

Dear Vancouver School Board Trustees, Superintendent Unwin, and Deputy Superintendent Nelson,

We are requesting additional mitigation measures to protect our children from Covid19 infections in schools. Given new information and the emergence of data, since the summer, it has become increasingly apparent that children urgently require additional protection from Covid 19 infections, in their eleventh hour, prior to eligibility for vaccination. The 5–11-year-old cohort are likely a few months away from being fully vaccinated.

Were you made aware of the data from the Public Health Agency of Canada (PHAC) document from September 14, 2021 "Evidence on the Virulence, Transmission and Impact of B.1.617.2 (Delta) among Children" when the decisions were made to return to a "nearly normal" school year"? The above mentioned PHAC document outlined the projected infections in schools with and without certain public health measures (PHM) in place. This document projected that a very high level of transmission was to occur within schools among children 4-11 years old:

"Elementary schools generally include children 4-11 years old, thus none of the children are eligible for vaccination in these settings. Key findings on elementary schools from the predictive models are listed below: The baseline scenario of 30-50% immunity (from infection or vaccination) and no NPIs estimated more than 75% of susceptible students will get infected within three months (26). The addition of masks dropped the proportion infected to 50% and testing further reduces infections to 22% (26). Compared to fully remote instruction, 5-day in-person attendance with no in-school testing (90% of teachers and staff were vaccinated with 80% vaccine effectiveness) was associated with a 40% projected increase (excess cases attributable to school transmission) in infections among students at a community case rate of 10 cases/100k/day and a 38% increase at 50 community cases/100k/day (25). In a community with 10 cases/100k/day, weekly screening averted 57% of excess incidence (cases attributable to school transmission) relative to remote learning" (see attached PHAC document).

Children under the age of 12 now account for the highest number of new infections in our nation. BC cases also reflect the vulnerability of children at this time. On October 27, a report was posted that stated that Fraser Health schools saw more than 2000 COVID-19 cases within a 6-week period (1). As of November 9th, BC School COVID Tracker has posted 2784 school exposure events since the beginning of this school year, which is several fold higher than the exposures posted for the entirety of last school year. Given the very high number of school exposures within the first 6-8 weeks of this school year as well as the projected high level of transmissions in schools in the above mentioned PHAC document, we anticipate that you would support the addition of public health measures that were projected to reduce transmission in schools.

Airborne transmission is the dominant route for the spread of SARS-CoV-2. Asymptomatic infection has been a key feature of this pandemic and asymptomatic infection is far more common in children (47%) as compared to older individuals (20%)(2). Therefore, asymptomatic testing amongst children would be of greatest benefit. And, mitigation measures in schools should target airborne asymptomatic transmission.

The risks to our children are not negligible. The CDC states that children are at risk of severe illness and complications from COVID-19. The pediatric hospitalization rate is 1% (possibly higher for Delta), of which a third end up in the PICU. The rate of MIS-C is 1/3000. And, alarmingly the rate of long COVID is 7-14%. While BC does not track pediatric long COVID, there is robust international data from the UK (3,4) and Israel (5). Long COVID is a syndrome in which the pathophysiology is

poorly understood and the treatment is unknown. Studies in adults have demonstrated that even mild infection can cause vascular damage and organ damage including loss of kidney function (6), loss of grey matter (7) as well as cognitive deficits (8). A recent preprint study demonstrated a substantial new-onset post COVID-19 morbidity in the pediatric population(9). Unlike influenza or the common cold, SARS-CoV2 utilizes ACE 2 receptors to infiltrate cells. This receptor is found throughout the body, in many types of cells, including the vasculature system and almost all organs. SARS-CoV2 is unlike the rhinovirus virus (the most common cold virus) in that it utilizes the receptor ICAM-1 for cell entry which allows replication in sinus tissues and not in other tissues. It is also unlike the influenza virus which primarily targets lung tissue (10). SARS-CoV2 has the unique ability to enter and infect a large variety of cells.

The president of the Canadian Medical Association and pediatrician, Dr. Katherine Smart, wrote: "Preventable death and disability are not acceptable consequences. As the denominator of children with Covid-19 increases, so will the adverse outcomes- it's simple but grim math. And those who could pay the biggest price will be our children. We need to step up and be the adults"(11).

We are asking for immediate implementation of the following:

- 1) Ample rapid test access and procedures for classes with a confirmed positive case.
- 2) Improved remote learning options for students. At a minimum, flexibility should be available for those who choose homeschooling and would like to return to their local schools, without the constant threat of losing their spots.
- 3) Government funding for pandemic ventilation solutions. This would include active monitoring during the daytime when rooms are occupied, with CO2 monitors. Measures should be enacted should the CO2 measurement go above 800ppm such as additional HEPA units, or a fan pointing out a window or an adjustment to the system. Consideration should be given to upper room or 222 nm ultraviolet air disinfection potentially in gyms and auditoriums. (see additional attached PDF document)
- 4) Timely and accurate notifications of COVID-19 exposures in schools, regardless of where the positive cases were deemed to have been acquired.
- 5) Lobby for a Provincial education staff vaccine mandate.

Leading by example and implementing additional mitigation measure in schools would demonstrate to parents and caregivers the necessity of protecting children. This could beneficially result in increased pediatric vaccination uptake.

Moving forward, after vaccinations, good ventilation and filtration in schools will have ongoing benefits.

We look forward to your collaborative efforts to ensure the health and safety of the children of Vancouver. We also look forward to your timely response within the next two weeks, as this is an urgent matter.

Sincerely,

Safe Schools Coalition of BC,

Dr. Nathalie Kos

Jennifer Heighton, co-founder, Safe Schools Coalition BC

Jaelyn Ferreira, advocate, co-founder, Safe Schools Coalition BC

Tracy Casavant, co-founder, Safe Schools Coalition BC

Kyenta Martins, Safe Schools Coalition BC,

founder Option 4 Families of Vancouver

Mike McCulloch, Safe Schools Coalition BC

Julia Hengstler, Safe Schools Coalition BC, professor of education,

author, presenter, consultant & mother

Gabriel Bauman, Safe Schools Coalition BC

Tom Jackman, Safe Schools Coalition BC

Victoria Chung, Safe Schools Coalition BC

Dr. Mauricio Drelichman

Dr. Lyne Filiatrault, retired Vancouver Emergency Physician

Dr. Karina Zeidler, Family Physician

David N. Fisman, MD MPH FRCP(C) FCAHS, Professor of Epidemiology, University of Toronto

Dr. Amy Tan, Palliative Care & Family Physician

Colin D Furness, MSt PhD MPH MEd (cand), Assistant Professor,

Dalla Lana School of Public Health, University of Toronto

References

1. MacLellan J. "Fraser Health schools saw 2000+ COVID-19 cases in six weeks-mostly students" New West Record, Oct 28, 2021. <https://www.newwestrecord.ca/coronavirus-covid-19-local-news/fraser-health-schools-saw-2000-covid-19-cases-in-six-weeks-and-most-of-those-were-students-4699352>
2. Fisman D. et al. Asymptomatic infection is the pandemic's dark matter. PNAS September 21, 2021 118 (38)
3. Updated estimates of the prevalence of long COVID symptoms-Office for National Statistics. 21 January 2021. reference number:12788
4. Wise J. Long covid: one in seven children may still have symptoms 15 weeks after infection, data show. BMJ 2021;374:n2157
5. TOI Staff. "11% of Israeli kids who got virus now suffer from "long COVID -Study" Times of Israel, 14 September 21. <https://www.timesofisrael.com/more-than-10-of-israeli-kids-who-got-virus-now-suffer-from-long-covid-study/>
6. Bowe B. et al. Kidney Outcomes in Long COVID. JASN. November 2021, 32 (11) 2851-2862
7. Douaud G. et al. Brain imaging before and after COVID-19 in UK Biobank, medRxiv. 2021. doi: org/10.1101/2021.06.11.21258690
8. Hampshire A. et al. Cognitive deficits in people who have recovered from COVID-19. j.eclinm. Volume 39, 101044, September 01, 2021
9. Roessler M. et al. Post COVID-19 in children, adolescents, and adults: results of a matched cohort study including more than 150,000 individuals with COVID-19. medRxiv. 2021. doi.org/ 10.1101/2021.10.21.21265133
10. Kavanagh K. Viewpoint: Here's Why COVID-19 Is Much Worse Than Flu. Infection Control Today. October 1, 2021A
11. Smart K. To protect our kids from COVID-19, we have to be grown-ups. The Globe And Mail. August 16, 2021