Colin D. Furness MISt PhD MPH Infection Control Epidemiologist ********** Toronto, Ontario

December 31, 2021

Dr. Eileen de Villa Toronto Medical Officer of Health 277 Victoria Street Toronto ON M5B 1W2

Dear Dr. de Villa,

I am writing with an urgent plea for urgent action to protect our children, in light of yesterday's announcement of return to school plans by Dr. Kieran Moore.

When children return to school, classes will be collapsed together to rationalize absent teachers and absent children. No meaningful student cohorting will exist. Children will be given one cloth mask that isn't adequate against an airborne pathogen. Each school will receive less than one new HEPA filter. Moreover, because there is also no central testing regime, there is no way to notify of exposures, so a sick child may stay home but none of those exposed will know to test or isolate. Rapid testing would be enormously helpful in this situation if done daily (and only if done daily), but the required 1+ million rapid tests needed each day for this purpose do not exist. Under Dr. Moore's plan, all students attending schools and daycares in Ontario will become exposed to COVID-19 within a few days of opening.

What will be the impact of this sudden mass infection in our children? Most cases of pre-Omicron COVID in children are mild, although Long COVID, associated with auto-immune disease and brain tissue loss, occurs in anywhere from 5% to 35% of child cases, even when they are mild. Omicron's ability to inflict Long COVID may be very impaired, which is cause for hope, but not the basis for a public health strategy. We frankly do not yet know what changes Omicron brings to the epidemiology of Long COVID.

However, in the short term, I am actually more concerned about system capacity to deal with unvaccinated cases, because we know that Omicron remains extremely dangerous to unvaccinated people. Here is what the data tell us. There are 723,000 children in Ontario under 5, entirely unvaccinated, and approximately 75% (~550,000) of these are attending daycare or kindergarten. There are 1,100,000 children ages 5-11 in Ontario, of whom only approximately 50% are vaccinated. This means a total of ~1,100,000 entirely unvaccinated children between the ages of 0-11, who will be attending schools and daycares beginning on January 5: a large share is from Toronto. Past reports of child hospitalization rates for COVID have converged at approximately 1/200. However, Omicron has been reported as causing 50% fewer hospitalizations, so we can assume 1/400 child cases will require hospitalization in this wave in Ontario. That admittedly seems low, on the order of one child per school in

this age group. However, cumulatively we could expect up to 2,750 hospitalizations of children under 12 from this wave in Ontario.

This now seems an appallingly high number, but that itself is not the problem. The problem is time frame. Spread over months, this burden might be readily manageable. However, because the opening plan will ensure that these children will become infected within days of each other, most who will require hospitalization, will need it at about the same time. While I do not know how many paediatric ICU beds exist in Ontario, I believe it can be counted in the dozens, to be fielded for a potential 2,750 children in simultaneous need. What sounded appalling now seems more like catastrophic.

Despite the provincial policies for return to in person school next week, there are still two levers left to pull. One is citizen resistance: my own children will not be attending the first 13 school days in January, and if a majority of parents also resist, transmission could be significantly slowed by thinning attendance.

However, the more important, second lever is action at the level of the public health unit and school board, hence my letter. Either authority could implement a 13 school-day delay in opening primary schools, making Jan. 24 the first day of school. This short delay would allow five vital steps to be taken:

- (a) Emergency prioritization of 5+ students for first, second, and third shots as appropriate;
- (b) Emergency prioritization of teachers and other school staff for a third shot;
- (c) Spreading out the burden of child infection many would still become infected in the next two weeks through community transmission, but not the entire school-going population;
- (d) Deferral of close student contact until likely after the Omicron wave has peaked in Ontario;
- (e) Formulation of a plan to enhance daycare air quality and PPE in lieu of vaccination.

Finally, when we do open later in January, it is also vital to institute a policy where at least one shot is required for every student to attend in person. It is becoming apparent that **serious** COVID-19 has now become a vaccine-preventable disease, simply put. We avoid catastrophe and get schools back to normal by recognizing this truth and allowing some time to finish vaccinating the susceptible population instead of mass infecting them. These are our children; we owe them this diligence.

These five steps, together with N95 masks being issued to teachers, would let us get kids back in school safely. I'm asking for 13 days for primary schools and new vaccination prioritization, in exchange for avoiding catastrophic outcomes for a few thousand unfortunate children.

Thank you for your consideration of my plea.

Sincerely,

Colin Furness

din Funel