the United States, obesity is present in approximately 40% of the nation. When the researchers assessed 265 patients admitted to ICUs in the United States, they found that younger patients were more likely to be obese. Obesity is hypothesized to contribute to severe or critical covid-19 due in part to the effects of restricted ventilation of the lungs (some have also proposed physiologic reasons related to how the virus may enter fat cells). This is

thought to impair the immune system from fighting SARS-CoV-2. Stress that infections impart on the cardiovascular system may also be magnified in persons with obesity. *Abbreviated from Brief19 for 5 May 2020.* –Annie Gensel, M.S.

Do blood thinners help covid-19 patients? Researchers at Mount Sinai Hospital in New York City performed a retrospective study of hospitalized patients with covid-19 between March 14-April 11th in order to assess whether giving blood thinning medications at doses designed to treat blood clots (“therapeutic anticoagulation”) might decrease mortality. The findings are available as a [preprint](#), but will be published in the *Journal of the American College of Cardiology*. The study screened 2,773 patients, of whom 28% received these blood thinning medications. The authors report that 22.5% of the patients who received blood thinners died during their hospitalization, compared with 22.8% among patients who did not. In the subset of patients who required mechanical ventilation, however, the authors report a mortality rate of 29% mortality in the blood thinner patients vs. 63% in those who did not. Unfortunately, the report does not provide adequate data regarding the features of these patients, including important demographic information and specifics regarding any underlying medical problems. Nevertheless, the authors claim a survival benefit among patients receiving the blood thinners. **Analysis:** This study was an uncontrolled study. In such studies, “selection bias” often muddies the results. Because physicians simply chose which patients would receive blood thinners and which would not (instead of the randomization that occurs in a true clinical trial), it is possible that the results reflect more about the patients’ underlying condition and medical problems and less about the strategy of using blood thinners itself. Even so, physicians who are impressed by these findings would have difficulty implementing it. The authors provided no information about dosing. Such information would certainly appear in a randomized controlled trial that would be far more likely to provide answers on whether blood thinners save lives in covid-19 patients. *Abbreviated from Brief19 for 8 May 2020.* –Lauren Westafer, DO, MPH

Disparate covid-19 hospitalization and death rates across New York City boroughs.

Authors of a research [letter](#) published in *JAMA* found that despite Manhattan’s increased population density, decreased covid-19 testing, and a comparable number of hospital beds to the Bronx, the Bronx outpaced Manhattan in hospitalizations and deaths per 100,000 people. Manhattan and Staten Island, the only two New York boroughs where the majority of the residents are White, had lower numbers of deaths per 100,000 people compared to the Bronx, Brooklyn, and Queens. The researchers conclude that factors such as “underlying comorbid illnesses, occupational exposures, socioeconomic determinants, and race-based structural inequities” may be drivers of the disparities across the city. *4 May 2020.* –Aida Haddad, MDiv

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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.