



COVID-19 research update

April 21, 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 and publishes updates on Mondays, Tuesdays and Thursdays. 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](#).

Deploying COVID-19 blood tests

A [commentary on the availability and usefulness of antibody tests for COVID-19](#) (JAMA, April 17) argues that although these tests will be critical in the weeks and months ahead, they must be deployed appropriately and with an acknowledgment of unanswered questions. Some serology tests identify how many antibodies an individual has, while others, such as lateral flow assays, provide a simple positive or negative result with no quantitative information. One lateral flow assay has been granted Emergency Use Authorization by the FDA. While these tests can be useful for some limited purposes, such as population-level disease surveillance, they should not be used as the sole basis to diagnose or exclude SARS-CoV-2 infection or to inform patients of infection status. However, several companies are marketing lateral flow assays as rapid point-of-care tests. Additionally, allowing people to leave quarantine based on their antibody status assumes that past infection guards against reinfection, something that researchers have said is likely, but not yet well defined.

A [commentary on what is needed to lift social distancing restrictions](#) (Harvard Global Health Institute, April 18) estimates that the number of virologic tests needed nationally every day is, at a minimum, 500,000, though we likely need many more. The authors present approaches to estimating the number of tests needed, including the pros and cons of each approach. Testing is critical in order to estimate the number of COVID-19 cases in the U.S., isolate the individuals who test positive and trace the contacts of those individuals to prevent further spread. If the U.S. cannot test at least 500,000 people daily by May 1, the authors conclude that it will be difficult for the economy to be fully reopened.

Symptom screening for COVID-19

A [study of healthcare personnel in Washington](#) (JAMA, April 17) found that of 48 infected workers who were interviewed, the most common initial symptoms of COVID-19 were cough (50.0%), fever (41.7%) and muscle aches (35.4%). Eight of those interviewed (16.7%) did not report fever, cough, shortness of breath or sore throat at symptom onset; among this group, the most common symptoms were chills, muscle ache, nasal congestion and malaise. Among those interviewed, 64.6% reported working a median of 2 days while exhibiting symptoms.

The authors concluded that screening only for fever, cough, shortness of breath or sore throat might have missed 17% of symptomatic healthcare workers at the time of illness onset; and expanding criteria for symptoms screening to include muscle soreness and chills may still have missed 10%.

Influenza and COVID-19 spread

A [study of COVID-19 diagnosis in the U.S.](#) (MedRxiv, April 14) found a surge of non-influenza illness above the seasonal average is correlated with COVID-19 case counts across states. The surge of cases corresponds to at least 28 million presumed symptomatic COVID-19 patients across the U.S. during the three week period from March 8 to March 28. The authors caution that these estimates should be verified with antibody testing. The analysis suggests that COVID-19 has spread rapidly throughout the U.S. since January 15 and is likely accompanied by a large undiagnosed population of potential COVID-19 outpatients with presumably milder clinical symptoms than estimated from prior studies of COVID-19 inpatients.

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