



COVID-19

research update

April 8, 2020

The Health Policy Institute of Ohio is collecting the latest research so that Ohio policymakers and other stakeholders can make informed decisions on the rapidly evolving COVID-19 pandemic. HPIO has also created a [Coronavirus \(COVID-19\) resource page](#) to serve as a "one-stop-shop" for links to the Ohio Department of Health, Centers for Disease Control and Prevention and other sources of frequently updated, reputable information.

Studies examine how long the COVID-19 virus lives

Recent research has shed light on how long the SARS-CoV-2 virus remains active on various surfaces and under various conditions.

[A study of the SARS-CoV-2 virus](#) (Lancet, April 2) found that heat and standard disinfection methods can reduce how long it lives. The article found that the virus becomes inactive in five minutes at 70° C (158° F). At room temperature, the virus lasts 3 hours on paper, 2 days on wood and cloth, 4 days on glass and money, 7 days on stainless steel and plastic and was still detectable on the exterior of surgical masks after 7 days. Authors also tested standard disinfectants and found that they work. After using disinfectant, no infection could be detected after a 5-minute incubation at room temperature, with the exception of hand soap (which showed undetectable levels of the virus after 15 minutes).

[A letter published in the New England Journal of Medicine](#) (March 17) stated that SARS-CoV-2 remained viable in aerosols throughout the duration of a recent 3-hour experiment. The longest viability of both viruses was on stainless steel and plastic, with lower viability on copper and cardboard. The virus was detected up to 72 hours after application to stainless steel and plastic. On copper, no viable SARS-CoV-2 was measured after 4 hours, and on cardboard, no viable SARS-CoV-2 was measured after 24 hours. The authors conclude that aerosol and surface transmission of SARS-CoV-2 is plausible, since the virus can remain viable and infectious in aerosols for hours and on surfaces up to days; and that hospital spread and super-spreading events are likely.

CDC launching multiple COVID-19 blood test studies

There have been multiple recent media reports about emerging antibody tests to detect whether people have been exposed to the virus that causes

COVID-19 (for example, [New York Times, April 2, 2020](#) and [NBC News, April 4, 2020](#)). [This Stat article](#) reports that the CDC will conduct three studies focused on antibody testing. The first study, which is already underway, is examining blood samples from people who have not been diagnosed with COVID-19 in "hot spots." The second, which the CDC hopes to start during the summer, will focus on samples from other parts of the country. The third study will focus on special populations, initially healthcare workers. All of these studies, called sero-surveys, will "involve drawing blood from people never diagnosed as a case to look for antibodies to the virus." They will include a representative sample of a population, including people of various ages. The development and use of antibody testing will be important for decision making and planning.

Intensive care management and outcomes

Studies of COVID-19 patients in China and Italy give insights that could be useful for Ohio healthcare providers.

[An in-depth review](#) (Lancet, April 6) of intensive care treatment of COVID-19 patients in China provides an overview of the challenges facing ICUs and recommendations for addressing these challenges.

Key messages highlighted in the journal are:

- Clinical features of coronavirus disease 2019 (COVID-19) are non-specific and do not easily distinguish it from other causes of severe community-acquired pneumonia
- As the pandemic worsens, ICU practitioners should increasingly have a high index of suspicion and a low threshold for diagnostic testing for COVID-19
- Many questions on clinical management remain unanswered, including the significance of myocardial dysfunction, and the role of non-invasive ventilation, high-flow nasal cannula, corticosteroids, and various repurposed and experimental therapies

[A study of COVID-19 patients in ICUs in Lombardy, Italy](#) (JAMA, April 6) found that 82% were male; 18% were female. Median age was 63 but there were multiple cases of people who were below this age with no comorbidities. Most of these patients required some type of respiratory support and the ICU mortality rate was 26% as of March 25, 2020. Prevalence of hypertension was higher for those who died in the ICU than for those who were discharged. The authors note that the need for invasive ventilation in this patient population was higher than that reported in Washington state and Wuhan.