



**COVID-19 IMMUNITY  
TASK FORCE**

# Spotlight on **CITF-FUNDED RESEARCH**



## **CITF-Funded Research Results**

### **Nearly half of blood donors showed infection-acquired seropositivity due to Omicron by end of May: Canadian Blood Services**

Consistent with the ongoing transmission of the Omicron variant, infection-acquired seropositivity increased in the blood donor community gradually throughout May, from 36.7% at the end of April to 49.0% at the end of May, according to data from Canadian Blood Services. Concentrations of antibodies due to vaccination (anti-spike (S) antibodies) were high by September 2021 but gradually decreased over the following few months (expected, as immunity wanes over time). Those vaccine-induced antibody concentrations did increase in all age groups again by February 2022, likely due to the administration of third vaccine doses. In the 60+ age group, anti-S antibodies rose in May, consistent with the administration of fourth doses to older Canadians.

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### **Unvaccinated paramedics at greater risk of COVID-19 infection**

A study published in the *Annals of Emergency Medicine* did not find that paramedics, prior to the Omicron wave, were at higher risk of catching SARS-CoV-2 than a control group of blood donors. There is evidence, however, that unvaccinated paramedics got COVID more frequently compared to unvaccinated blood donors.

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## **Findings show clear advantages of Moderna vaccine for long-term care residents**

A study in preprint, not yet peer-reviewed, showed that among residents of long-term care facilities, there was a lower risk of infection with the Omicron variant when the person had:

- Received three doses of Moderna or a combination including Moderna (vs. three doses of Pfizer);
- Any fourth mRNA vaccine dose; and
- Hybrid immunity induced by 3 vaccine doses and a SARS-CoV-2 infection in the 3 months prior to the beginning of the Omicron wave.

Moreover, neither age nor gender was a determining factor in the risk of Omicron infection.

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## **Evidence suggests SARS-CoV-2 transmissions in school less than in community at large**

A preprint, not yet peer-reviewed, suggests that the chances of adults getting infected with SARS-CoV-2 was lower in the school setting than it was in the community, even during the first Omicron wave. The research out of British Columbia shows that notwithstanding frequent exposures to COVID-19, the prevalence of SARS-CoV-2 infections among the staff of three main school districts in the greater Vancouver area was not statistically greater than a reference group of blood donors from the same community (26.5% vs 32.4%).

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## Preprint to Publication

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### **SARS-CoV-2 transmission more frequent in households than in schools**

A CITF-funded study now published in *Microbiology Spectrum* found that in British Columbia, in 2021, far more household contacts (37%) tested positive for COVID-19 than school contacts, of whom only 1.3% would test positive. The researchers estimated rates of symptomatic and asymptomatic transmission of SARS-CoV-2 among K-12 students and staff in BC from April to June 2021.

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## CITF in the News

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### **The Omicron tsunami: Analysis of data from blood testing suggests over 17 million Canadians were infected with Omicron in only 5 months**

A CITF analysis of data from 21 funded or affiliated studies, and relying on blood testing, provides a clearer picture of the massive scale of the Omicron wave in Canada. Before the arrival of the Omicron variant, approximately

7% of Canadians had infection-acquired antibodies to SARS-CoV-2. Between December 2021 and May 2022, the proportion rose by 45% of Canadians having antibodies to SARS-CoV-2 infection.

“Omicron has been a tsunami,” states CITF Executive Director Dr. Tim Evans. “Across the country, our analysis of the data suggests that 17 million Canadians had an Omicron infection in the period December to May, for an average of more than 100,000 infections per day. New sublineages in the Omicron line have been continuing to spread since then, and the percentage of Canadians who have had a SARS-CoV-2 infection is now likely well above 50%.”

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