

September 2, 2021

To: The leaders of the federal political parties: Justin Trudeau, Erin O'Toole, Jagmeet Singh, Annamie Paul, and Yves-François Blanchet
CC: All provincial premiers and territorial leaders

Canadians need stronger, consistent protections from COVID-19!

A group of Canadian occupational health experts, we are making an urgent call for you to support stronger protections from COVID-19. It's clear that vaccinations are not enough.

Will you commit to include the following actions in your electoral platform?

- Loud, clear, and consistent messaging that the SARS CoV-2 virus spreads as an aerosol, making a full array of airborne prevention measures necessary.**
- Enforceable standards requiring ventilation to supply clean respirable air in all workplaces, public spaces and other locations where people gather.**
- Mandated HEPA filtration units for situations with inadequate ventilation.**
- Provision of effective respiratory protection equipment (PPE) like N95s (not cloth or surgical masks) for individuals working with others at close quarters or without adequate ventilation.**

Canadians have the right to know where the federal parties stand on these vital measures. The stakes are very high, and the current measures will not adequately protect Canadians from the fourth wave.

Remember the prescient quote by Archie Campbell, head of the 2003 SARS Commission: ***If we do not learn from SARS and we do not make the government fix the problems that remain, we will pay a terrible price in the next pandemic.***

We look forward to your response by **September 10.**

Alec Farquhar, Dorothy Wigmore, Jennifer McDonald, Kevin Hedges, Laurence Svirchev, Marianne Levitsky, Sarah Addleman, Simon Smith, Stéphane Bilodeau and other members of the [Canadian Aerosol Transmission Coalition](#).

Supported by Leyla Asadi, MD, MPH, Edmonton; Kashif Pirzada, MD, Toronto; Anna Wolak, MD, Vancouver; Edith Hui, MD, Toronto; Cheryl White, P Eng, Toronto; David Elfstrom, P Eng, Toronto; Dan Furst, Tech Lawyer, Calgary; Andy Wong, Markham; Tehseen Ladha, MD, Edmonton; Danielle J. Cane, Toronto; Joe Vipond, MD, Calgary; Leah Ugolini, RDH, Toronto

We are making an urgent call for you, as leader of a national party, to take a stand on these important measures (more detail in Appendix). We call on you to commit to the rapid strengthening of protections for the public and workers against the airborne transmission of COVID-19, consistent with the fact that the virus spreads primarily in the air.

Why are these measures needed?

Full vaccination of the vulnerable Canadian population is essential to reduce severe illness and death. But it is practically and mathematically insufficient to prevent the exponential transmission levels of a fourth wave from the Delta variant. Other prevention measures are essential to break transmission chains.

Who are we?

Our multi-disciplinary group includes physicians, health scientists, ventilation engineers, respiratory protection specialists and occupational health professionals. Since January 2021, we have studied and advocated for science- and evidence-based approaches to prevent aerosol transmission of SARS-CoV2.

Will your campaign support these essential measures to save the lives of Canadians and end the pandemic?

Appendix -- The details

At the onset of the pandemic, individuals in our group called for prevention measures against airborne and aerosol transmission in the face of the entrenched official position that only droplet and contact spread mattered or existed. Unfortunately, our calls went largely unheeded.

We repeated those calls as a coalition in an [open letter in January 2021](#), signed by over 600 health and safety professionals and other concerned stakeholders. As the evidence for airborne transmission became stronger, governments and public health authorities made tentative references to the “shared air” risk, providing some limited acknowledgement, but rarely, if ever, has the guidance been consistent with the full repercussions of the science about airborne transmission. Nor has the precautionary principle been applied, to our deep disappointment.

The Delta variant makes stronger measures essential

The Delta variant is much more contagious than previous versions of the virus. It strikes hardest against those with no vaccination. It also can infect fully-vaccinated individuals who then become vectors in the chain of transmission to the unvaccinated. A significant number of people are highly vulnerable to the virus due to medical issues, fear and hesitancy, as well as vaccine ineligibility for children under 12. Viral reproduction levels have doubled to six or eight, so more vaccinations are not a sufficient measure to stop the latest exponential cross-country surge, or future ones.

While we are pleased to see some positive changes, **the current prevention measures are not strong enough**. In some cases (e.g., Québec, Ontario) the recognition of aerosol transmission has not led to meaningful changes at the frontlines. (Why else have at least 100,000 healthcare workers been infected across the country?)

Ventilation and air purification are essential. Most guidance about it is not sufficiently prescriptive or detailed, and does not set clear standards, nor

reinforce the need for transparency of real-time levels. Similarly, PPE guidance does not require filtering respirators in enough workplace situations; they are mostly restricted to a narrow range of healthcare activities, while ineffective gloves and face shields are common.

Furthermore, the “hygiene theatre” of surface disinfecting also is unnecessary, as the US CDC [recommended](#) in early April; in fact, it’s likely making people sick (e.g. asthma) rather than protecting us.

We need much stronger statements and more practical measures.

To **break the chains of transmission**, we need these science-based measures:

- 1. Loud, clear messaging that SARS CoV-2 virus spreads as an aerosol (like smoke) and requires airborne control measures. Make the message consistent across the country and advocate protections consistent with the messages.**
 - COVID is airborne
 - Avoid shared air
 - Minimize indoor occupancy
 - Clean the air: ventilate and filter - to protect everyone in enclosed spaces
 - Distance, don’t partition (barriers provide false security and can trap bad air)
 - Clean with soap and water – disinfect only if contamination known
- 2. Enforceable standards to minimize shared air in all workplaces, public spaces and other places where people gather. Reduce occupancy, improve dilution ventilation, supply clean respirable air.**
 - Set **occupancy maximums** for indoor spaces based on expert assessments of ventilation levels. Then reduce or cease occupancy when the required level of ventilation cannot be maintained.
 - **Install MERV 13 filters** (or the highest possible) in the HVAC systems of all

publicly-accessible buildings, including schools, government, hospital, long-term care, and retail facilities.

- Require employers or building owners to **obtain an expert recommendation about how to ensure clean respirable air** through a combination of outside fresh air and properly-filtered recycled air. Where this is not possible, require air purifying equipment (see below).
- In workplace and other congregate settings (including schools and health care facilities) **require carbon dioxide (CO₂) monitoring of all occupied spaces**. Aim to maintain a CO₂ level of 600 parts per million (ppm) or less. Require ventilation improvements when the levels surpass 800 ppm and close the space if levels exceed 1000 ppm.
- Require employers and building owners to **regularly test the air and make results available to all**, including CO₂ and ventilation levels, and related occupancy limits.

3. Mandate appropriately-sized HEPA-filtered air purifiers where ventilation is inadequate

- Where existing HVAC systems cannot provide the required clean respirable air, mandate the use of high-quality HEPA filtering air purifiers (with no additional technologies like ionization or UV) to remove and therefore dilute whatever virus may be in the air.
- Set air quality and occupancy levels based on the expected performance of the air purifier units and available ventilation. Reduce or cease occupancy if the units cannot reach those levels (e.g., three units are supposed to be used and one is broken).

4. Require N95 or equivalent respirators in indoor or enclosed spaces where workers encounter the public, deal with patients/clients, and/or mix with people in enclosed areas

- Despite good ventilation/air purification levels, people can still be infected if they are close to others, even for a short time. A recent University of Waterloo [study](#) makes this clear.
- Therefore, individuals and workers who must be in settings where they “share air” at close quarters, or with inadequate ventilation -- must be provided with effective filtering respiratory protection (i.e., N95 respirators or better), not the poorly-fitting surgical masks most currently receive. This includes teachers with students, healthcare workers with patients or residents, transit drivers with riders, retail clerks with customers, and meatpacking workers.

Finally, Canada also needs long-term solutions, including a national [standard](#) for responses to this kind of public health emergency. It must include consistent and transparent reporting of key data such as the occupation of infected people.

Provinces and territories have followed very different paths in this pandemic, sometimes with disastrous results. That should not happen again. In our federal system, the national government still has the right to use emergency legislation to establish minimum standards for responses to public health crises. Provinces can do more; but a national standard would guarantee all Canadians minimum protections and data monitoring.