



**COVID-19
IMMUNITY
TASK FORCE**

**GROUPE DE TRAVAIL
SUR L'IMMUNITÉ
FACE À LA COVID-19**

Summary report #1

**Risks and impacts of the COVID-19
pandemic on Canada's kids, their parents,
and teachers:**

**Latest research results and policy
implications**

Key findings

- Infection-acquired immunity remains low among Canadian children, so vaccination and mitigation measures such as mask wearing, etc., remain essential.
- Although school staff have feared catching SARS-CoV-2, the virus that causes COVID-19, the mitigation measures at school seem to have worked, at least in some settings, as few have been found to have caught the virus at school.
- Most parents and teachers agree that vaccination is important.
- Most parents intended to get their children vaccinated when vaccines become available to them (if not already).
- So far, the risk of adverse events post-vaccination is low among those over 12.
- The risk of getting myocarditis and pericarditis from SARS-CoV-2 infection is higher for children and adolescents than it is from getting a vaccine.

Background

The [COVID-19 Immunity Task Force \(CITF\)](#), through the Government of Canada, supports over 100 studies to determine the extent of SARS-CoV-2 infection in Canada. This includes the **seven studies** included in this summary that are focused on daycare, primary, and secondary school-aged children, their parents, and teachers. Collectively, results from these studies provide a snapshot of the pandemic's impact on the 2020-21 school year, across Canada, both in terms of infection burden and the toll on mental health and social behaviours. Of note, these results reflect pre-Delta variant times.

Research studies included

Study	Lead researcher(s) and affiliation	Who is participating?	Where is the study taking place?
<u>CHILD Cohort Study</u>	Dr. Meghan Azad, University of Manitoba Dr. Padmaja Subbarao, The Hospital for Sick Children	Children 8-10 years old and their parents	Alberta, British Columbia, Manitoba, Ontario
<u>COVID-19 Education Study (CCS-2)</u>	Dr. Brenda Coleman, Sinai Health System	Primary and secondary school teachers and education workers	Ontario
<u>Tracking COVID-19 for Safer Schools</u>	Dr. Pascal Lavoie, University of British Columbia Dr. Louise Mâsse, BC Children's Hospital	Primary and secondary school teachers and education workers	British Columbia
<u>TARGetKids!</u>	Dr. Jonathon Maguire, Unity Health Toronto Dr. Catherine Birken, The Hospital for Sick Children	Children 0-10 years old and their parents	Ontario
<u>The SPRING Study</u>	Dr. Manish Sadarangani, University of British Columbia	Children, teens, and young adults 0-25 years old	British Columbia
<u>EnCORE Study</u>	Dr. Kate Zinszer, Université de Montréal	Study 1: Children and teens 2-17 years old Study 2: Daycare, primary and secondary school teachers	Quebec

Latest results

Incidence of SARS-CoV-2 infection in schools across Canada

All seven CITF-funded studies monitored SARS-CoV-2 seroprevalence. Findings in over 13,700 children, parents, and school staff indicate that infection-acquired seroprevalence rose gradually throughout the 2020-21 school year, from September 2020 to August 2021, in line with the Canadian population during that time.

- Despite this gradual increase in schools, **seroprevalence remained low** in Canada more broadly, at less than 12.6% in July 2021 in certain parts of Canada, implying that most individuals, if not yet vaccinated, were still at risk of SARS-CoV-2 infection.
- The EnCORE study in Montreal reported a **seropositivity of 10.1% among children** between May 2021 and August 2021, up from 5.8% between October 2020 and March 2021.
- **Seroprevalence rates among school staff** were found to be similar in Vancouver and in Ontario. In Vancouver, where schools were closed for the spring 2021 semester only, 4.0% of staff tested positive for antibodies to SARS-CoV-2 between February 10, 2021, and May 15, 2021. In Ontario, where schools remained closed starting in early April 2021, 3.6% of staff tested positive for antibodies to SARS-CoV-2 between February 18, 2021, and September 10, 2021.
- In terms of **teachers catching SARS-CoV-2 in school**, two of three studies focussing on teachers found the **risk was relatively low**. The Ontario-based COVID-19 Education Study (CCS-2) found that exposure to a household member with COVID-19 (more specifically an adult household member) and travelling outside Ontario were the two highest risk factors for infection in teachers. The B.C.-based Tracking COVID-19 for Safer Schools study also found that teachers contracted SARS-CoV-2 at school in the same proportion as in the community, concluding that in-person schooling is possible without significantly increasing the risk for school staff, **as long as mitigation measures are in place**.

Psychological impact of the pandemic on mental health and social behaviours

Through carefully crafted questionnaires, study teams were able to prompt participants (both children and adults) to share information on their personal experiences during the pandemic. This helped to gain insight into changes to their mental health, social behaviours, and overall wellbeing.

- Results from the CHILD cohort study and the EnCORE study show that up to 80% of kids and youth surveyed **increased their non-educational screen time** during the pandemic.

- The same two studies showed that more than half of the children and youth spent **less time doing physical activity**.
- Several of the studies demonstrated that parents experienced high levels of pandemic-induced **stress and anxiety**.
- As for education workers, many reported **fearing they would catch the virus at work**, although as mentioned above, the risk of catching the virus at school was relatively low in two studies. In the EnCORE study in Montreal, 20% of enrolled staff working in daycares and schools reported feeling burnt out from their job.

Vaccination intent and coverage among kids, their parents, and school staff

As most studies launched before the availability of vaccines in the adolescent population, researchers asked their participants if they intended to receive a COVID-19 vaccine when it was offered to them.

- The CHILD Cohort study operating in Vancouver, Edmonton, Winnipeg, and Toronto, reported that up to 94% of eligible surveyed parents **have received at least one dose** of the COVID-19 vaccine as of September 9, 2021.
- The TARGetKids! study in Ontario found that between April 2020 and July 2021, only 3% of parents were unconvinced of the importance of vaccines for themselves, whereas 8% were unconvinced of the importance of getting their **children vaccinated**.
- The EnCORE study in Montreal found that most parents were very likely to have their youths and older children vaccinated, although **confidence decreased with the child's age**. For example, as of August 2021, 50% of parents of 2- to 3-year-olds intended to have their child vaccinated, whereas nearly 80% of parents of 8- to 9-year-olds were very likely to have their child vaccinated. Nearly 90% of the parents of 14- to 18-year-olds intended to have their adolescents vaccinated, if they had not already received vaccines.
- The SPRING Study in B.C. found that 76% of surveyed parents and children intended to receive a COVID-19 vaccine, when asked in late winter 2021. They also found that the **key facilitators to increase vaccine confidence** were to focus on vaccine safety and benefits, leverage trusted voices (such as Provincial Health Officers), and encourage individuals to promote vaccination among friends/social networks.

Policy implications

As we begin a new school year, the **threat of Delta** and other emerging Variants of Concern (VOCs) is omnipresent.

- The continuation of **nonpharmaceutical interventions** such as masks, visors, hand washing, physical distancing, reduced gatherings, improved ventilation and indoor air quality, distance learning alternatives, etc., **continue to be relevant** to control the spread of SARS-CoV-2 in schools. This is imperative to keep children in class, where they are less disposed to spend time on screens and more likely to be physically active.

The arrival of vaccines in the over 12-year-old population has also provided a new means to tackle the spread of SARS-CoV-2 in schools.

- Overall, vaccine coverage is high in Canada, but it is variable across the country, resulting in **pockets of the population who are not adequately protected** against SARS-CoV-2 infection.
- As many participants in the CITF-funded studies indicated that they are, or intend to get vaccinated, it will be important to **continue to monitor vaccine coverage** and levels of vaccine-induced immunity to ensure safety for all involved in the educational sector.
- This will be particularly important when COVID-19 vaccines become available to children less than 12 years old, which constitutes a big proportion of school-aged children and **about 15% of the Canadian population**. Findings from the CITF-funded studies indicate that most, but not all, parents are prepared to get their <12-year-old children vaccinated.

Recently, [Pfizer-BioNTech announced](#) that its 2-dose pediatric formulation (10µg mRNA) of the COVID-19 vaccine was found to be safe and effective in a cohort of over 2,200 children aged 5-11 years old.

- The timeline at which this vaccine, and a similar one from Moderna, may become **accessible to Canadian children** is determined by Canada's robust regulatory approval body, [Health Canada](#), recommendations from the [National Advisory Committee on Immunization \(NACI\)](#), and provincial/territorial implementation. Clinical data submitted by pharmaceutical companies to these federal agencies are scrutinized with the utmost rigor before the products are recommended and deemed accepted for use.
- Furthermore, adverse health events such as **myocarditis and pericarditis**, for which there is an increased risk in children and teens with SARS-CoV-2 infection and seen very rarely following COVID-19 vaccination, continues to be closely monitored and evaluated. In fact, the CITF, through its working party, the [Vaccine Surveillance Reference Group \(VSRG\)](#), proudly supports several pan-Canadian initiatives tasked with reporting adverse health events to regulatory bodies, which take action in the event of a verified safety signal.