

January 31, 2024

Hon. Sylvia Jones
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Hon. Paul Calandra
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Hon. Mark Holland
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Hon. Sean Fraser
Minister of Housing, Infrastructure and Communities (Canada)
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Dear Honourable Ministers,

Re: Legislated improvements to indoor air quality (IAQ) in indoor public settings are required to reduce the transmission of COVID-19 and other airborne pathogens

Through the COVID-19 pandemic, we have learned that the SARS-CoV-2 virus transmits via an airborne mechanism. Additionally, despite the end to the global declaration of emergency, COVID-19 continues to cause illness and death due to severe disease and through Post COVID Condition (Long COVID). In the region served by Peterborough Public Health, there were 109 PCR-confirmed COVID-19 deaths in 2022 and 35 in 2023.¹ Recently released data from Statistics Canada shows that nationally, in 2022, COVID-19 climbed to the third leading cause of death in Canada; in 2020 and 2021, COVID-19 was the fourth leading cause of death.² Last month, the seven-day average wastewater signal for December 11, 2023 was at 42 normalized viral copies per mL, the highest since monitoring began in January 2021.³ Suffice it to say that COVID-19 is still present and harming our community's health and the economy's stability.

With this recognition, the Board of Health of Peterborough Public Health continues to advocate for improvements in preventive activities and at its January 10th Board of Health meeting resolved to continue this advocacy with this letter to you for your consideration.

Among the most important interventions to prevent COVID-19 is improving the indoor air quality (IAQ) of the air that we breathe. In January 2023, we last wrote to you to advocate for consideration of IAQ improvements. In May of 2023, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) released a new standard that now operationalizes the improvements. Canada uses ASHRAE to inform its current building code development, and so this new standard should be integrated as soon as possible in Canada to improve health and save lives.

ASHRAE Standard 241: [Control of Infectious Aerosols](#), specifically addresses improving IAQ to reduce infection from airborne pathogens. The Ontario Society of Professional Engineers notes that “incorporating ASHRAE Standard 241 into the Canadian National Building Code will significantly improve indoor air quality and ensure that building designs and systems are optimized to minimize airborne disease transmission.”⁴

Advancing cleaner air policies and implementing ASHRAE Standard 241 comes with a significant boost to both public health and economic outcomes. “The total monetized COVID-reduction benefit of 16 weeks of Infection Risk Management Mode per year [during the peak ‘season’ of transmission] is about \$40 billion, about 10 times the total cost. Monetized values of other benefits, such as increased productivity and reduction in other virus infections, would likely be another \$20 billion to \$40 billion.”⁵ The return on investment is *at least* 6:1, potentially as much as 8:1.

The bottom line is that scientists, academics, engineers, doctors, and public health practitioners agree that cleaner air in indoor public spaces is needed to truly get ahead of this pandemic and mitigate the onset of future public health emergencies related to airborne pathogens.^{6,7,8}

ASHRAE Standard 241 specifically addresses improved IAQ as it relates to respiratory viruses, a component currently missing from provincial and federal building codes and regulations. The Standard lays out practical solutions that owners, operators, and managers of shared spaces can take to protect those occupying their spaces from airborne pathogens.

ASHRAE Standard 241 and improved indoor air quality should be adopted into federal and provincial building codes and highly considered for inclusion in local property standards by-laws to ensure improvements in the air we breathe and our health.

Respectfully,

Original signed by

Councillor Joy Lachica
Chair, Board of Health

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cc: Local MPPs
Local MPs
Local Councils
Ontario Boards of Health
Association of Local Public Health Agencies (aLPHa)

¹ Public Health Ontario. (2023). Ontario COVID-19 Data Tool. Retrieved November 27, 2023 from <https://www.publichealthontario.ca/en/data-and-analysis/infectious-disease/covid-19-data-surveillance/covid-19-data-tool?tab=trends>

² Statistics Canada. (2023). Leading causes of death, total population, by age group. Retrieved December 19, 2023, from <https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1310039401>

³ Peterborough Public Health. (2023). COVID-19 and Respiratory Virus Risk Index. Retrieved November 29, 2023 from <https://www.peterboroughpublichealth.ca/covid-19-risk-index/>

⁴ Ontario Society of Professional Engineers. (2023) OSPE Supports Adoption of ASHRAE Standard 241 in the Canadian National Building Code. Retrieved August 16, 2023 from, <https://ospe.on.ca/advocacy/ospe-supports-adoption-of-ashrae-standard-241-in-the-canadian-national-building-code/>

⁵ Richard Bruns, PhD. ASHRAE Journal. (2023). Cost-Benefit Analysis of ASHRAE Standard 241. Marwa Zaatari, PhD.. Anurag Goel, Joesph Maser. ASHRAE Journal. (2023). Why Equivalent Clean Airflow Doesn't Have To Be Expensive

⁶ The Lancet. (2023). US CDC announces indoor air guidance for COVID-19 after 3 years. Retrieved July 7, 2023 from [https://www.thelancet.com/pdfs/journals/lanres/PIIS2213-2600\(23\)00229-1.pdf](https://www.thelancet.com/pdfs/journals/lanres/PIIS2213-2600(23)00229-1.pdf)

⁷ National Collaborating Centre for Environmental Health. (2021). COVID-19 and indoor air: Risk mitigating measures and future-proofing. Retrieved July 7, 2021 from <https://ncceh.ca/content/blog/covid-19-and-indoor-air-risk-mitigating-measures-and-future-proofing>

⁸ Ibid.