

For immediate release

There's no excuse left. We need new, stronger measures to deal with COVID-19's airborne transmission

TORONTO – April 16, 2021 – Lives are at stake. Things will not improve until governments and public health officials accept that the SARS-CoV2 virus is airborne. The clear science about this can't be ignored or denied any longer. Only new and effective measures based on airborne transmission of all variants will protect essential workers and the rest of us.

That's the message from a Canadian coalition of organizations representing hundreds of scientists, occupational health specialists, engineers, physicians, nurses and others. They added their voices today to the growing chorus delivering similar messages, as new variants of the SARS-CoV2 virus take frightening tolls in many parts of the country.

"Vaccines are not enough," said **Marc-André Lavoie**, President, Canadian Registration Board of Occupational Hygienists. "Whatever lockdown is used, many people will still be working in closed spaces. We must protect them -- and their communities -- from infection. That means strong measures based on knowing that the virus spreads when people are 'sharing the air'. This is what's happening when workers are indoors, at close quarters, without adequate ventilation, for even a short time."

"It's vital that employers improve ventilation," said **Stéphane Bilodeau**, a prominent Canadian ventilation engineer. "HVAC systems with fresh air intake and air purifiers with HEPA filters if necessary, are key tools to reduce the virus spreading through the air in a workplace, including schools, offices, grocery stores and restaurants."

The science about airborne transmission persuaded a Quebec judge recently to [rule](#) that all health care workers in 'hot and warm zones' need N95s; surgical masks are not good enough.

"Employers also need to provide workers with a higher level of personal protective equipment when caring for, or in close contact, with others", said **Dr. Raymond Tellier**, a microbiologist with extensive experience investigating infectious diseases. "When workers could be in harm's way, this means real respirators, not surgical masks."

"There's no longer an excuse to limit who's using N95s, or even better protection," added **Dr. Simon Smith**, a scientist retired from a career in respirator development. "Several Canadian companies are producing high volumes of them now. All workers exposed to aerosols should be using them,

rather than much less effective barriers like surgical masks. In many areas, they could also use traditional 'elastomeric' respirators, or in more hazardous situations, a powered air purifying respirator (PAPR)."

"Public health authorities haven't paid enough attention to protecting workers. So there've been some very large outbreaks across the country because the virus is carried into a workplace and goes from there to co-workers, families and others," said retired WorkSafeBC officer and Certified Industrial Hygienist (CIH), **Laurence Svirchev**. "Government health and safety inspectors know infection rates go down when employers use engineering controls -- like ventilation -- and effective PPE -- like fit-tested N95 respirators. They must to allowed to enforce health and safety laws, to order employers to provide these vital measures."

The expert coalition endorses Zero COVID Canada's [open letter](#) to federal and provincial officials, public health officers, and the Public Health Agency of Canada, which details the call for strong lockdown action that recognises airborne transmission.

"Sustained and targeted measures -- like those used in places like New Zealand -- will break the transmission chains," said **Dr. Kashif Pirzada** with Masks4Canada. "Recycling failed yo-yo measures that ignore airborne transmission -- clearly it's not working. We need to use all the tools at our disposal, including targeted lockdowns, ventilation, rapid tests and N95 masks."

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Background information

What protective measures are really needed? Our recommendations

- ✓ **Update COVID-19 guidance to address aerosol transmission of COVID-19**
 - ✓ **Promote strategies to reduce transmission risk in private homes and businesses through clear public health messaging and education, specifically:**
 - avoid the “3 C’s” (crowded places, close-contact settings and confined/enclosed spaces)
 - regular HVAC maintenance and filter replacement
 - turn on vented range hoods and bathroom exhaust fans, when possible
 - routinely open windows for fresh air
 - indoor mask wearing even when distanced
 - ✓ **Mandate and fund ventilation assessments and upgrades for essential public institutions** (e.g., schools, long-term care homes)
 - ✓ **Ensure that no high-risk healthcare worker (HCW) or other essential worker is denied access to a fit-tested respirator** (N95, elastomeric or equivalent)
 - ✓ **Put the onus on employers to provide proper protective equipment rather than requiring HCWs to do individual point of care risk assessments** (as PHAC recommends in its recent guidance), **often with little time, training, fit-testing or suitable options:**
 - Health care workers need respirators in situations besides traditionally-defined “aerosol generating procedures” (in real life, they include shouting, singing, coughing, sneezing, heavy breathing and even normal breathing and speaking).
- Decisions also need to be based on proximity to the patient, time spent with the patient, building air quality, and patient compliance with masking for source control.
- For other workers, respirators should be required in work situations involving crowding, close contact, the presence of aerosol-generating sources and poor building air quality
- ✓ **Recommend and deploy carbon dioxide (CO₂) monitors as a surrogate measure of inadequate ventilation to reduce long-range transmission risk in shared room air:**
 - During a TB outbreak, CO₂ concentrations above 1000 PPM significantly increased the risk of becoming infected with TB. Improving the building ventilation to a CO₂ concentration of 600 PPM stopped the outbreak in its tracks.
- ✓ **Include appropriately sized portable air filtration (HEPA) units, installed under appropriate professional guidance, as options for filtering out bioaerosols indoors when ventilation is suboptimal**
- ✓ **Engage engineers and other ventilation specialists to develop clear ventilation standards for indoor workplaces. Integrate these standards into re-opening guidelines for businesses with a higher risk of aerosol transmission.**
- ✓ **Develop solutions and guidance using the skills and knowledge of disciplines trained to deal with job-related hazards** (e.g., occupational hygienists, aerosol scientists, ventilation engineers)