

Intelligence MEMOS



From: Rosalie Wyonch

To: Canadians Concerned about Healthcare

Date: May 14, 2020

Re: **COVID-19 IMMUNITY: WHAT WE DON'T KNOW BUT CAN NOW TEST FOR**

With the COVID-19 curve flattened and loosening of restrictions now underway in many jurisdictions, Canadian healthcare providers require new tools to continue to study and understand the virus. [Health Canada recently approved the first test for COVID-19 immunity](#) in Canada.

Information about immunity is critical to continuing efforts to contain the epidemic, particularly as restrictions are loosened, potentially increasing transmission risk. Without it, it is impossible to know how many people may have been exposed but never developed symptoms (estimates suggest up to [one quarter of infections are asymptomatic](#)). An unknown asymptomatic rate affects the accuracy of epidemiological models and makes projections less certain. In particular, the fatality rate is based on the number of known cases: we can't know how deadly COVID-19 is without knowing the true infection rate.

The C.D. Howe Institute's Public Health and Emergency Measures Working Group recently discussed testing for immunity and concluded that it would provide valuable information about the epidemic and could be used directly or indirectly in developing policies to transition to the "new normal."

It is currently unknown how long antibodies are present after infection has subsided or how effective antibodies are in preventing reinfection or further transmission of the virus – critical information for vaccine development and public policy. There are also [clinical results](#) showing plasma transfusion of antibodies could be an effective treatment for critically ill COVID-19 patients.

Tests for COVID-19 related antibodies could also have applications in contact tracing and identifying immune or at-risk clusters (within households, businesses or geographic regions). Some governments have suggested that the detection of antibodies to the SARS-CoV-2, the virus that causes COVID-19, could serve as the basis for an ["immunity passport" or "risk-free certificate"](#) that would enable individuals to travel or to return to work assuming that they are protected against re-infection.

At the moment, however, there is not enough known about the possibility of re-infection or the length of time a recovered patient might be immune to be able to formulate labour market policies. In addition, there are [serious ethical questions](#) about allowing some people to be less restricted than others based on biological considerations – in this case the presence of a particular antibody.

Health Canada has recently authorized the first serological test for the Canadian market and plans to test 1 million Canadians over the next two years. Meanwhile, the [FDA granted Emergency Use Authorization to the first serological test on April 1](#). As of May 4, [170 manufacturers](#) were selling serologic tests that had not received FDA authorization, but can be used [\(with restrictions on their use for the purposes of diagnosis\)](#). In Australia, [serologic tests have contributed to findings](#) that children are at low risk of transmitting the infection in a school environment.

The authorization of a test for COVID-19 antibodies is a good first step towards better understanding of the epidemic in Canada. Initial access to testing should prioritize the most at-risk populations, health care workers and elderly Canadians residing in institutional settings in particular. However, efforts to broaden access and scale up testing volumes should not wait until the initial crisis has passed. Tests for the presence of the virus use different laboratory resources than those that test for antibodies: increasing testing volumes for antibodies shouldn't affect the volume of diagnostic COVID-19 tests that are performed.

As provinces begin to loosen restrictions imposed to flatten the curve and reduce the spread of COVID-19, continued monitoring through extensive testing and contact tracing is required to prevent a second wave of infection. Market authorization of an immunity test is a good first step, but without test results Canadian health care providers and policy makers lack a complete picture of the epidemic.

Rosalie Wyonch is a Policy Analyst at the C.D. Howe Institute.

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