

Research Roundup

Your weekly review on COVID-related research



CITF Event



A Townhall for all Canadians

Invite your friends and family! This presentation, hosted by the CITF in collaboration with Statistics Canada, will be geared to the general Canadian public. We invite anyone interested in the science and data behind this pandemic to join, learn and participate by asking questions! Presenters will give an overview and analysis of the data released last week from Statistics Canada's Canadian COVID-19 Antibody and Health Survey (CCAHS), including by province or region, age, occupation, and visible minority status! The CITF

will explain its in-house modelling capabilities and provide conclusions as to what the data means for the future of our pandemic response.

Register



Spotlight on CITF-funded Research

Effectiveness of COVID-19 vaccines against VOCs in Canada

The race to vaccinate the world became more urgent with the emergence of variants of concern (VOCs). In a recent pre-print, not yet peer-reviewed, researchers from the Canadian Immunization Research Network (CIRN), including CITF-funded researchers Dr. Deshayne Fell, Dr. Jeff Kwong and Dr. Kumanan Wilson, estimated the effectiveness of vaccines given between December 2020 and May 2021 in protecting against symptomatic SARS-CoV-2 infection caused by the Alpha, Beta, Gamma, and Delta variants.

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Workplace SARS-CoV-2 testing throughout the pandemic

Researchers from SeroTracker followed SARS-CoV-2 testing programs reported by 1,159 Canadian and 1,081 international employers across multiple sectors from March 1, 2020, to March 31, 2021. In a recent preprint, therefore not yet peer-reviewed, they report that fewer than 20% of high transmission workplaces had publicly disclosed a testing program. These workplaces represent retail and customer-facing environments, as well as indoor and mixed blue-collar settings.

COVID-19 vaccination during pregnancy in Ontario

A study supported by the VSRG and CITF reports early findings on the uptake of the COVID-19 vaccine in pregnant individuals in Ontario. Dr. Deshayne Fell and her team at the Better Outcomes Registry & Network (BORN) are collecting and evaluating data on COVID-19 vaccination in pregnant individuals across the province at multiple time points. In their first report, the study team unveiled preliminary findings for the period from December 14, 2020 (when Ontario's COVID-19 vaccination program started) to May 31, 2021. The study will be providing regular updates.

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Publications from our Experts

COVID-19 vaccination generates protective immune responses

Protection from COVID-19 vaccines is likely complex, requiring non-neutralizing antibodies, T cell responses, and innate immune mechanisms, as well as low levels of neutralizing antibodies. CITF Testing Working Party and Immune Science Working Party member Dr. Manish Sadarangani and his team provided an overview on the protective immune responses elicited by currently approved vaccines in *Nature Reviews Immunology*. They concluded that vaccine monitoring, as well as comprehensive analyses of immunologic data pre- and post-vaccination, are needed to understand the correlates of protection against COVID-19.



International Research Review

Differences in immune response, based on age, after a Pfizer vaccine

The mRNA-based Pfizer vaccine has demonstrated remarkable efficacy and is approved for use across a wide range of age groups from children aged 12 and up to the elderly. While the specific correlates of protection are still under investigation, a study published in *Nature* attempts to evaluate the broad range of immune responses elicited after one or two doses of the Pfizer vaccine in individuals ranging from 20 to over 80 years old.

Read Summary

Long COVID – the next public health disaster on the horizon

According to a recent *New England Journal of Medicine* article, more than 15 million cases of long COVID are expected in the United States alone. That said, no clear definition for this condition currently exists – including no accepted diagnostic tests or biomarkers. Long COVID is described as a chronic disease syndrome resulting from SARS-CoV-2 infection, with a range of symptoms that can last weeks or months with unknown pathophysiology, time course, therapy, or recovery rate. Anyone who has been infected seems to be at risk of long COVID, though women and patients in their 40s seem to be predominantly affected.

Read Summary



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