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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Breaking News: Immune-suppressed patients may be contagious with covid-19 for weeks or longer. Guidelines may need changing.

A new letter to the editor was published in *The New England Journal of Medicine* today that provides some important preliminary evidence that could change hospital practices and covid-19 isolation and quarantine guidelines, especially as related to persons with incompletely functioning immune systems, known as “immunocompromised” or “immune-suppressed” states. Such patients may be those with cancer receiving chemotherapy or other advanced diseases such as AIDS. Fortunately, some autoimmune conditions (in which the body attacks its own immune system) like multiple sclerosis, [have not been shown](#) to be associated with worse disease, though contagion itself was not assessed. What about patients with far less intact immune systems?

First some background. [Recommendations](#) from the US Centers for Disease Control and Prevention (CDC) currently state that for persons with *uncompromised* (“normal”) immune systems, SARS-CoV-2 infections are considered potentially contagious for 10 to 14 days after the onset of symptoms in mild or moderate cases. The agency further states that those with severe or critical covid-19 (or with incompletely functioning immune symptoms—though what qualifies is not defined), it is possible that infected persons might be able to infect others for up to 20 days. More [recent evidence](#) has suggested the possibility of shorter contagious periods for patients with non-severe disease; 10 days after the onset of symptoms, as infectious viral particles have rarely been recovered after that timeframe, leading some to suggest that shorter isolation periods might be preferable guidance, simply because people might be more likely to more faithfully complete shorter isolation and quarantine periods. Meanwhile, “typical” patients with covid-19 can continue to have positive nasopharyngeal swabs for SARS-CoV-2 for up to 3 months after illness onset, but most of these persons are considered not contagious after the initial couple of weeks, as the virus cannot usually replicate at that point and the tests are detecting leftover viral genetic material, rather than contagious virus particles.

But what about profoundly “immune-compromised” patients? Now, new data quantifying this is finally available. Researchers at Memorial Sloan Kettering Cancer Center in New York City enrolled 20 immunocompromised patients into their study. All 20 patients had cancer, with 18 of the 20 patients receiving either bone marrow transplant or “CAR-T cell” therapy. The average of patients was 61 years of age with 11 patients (55 percent) having severe covid-19. Twenty percent (4 patients) died within 30 days.

From each of these patients, serial nasopharyngeal samples were collected throughout the hospital stay. The average time from covid-19 symptom onset to confirmed diagnosis was 3 days. The results are short and to the point: viable (i.e. contagious) SARS-CoV-2 was able to replicate and remained detectable in five patients who were followed-up. In five those patients, the virus grew for 8, 17, 25, 26, and 61 days after the onset of symptoms.

Yes, this was a very small sample and there was no “immune intact” control group for comparison. Are the results generalizable to all immunocompromised patients? That remains to be determined, as these were very sick individuals at baseline. But the top-line message is clear: patients with SARS-CoV-2 who were or are significantly immunocompromised/immune-suppressed can be contagious for up to two months. More research is needed in this patient population. In the meantime, guidelines for isolation and quarantine may need to be adjusted based solely on these new findings.

—Joshua Niforatos, MD, MTS

POLICY BRIEFING

An autopsy of Scott Atlas' tenure at the White House: A portrait of disgrace.

On July 12th, President Trump did something that he had not done before: he wore a mask in public. It was a late but welcome development signaling he might be willing to adapt and endorse simple, free, and helpful public health measures that could save American lives.

It was an important moment in the nation's chaotic and incompetent struggle to contain SARS-CoV-2, the virus that causes covid-19. Trump had not been briefed by Dr. Anthony Fauci, the nation's top infectious disease expert, in over two months. The White House Coronavirus Taskforce was in shambles, its frequent press briefings cancelled after the President's latest deranged ramblings led him to improvise the idea that people might try injecting bleach into their bodies to combat the pandemic infection.

Case counts of the "summer surge" peaked on July 24th at 74,857 per day, 12 days after Trump was seen with a mask. Maybe Trump's example was having an effect. Or maybe it was the weather—July was one of the hottest on record. So was August.

Enter Scott Atlas, a man with no relevant experience for the job. (Apparently, he was a respected neuroradiologist at one time). August was Scott Atlas's first full month on the job. He questioned whether masks could really help and spread the falsehood that children were immune from the virus. His ideas influenced the now retracted and lambasted CDC policy that, for a brief time in late August, stated that asymptomatic persons need not be tested for coronavirus.

Not surprisingly, in September, cases began to rise again. On October 23, a daily case count of 82,332 broke the previous US record. Cases been above that number *every single day since*. Hospitalizations have followed the same trajectory, albeit on a two-week time lag. Reaching their trough in mid-to-late September, hospitalization numbers have sky-rocketed since, as pandemic fatigue, cold weather, and incompetent White House and local leadership have banded together to create the worst Fall for Americans since 1918.

During this time, no public health official has had the President's ear more than Atlas. Since assuming his role as an advisor to President Trump, the number of preventable deaths has been astronomical. As he began his "work" in the White House on July 23, we do not think it fair to ascribe the deaths during the 6 weeks of late July and August to Atlas' ineptitude, as there is a lag between policies, cases, hospitalizations, and deaths. But since September 1st, 82,424 Americans have died of covid-19. However, the outcomes of cases recorded through today *belong on his scorecard*. The final death toll due to Scott Atlas's wreckage will not be known until 6 weeks from tomorrow, on approximately Tuesday, January 12th. Currently, the rolling 7-day average for covid-19 deaths in the US is 1,452. If this continues—though the numbers are expected to rise—62,436 more covid-19 deaths will have occurred on Atlas's watch, for a total of 144,860. Few physicians in American history have been more closely associated with a higher death count, and therefore as disgraced, as Scott Atlas.

—Jeremy Samuel Faust, MD MS

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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 and public policy.