



**CANADIAN SOCIETY OF RESPIRATORY THERAPISTS**

**SOCIÉTÉ CANADIENNE DES THÉRAPEUTES RESPIRATOIRES**

## **Position Statement on Climate Change and Cardiorespiratory Health**

### **Preamble**

Climate change is a global crisis which with significant health impacts<sup>1</sup>. The effects of climate change impact all of Canada with many parts of the country already being disproportionately affected<sup>2,3</sup>.

Climate change is a healthcare issue and requires immediate and sustained action from governments at all levels. This crisis needs to be addressed with the same urgency and level of attention as the COVID-19 pandemic.

Climate change has significant impacts on cardiorespiratory health and respiratory therapists are concerned about the impacts on the health of their patients, families, and communities, and on strained healthcare systems. To that end, they have a strong interest in ensuring measures are taken to mitigate (i.e., reduce) and to adapt to (i.e., respond in a manner that reduces exposure and vulnerability to<sup>1</sup>) climate change. The CSRT acknowledges the commitments the federal government has made at the COP 26 summit and previous climate meetings. These commitments must be followed through with evidence-informed actions to achieve or exceed climate targets and which are rooted in legislation.

Furthermore, respiratory therapists must be mindful of the actions they take in their day-to-day practice and the potential impacts these actions have on the environment and the lands upon which they live and work.

### **Position**

Federal, provincial, and local governments need to take immediate and sustained action to mitigate the impacts of climate change and to support adaptation to its effects.

### **Recommendations**

The CSRT calls on governments at all levels to:

1. develop and implement effective evidence-informed action plans to address climate change with the highest level of urgency (these plans should recognize the traditional knowledge, experience and perspective of Canada's Indigenous people be developed in collaboration with local Indigenous communities)
2. enshrine evidence-informed actions in legislation to ensure sustained action
3. undertake measures to specifically mitigate and adapt to climate change by building climate resilient infrastructure including infrastructure to help people with respiratory and other chronic diseases cope and adjust to the impacts of climate change, encouraging the healthcare industry to reduce its impact on climate change and supporting those impacted by the transition to greener healthcare and a greener economy
4. ensure sustainable funding for research relating to climate change and cardiorespiratory health

The CSRT also calls on respiratory therapists to be mindful of the choices they make in their day-to-day practice and to choose or advocate for options that minimize the impact on the environment.

### **Rationale**

Among the many impacts of climate change felt across Canada in recent years are wildfires<sup>3,4</sup> and extremes of temperature and weather. These changes are particularly impactful on cardiorespiratory<sup>4,5</sup> health. Wildfires result in elevated levels of particulate matter in the atmosphere, reducing air quality and impacting lung and cardiovascular health. Rapid changes in ambient temperature and humidity are associated with increased emergency department visits in people with chronic lung disease<sup>6</sup>. Increases in particulate matter, ozone and other greenhouse gases trigger inflammatory responses and are associated with exacerbations in people with asthma and chronic obstructive pulmonary disease<sup>5</sup> and with increased emergency department visits for cardiovascular concerns<sup>6</sup>. These environmental changes lead to increased morbidity and mortality in asthma, COPD<sup>7</sup> and other respiratory illnesses<sup>8</sup> and in people with cardiovascular disease. Furthermore, climate related events create increased risk to physical healthcare infrastructure, and increased strain on healthcare delivery and vulnerable populations, including those with respiratory disease. Emergency evacuations and population displacement from wildfires and floods may overwhelm healthcare systems and public resources and have been associated with trauma and post-traumatic stress disorder<sup>9</sup>.

Other anticipated impacts of climate change vary across the country and include coastal erosion, reduced access to potable water, loss of permafrost and sea ice, changes in precipitation patterns (drought or increased precipitation), flooding, storm surge, changes to forest and aquatic ecosystems<sup>8</sup>. These effects will impact infrastructure, agricultural practices, fisheries and carbon absorption<sup>8</sup> and have further impact on the health and wellbeing of those in the areas impacted. Such impacts include alterations in patterns and distributions of vector-borne, water-borne and food-borne illnesses; negative impacts on food security and nutrition, an increase in mental health and stress disorders and an increase in storm-related morbidity and mortality<sup>6</sup>.

Factors contributing to climate change include the combustion of fossil fuels, deforestation and other activities that result in an increase in carbon dioxide in the atmosphere, creating a warming, or greenhouse, effect. The Canadian healthcare system is itself a significant contributor to Canada's total greenhouse gas and other pollutant emissions<sup>10</sup>, and thus to climate change. Healthcare activities that contribute to climate change include hospital operations (e.g., electricity consumption), the use of inhaled anesthetic agents, the manufacture and disposal of biohazardous materials and pharmaceuticals, supply procurement and waste management. Governments' response to climate change should empower decision makers to understand and reduce the environmental footprint left by local healthcare activities.

Respiratory therapists provide education to patients on the self-management of their respiratory disease<sup>11</sup>. This includes educating patients on measures they can adopt to cope with the impacts of climate change (e.g., regulating activity based upon the local outdoor air temperature or air quality index) and on improving residential indoor air quality. While important, patient-focused adaptation strategies are insufficient. Broader, systemic adaptation strategies that allow communities to become resilient to and live with the impacts of climate change (e.g., enhanced preparedness for outbreaks, urban green spaces, green cooling technologies) must be supported.

Respiratory therapists have a responsibility to act in a manner that uses resources wisely<sup>11</sup>. Examples of actions for consideration are the intentional selection of equipment to reduce waste and championing local activities to reduce negative environment impacts (e.g., organizational “Green Teams”, use of greener medications [including anesthetics] and equipment).

The evidence of a climate crisis is clear, and research will help governments, healthcare decision leaders and healthcare providers better understand the full health impacts of climate change. Furthermore, ongoing research into the effectiveness of mitigation and adaptation measures and the resulting impacts of cardiorespiratory health will inform policy and practice. This will support the implementation of measures which are most appropriate to a given jurisdiction and context.

### **About the Canadian Society of Respiratory Therapists (CSRT)**

The CSRT is the national professional association representing respiratory therapists across Canada. The CSRT promotes the respiratory therapy profession at the national and international level and is the credentialing agency for respiratory therapists who practice in non-regulated jurisdictions in Canada.

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**Approved by:** CSRT Board of Directors (Approved April 2022)

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