

BRIEF19

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

Coronavirus knowledge and behavior survey reveals gaps and disparities. A new survey on how well Americans understand coronavirus risks was published in [JAMA Network Open](#) today. Other information obtained included knowledge of how the virus spreads, its symptoms, how likely members of various demographic groups are to be infected or know someone who is, and how frequent actions such as handwashing and leaving the home occurred during the early phase of the outbreak in the U.S.. Among political affiliations, Republicans were less likely to have knowledge of covid-19 symptoms, and more likely to have contracted or know someone with the virus. Among racial groups, Black Americans were more likely to have, or know someone with, the virus. Hispanic and Black Americans were also more likely to have left the home in the last 3 days before taking the survey, perhaps owing to having jobs that precluded telecommuting. However, Hispanics and Black respondents were also more likely than White respondents to wash their hands more frequently. Male gender and young age (18-29) were by far the greatest risk factors for infrequent handwashing. [18.June.2020.](#)

Steroids to the rescue? A major finding announced via press release. Partial results from one aspect of a large group of covid-19 trials being carried out in the U.K., known collectively as the [Recovery Trial](#), were shared today via press release. The blockbuster finding is that dexamethasone, a commonly used, widely available, and inexpensive steroid, apparently reduced deaths by one third among covid-19 patients on mechanical ventilators. Among patients on mechanical ventilators, eight patients would need to be given the drug to save one life. Among critical illness medications and other intensive care interventions, that is a unusually large effect size. If the data hold up to scientific scrutiny once published, dexamethasone would become the first drug demonstrated to have a mortality benefit for covid-19. In the trial, the medication was given in doses familiar to physicians who already give the drug for a variety of other conditions (6 milligrams/day by mouth or IV for ten days). One weakness of the study is that it was “open-label” (not blinded), meaning the healthcare teams knew whether or not the patients received the drug. However, a strength of the trial is that it was randomized, so that an appropriate comparison could be made between the fates of those who received the drug and a control group that did not (but otherwise received “usual” care). The steroid also was reported to have improved the survival rates of patients who required oxygen and other respiratory support, but did not have a mortality benefit among those who did not yet have such needs. This suggests that the drug is effective in only the most severe cases, which represent a relatively small but important fraction of covid-19 cases. In the wake of the news, two vocal factions of physicians emerged on social media and in the press. Some felt that the drug should be given to intensive care patients immediately and without delay, even without the benefit of having seen the full data from the trial. Some of these experts argued that dexamethasone is a well-known drug that intensive care physicians already have tremendous experience with. Others felt that without the raw data, no conclusion reliable enough to warrant such action could be made at this time. Among other questions that have not been answered are why the patients in this trial had such poor outcomes overall. After 28 days, 41% of mechanically ventilated patients died, 25% of those who required only oxygen died, and 13% of those who did not require oxygen died. However, it is highly likely that at some point that patients in the latter group eventually required oxygen or some other form of respiratory support. So, when these designations were made, and why, will have an impact on how these data are eventually interpreted. We also don't know whether the outcomes are different among patients taking other drugs, including remdesivir. *Abbreviated from Brief19 for* [17.June.2020.](#)

Symptom-free patients from the Diamond Princess Cruise studied. From the early days of the SARS-CoV-2 outbreak and the eventual pandemic that followed, the role of symptom-free spread has been a source of confusion among the public and disagreement among experts. Is symptom-free spread rare or common? Early studies [suggested](#) that the contribution of “asymptomatic” transmission of the virus from one person to the next was low, perhaps under 10% of new cases. [Later](#) studies reported far higher numbers. Why was symptom-free contagion so poorly understood early on? Part of the explanation may owe to limited testing capacity and inadequacies in what experts call “contact tracing.” Contact tracing is the practice of tracking down anyone who came into contact with an infected person and instructing those individuals to quarantine for a period of time and/or be tested for the virus. The problem that the novel coronavirus poses for virus hunters, it appears, is that it may be contagious by infected persons who do not have symptoms—regardless of whether they will later develop them—for far longer than two days, and longer than most respiratory viruses that cause serious short-term serious illness. This means that the usual approach to contact tracing, while important, may be insufficient to stop the spread of the virus. Enter the Diamond Princess Cruise outbreak. A [new report](#) in *NEJM* describes the number of infected persons who were free of symptoms at the time of testing and how many of them went on to experience covid-19 symptoms. Of the 3,711 passengers and crew, nearly all were tested and 712 infections were diagnosed as infected. At the time of a positive test, 58% had no symptoms, far higher than contemporaneous reports from China and elsewhere. Of those, 96 people were removed from the ship and taken to a hospital in Japan where they were monitored closely. Among that group, 11 people eventually developed symptoms, which changed their designation from “asymptomatic” (never developed symptoms) to “presymptomatic” (eventually developed symptoms). Presymptomatic persons took an average of 4 days from the first positive test until any symptoms appeared. Additionally, some of the cabinmates of the SARS-CoV-2 positive asymptomatic passengers and crew who had tested negative while on the ship (despite rooming with a positive person) were also transferred to the hospital, isolated, and tracked. Of 32 such individuals, 8 later tested positive in the hospital, suggesting that asymptomatic spread was not uncommon. The fact that these 32 people were not initially positive for the virus suggests that the longer they spent with an infected person, the more likely their infection became. This may be due to repeated exposure or because asymptomatic persons became more contagious later in their course of infection. Other interesting findings reported in the study include the observation that presymptomatic disease was more common in older patients. Also, around half of all patients tested negative (twice) by 8 days after the positive test; 90% tested negative by 15 days. Older age was associated with a slower resolution of infection. *Abbreviated from Brief19 for [16 June 2020](#).*

—Jeremy Samuel Faust MD MS

Joshua Niforatos, MD Research Section Editor.

Kane Elfman PhD, Publishing and design.

Anna Fang, Week in Review.

Jeremy Samuel Faust MD MS, Editor-in-Chief.

<http://www.brief19.com/>

Twitter: [@brief_19](#)

submissions@brief19.com

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.