



# COVID-19

## research update

April 13, 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, reliable information. If this update was forwarded to you, you can [click here to join our mailing list](#).*

### Balancing COVID-19 restrictions and testing with civil liberties

An [analysis of restrictions aimed at slowing the spread of COVID-19](#) (New England Journal of Medicine, April 9) explores the legal and public policy precedents for balancing public health imperatives and civil liberties during a public health emergency. The authors explain that the COVID-19 outbreak is different in many ways from the outbreaks that were the basis of these precedents. The authors argue that decisions to lift the severe restrictions currently in place in the U.S. should be based on "person-level information" gathered through a "population-wide program of disease testing and surveillance." This would enable policymakers to tailor restrictions to affected individuals and communities, relieving undue burden on others. This approach has noted limitations, including the current lack of access to widespread testing and the need for personal protective equipment.

[A blog entry posted on the website of Health Affairs](#) (April 7) discusses how widespread home testing could result in a tiered approach to lifting social isolation restrictions and reopening the economy. The authors suggest that two different tests would need to be broadly disseminated to the public: an antibody test to reveal coronavirus immunity and a viral test to determine current infection status. Those who test positive for the virus can self-quarantine, while those who test positive for the antibodies can return to work. Rapid antibody and viral tests exist, including a finger prick test for antibodies that delivers results in 10-15 minutes. Authors also suggest that an "immunization passport" could be developed, such as a secure app that connects test results to personal identification markers, so that health care workers and employers can confirm an individual's immune status.

### Tobacco use, other risk factors associated with COVID-19

A [commentary on the link between smoking and COVID-19](#) (Journal of Clinical Medicine, March 20) reports that people who smoke are more vulnerable to respiratory viruses and outbreaks in countries such as China, Italy, Iran and South Korea likely include an overrepresentation of smokers among COVID-19 fatalities. Research has found that smoking can increase the production of the angiotensin-converting enzyme-2 (ACE2) receptor, which is the receptor where COVID-19 infections begin. The link between tobacco use and COVID-19 is of particular interest in Ohio. The [2019 Health Value Dashboard](#) finds that Ohio ranks in the bottom quartile on metrics related to tobacco use, including adult smoking and children living in a household with a smoker. Ohioans may be more susceptible to severe cases of COVID-19 because Ohioans smoke more than people in most other states.

[A literature review of COVID-19 patient studies](#) (Archives of Academic Emergency Medicine, March 23) found that hypertension, cardiovascular diseases, diabetes, smoking, chronic obstructive pulmonary disease (COPD), cancer and chronic kidney disease were among the most prevalent underlying diseases among hospitalized COVID-19 patients, respectively.

## Neurologic symptoms found in patients with COVID-19

A [new study](#) (JAMA, April 10) found that patients with COVID-19 commonly have neurologic manifestations. The study of 214 patients found that 36% reported neurologic symptoms. Among patients with severe infections, 6% reported acute cerebrovascular diseases, 15% reported impaired consciousness and 19% reported muscle injury. The authors suggest that when seeing patients with neurologic manifestations, such as dizziness, headache or loss of smell or taste, clinicians should suspect COVID-19 infection as a possible diagnosis to avoid delayed diagnosis or misdiagnosis and to accelerate treatment and prevent further transmission.