

## **Supporting a Comprehensive, Nationwide Response to COVID-19: The Role of Serologic Testing**

### *Executive Summary*

To date, COVID-19 molecular tests have been the primary mechanism to detect the virus. The introduction of serologic testing, or serology, provides another valuable tool to inform broader prevention, containment and mitigation strategies against infection with SARS-CoV-2.

When used appropriately, serologic testing may help determine the number of individuals who actually have been infected with SARS-CoV-2. By supporting screening for individuals using serology, health workers can provide a more detailed assessment regarding the true rate of infection and gain a better understanding of the case fatality rate to help inform public health strategies. Serologic testing also potentially could be used to support future vaccine development and contact tracing to stop the spread of the infection in the community.

While serology can help broaden our understanding of the reach and scope of exposure to SARS-CoV-2 within our communities, it has limitations. For example, serologic testing should not be used as a primary method of diagnosing COVID-19 in an acutely ill patient. Relying on serologic tests too soon after infection can yield false negative results. When a patient is symptomatic and experiencing the greatest viral replication, a molecular test is most useful for detecting the virus and determining a course of treatment.

There are a number of factors that state and federal policymakers and officials must consider when making decisions about return to daily life for Americans and their families. Serology is one tool that can inform decisions about whether it may be safe to lift stay-at-home orders or provide a timeline for safe returns to the workplace, schools and other common areas.

Just as the demand for diagnosing SARS CoV-2 has exceeded supply, the demand for serologic testing will be high, if not universal. Serology testing will be especially critical for health care workers and those on the frontlines of the pandemic but will be equally essential for businesses to open and remain open, people returning to work and for students returning to school.

As a result, the federal government's stake in the widespread success of SARS CoV-2 serology is considerable, and it should invest the financial resources to ensure that serologic testing is widely available and that a wide array of laboratories, hospitals and health care providers have the necessary resources to perform the testing.

Therefore, the federal government should fully assume the cost of SARS CoV-2 serologic testing. Estimates suggest that to provide serologic testing to nearly 70 million Americans, including frontline health workers, the non-health care workforce, college students and military service members would cost at least \$25 billion.

The U.S. government has brought considerable resources to bear to help slow the spread of SARS CoV-2 transmission in the community. To ensure that the U.S. can reopen and stay open for business, the federal government must play the leading role in scaling up and financing widespread SARS CoV-2 serologic testing.