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BRIEF19

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

SARS-CoV-2 and blood clots. There have been reports of SARS-CoV-2 patients with critical illness also developing abnormal blood clots. These clots often form and remain in large veins, but can become far more dangerous if they travel to the lungs or the brain. In a [letter](#) published in *The New England Journal of Medicine*, physicians from the Tongji Hospital in Wuhan, China describe three severely ill covid-19 patients who developed multiple infarcts (blockages of the blood to tissues that cause the tissue in the surrounding area to die from oxygen deprivation) in the brain. Tests from the three patients showed signs that the patients' blood was substantially prone to forming such clots. Specifically, all three patients were found to have "antiphospholipid antibodies" in their blood. These antibodies, produced by the patients' own immune systems, can attach to proteins on the inner-lining of blood vessels and make abnormal clots more likely to form. While some individuals have an autoimmune condition called "antiphospholipid antibody syndrome" in which these antibodies are produced throughout their lives, it is also thought that patients with serious illness (including from viral infections) can temporarily make these antibodies as well. While this has been well-described in the medical literature, it is unknown how large the increase is during infections like SARS-CoV-2. So, it remains unclear whether the patients described in this publication represent common or unusual events in covid-19 patients.

--Jeremy Samuel Faust, MD MS.

One virus, several diseases? SARS-CoV-2 and covid-19 are not the same thing. SARS-CoV-2 is the novel coronavirus itself. Covid-19 is the collection of respiratory symptoms (the "syndrome") that the virus can, but does not always, cause. This is an important distinction. We now know that the spectrum of disease that the virus provokes ranges from symptom-free to severe and critical illness. Experts are now starting to hypothesize that patients who develop more serious symptoms might fall into at least two distinct categories. These categories are described in a forthcoming [editorial](#) in the journal *Intensive Care Medicine*. The differences in these categories may turn out to have tremendous implications on how healthcare teams should optimally treat patients. For example, earlier in the illness, patients may need high amounts of oxygen, but because the elasticity of the lungs may still be normal, it should be delivered at relatively normal pressures. Later, the lungs may become stiffer, meaning that high-pressure oxygen might be necessary. Similarly, investigational medications (ranging from blood plasma donated by donors to hydroxychloroquine) may turn out to have no effect on some patients in various phases of illness, help another subset of patients, and seriously hurt others. This is the reason that high-quality and rigorous studies must be completed before doctors can safely administer potential therapies.

--Jeremy Samuel Faust, MD MS.

POLICY BRIEFING

Expanded production quotas of controlled substances. *Brief19* previously reported on the Drug Enforcement Agency's (DEA) decision to relax registration requirements for medical prescribers applying for a controlled substances license. In coordination with the Department of

Health and Human Services (HHS), and in response to increased requirements of sedation-related medications as well as anticipated supply delays due to social distancing, the DEA has [increased production quotas](#) on several schedule II substances and related compounds. In addition to the schedule II substances, the DEA has also increased production allowances for “list I chemicals” ephedrine and pseudoephedrine. Generally, this adjustment authority has allowed the agency to modify production quotas of a class of medications. However, due to the SUPPORT Act of 2018, the DEA may make changes at the dosage level to prevent shortages or diversions from occurring. Current stockpiles are predicted to last through the crisis, but the increased production was determined necessary so as to blunt the effect of increasing needs. *The Drug Enforcement Agency*.

--Joshua Lesko, MD

More money needed. Last week, the United State Congress passed the largest stimulus bill in its history when it passed the CARES Act, a \$2 trillion relief package. However, the need for relief already appears poised to exceed what was anticipated; more small businesses are requesting loans than expected. House Speaker Nancy Pelosi and Senate Minority Leader Chuck Schumer [issued a call](#) yesterday for additional aid in the form of a new \$500 billion bill. The proposal would include more aid to small businesses, hospitals, and supplementation of the Supplemental Nutrition Assistance Program. Senate Majority Leader Mitch McConnell signaled support for the added loans to small business. He did not comment on whether he would or would not support the other provisions proposed. *CNBC*.

Defense Production Act in action. The Trump Administration [signed](#) its first contract under its production authority of the Defense Production Act. Under the contract, General Motors will build over 30,000 ventilators that will be added to the Strategic National Stockpile. The cost of the contract is just shy of \$500 million. The ventilators are expected to appear between June and August of this year, well in advance of an expected winter resurgence of covid-19. *CNBC*

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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.