

4 May 2020

BRIEF19

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

Covid-19 and blood clots? Dermatologists weigh in. A case report posted for public viewing in a Google Document by a team of investigators led by a Yale physician describes the biopsy findings of a 22-year old otherwise healthy man with suspected covid-19 who developed small blood clots in his feet. The patient reported that the rash that caused burning and pain. A previous [report](#) by another team of researchers described a covid-19 patient with similar skin findings. However, that group had not found evidence of clots. That team believed the rash in their patient to be similar to a condition known as “pernio” or “chilblains,” which is caused by inflammation, usually in response to long-term repeated exposure to wet and cold temperatures. The team at Yale believes that the previous researchers’ failure to identify evidence of blood clots may have been due to timing and location of the biopsy. In this current report, a deeper biopsy was performed. The hallmark signs of small but abnormal blood clots were observed. These “microthrombi” are similar to lesions found in the lungs in deceased covid-19 patients, (as previously described in *Brief19*). While only an unpublished case report, the findings contribute to a growing body of evidence suggesting that covid-19 causes (or is associated with) the development of blood clots. However, the patient described in this paper had suspected, though not confirmed SARS-CoV-2 infection. A more compelling report would include multiple patients with confirmed infection.

–Jeremy Samuel Faust MD MS

Air Pollution Exposure Appears to Increase Covid-19 Mortality Rate

A preprint [paper](#) posted in medRxiv by researchers at Harvard is the first to draw connections between long-term air pollution exposure and covid-19 mortality rates. The study assessed county-level data in the United States through April 22nd and included 5,817 deaths spread over 3,087 counties (98 percent of the U.S. population was captured in the study). The authors found an association between long-term pollution exposure and an increased likelihood of dying from covid-19. Specifically, the authors believe that even a small increase in fine particulate matter air pollution (1 microgram per cubic meter) was associated with an eight percent increase in an individual’s likelihood of dying from covid-19. This means a person who might have had a 2 percent chance of dying otherwise, appears to have had a 2.16 percent of dying as a result of prolonged pollution exposure. While that is a small absolute increase, at a population level it can be noticeable; emergency room visits often are higher during times of poor air quality. Previous data from the 1918 Spanish influenza, 2003 Severe Acute Respiratory Syndrome, and 2009 H1N1 outbreaks yielded similar associations between pollution and infection-related mortality.

–Aida Haddad, MDiv

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 from covid-19 outcomes across the city.

–Aida Haddad, MDiv, @aidalot

POLICY BRIEFING

Consciously unmasking. In responses to threats of violence and other abuse directed at store owners in Stillwater Oklahoma, the mayor of the small town reversed a local policy requiring that masks be worn by all people when in public. The mayor cited a lack of police power to enforce the rules, and stated that the citizens did not seem to understand the purpose of the policy. Meanwhile, Ohio Governor Mike DeWine also lifted a statewide policy there, saying that “you got to know what you can do and what you can’t do.” Currently, around one in 588 residents of Ohio has contracted SARS-CoV-2, a smaller percentage than national averages.

–Jeremy Samuel Faust MD MS

States ignore the White House guidelines on re-opening. The Trump Administration recently [published guidelines](#) outlining a three-phase approach to reopening state and local economies. So far, no area of the country has satisfied the “gating criteria” the White House guidelines deem necessary in order for states and cities to enter into “Phase One” of the re-opening process safely. Senior Advisor Jared Kushner has [said](#), “we’re on the other side of the medical aspect of this,” though the daily death counts in the United States appear [stable](#), and no significant declines have been sustainably observed. Economic pressures, including continued unemployment applications and draining of the Small Business Administration loan fund, appear to be creating political pressure that is influencing pandemic response decisions. *Various.*

–Joshua Lesko, MD

Tribal tribulations continue. Last week, *Brief19* [described](#) the disproportionate effect covid-19 has had on the Navajo nation. Delays in financial relief provided under the CARES Act, the \$3 trillion relief legislation passed last month, have only made things worse. The bill appropriated \$8 billion for tribal governments. However, Alaska Native corporations, which are for-profit entities, have made claims that they should also have access to this funding. Their position is that they manage areas of Native land and, in essence, function in a government-like capacity. Tribal governments filed a [lawsuit](#) against the United States Treasury Department after it decided that these corporations could compete and apply for the aid. As a result, the funds are now frozen, causing further delays in help for the intended recipients of the money. *New York Times.*

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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.