

New study offers first glimpse into how widespread COVID-19 antibodies are in Canada's adult population

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Today, Canadian Blood Services and Canada's COVID-19 Immunity Task Force (CITF) are releasing initial results of the first 10,000 blood donor samples assessed for SARS-CoV-2 antibodies. This analysis reveals that over the period May 9 through June 8, 2020, fewer than 1 percent of the 10,000 samples from blood donors tested positive for antibodies to the novel coronavirus. Antibodies indicate past infection with SARS-CoV-2, and population studies like this one tell us how many people have likely been exposed to the virus.

These results offer a first, high-level glimpse into an ongoing Canadian Blood Services study assessing SARS-CoV-2 antibodies across nine provinces. They will be updated once Canadian Blood Services completes their analysis of the full sample of 37,800 donations made during the months of May and June 2020. In addition, Héma-Québec will have results for Quebec in the near future, which will be important for a complete national picture, given the COVID-19 rates in that province.

While there will be adjustments to this initial figure once the full 10-province study is completed in the coming weeks, Professor Catherine Hankins, CITF Co-Chair, believes its implications bear [public attention](#) immediately, as reopening is causing a worrisome uptick in COVID-19 cases across Canada.

"What is clear is that only a small percentage of adult Canadians has been infected by SARS-CoV-2," Hankins says. "By far, the majority of us remain vulnerable to infection. We need to ramp up testing and tracing capacity across the country to interrupt any chains of transmission quickly to prevent unchecked spread."

CITF Co-Chair Professor David Naylor concurred: "These data suggest there are several undetected infections for every case confirmed with swabs and RNA tests. That lends weight to current public health advice. Please wear a mask in public indoor spaces, wash your hands often, and practice physical distancing if you're around people who aren't in your COVID-19 'bubble'."

Acknowledging that many more adult Canadians are infected than currently documented, Professor Timothy Evans, CITF Executive Director cautioned against over-interpreting the apparent reduction in risk. "Among adults, the death rate from being infected with SARS-CoV-2 is likely closer to one percent, as compared to the eight percent reported to date among those diagnosed with COVID-19. But this is a highly infective virus that could take a huge toll if we allow it to spread, and we are only now learning that many survivors have persistent symptoms."

These initial results from Canadian Blood Services and CITF are a first step toward giving policymakers a deeper understanding of the COVID-19 infection rate across Canada. As further samples are analyzed by Canadian Blood Services and Héma-Québec, the findings will offer new insights to help guide effective public health measures.

"I want to thank Canadians for the sacrifices made to flatten the curve in the first wave. While these first results reflect widespread adherence with public health measures, they also mean most Canadians remain susceptible to infection," says the Honourable Patty Hajdu, Minister of

Health. "As we start to see case numbers rise again, we all need to follow public health advice and avoid crowded places, close-contact settings and confined spaces."

When the Government of Canada established CITF in late April 2020, Canadian Blood Services and Héma-Québec reached out to offer their assistance. Canada's blood system became the first place the initiative looked for evidence of infection and immunity in the Canadian population.

The choice was obvious. Blood donation centres are a rapid and reliable resource for generating insights into the patterns of illness, such as COVID-19, in the broader population. Canadian Blood Services and Héma-Québec routinely test blood donations, including tests for pathogens that can be transmitted through transfusion (SARS-CoV2 is not known to be transfusion-transmitted). Both organizations also regularly contribute to active, ethics-approved research programs like this one, some of which in the past have included seroprevalence work to guide policies.

"Canadian Blood Services is proud to support the CITF's mandate," says Dr. Graham Sher, Chief Executive Officer, Canadian Blood Services. "We are uniquely positioned to help by providing information on the presence of COVID-19 antibodies in a large number of people across Canada relatively quickly. This is a great opportunity and privilege for [blood](#) donors and staff at Canadian Blood Services to contribute to a national need in a novel way."

"Getting an early picture of the levels of population immunity is critical to inform the public health response," says Dr. Marc Germain, Vice-President, Medical Affairs and Innovation, Héma-Québec. "We look forward in the coming days to sharing the results of the first study on antibodies to SARS-CoV-2 among [blood donors](#) in Quebec."

Provided by McGill University

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