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Sustainable & Green Strategies

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A Canadian Health Sector Approach to Environmental Sustainability

An overview of the Canadian health system's interest in environmental sustainability and efforts to build a more climate-resilient healthcare system.

key points

- The Canadian Coalition for Green Health Care is Canada's premier green healthcare organisation.
- Canada is warming at a rate more than twice that of the global average, with Canada's north warming at three to four times that rate.
- Climate change is increasing risks to health systems in Canada and can disrupt care and service delivery when Canadians need them most - during extreme weather and natural disasters.
- The Coalition's vision of an environmentally sustainable, climate resilient, net-zero Canadian health system parallels the commitments of the Government of Canada.

Introduction

Canada's commitment to planetary health, climate-change resiliency and preparedness has been increasing steadily over the past several years. This article sheds light on the Canadian health system's interest in environmental sustainability and efforts to build a more climate-resilient healthcare system. The authors will delve into key motivators, national initiatives, and the role the [Canadian Coalition for Green Health Care](#) (the Coalition) plays in driving sustainable healthcare practices.

By way of background, the Coalition (a national not-for-profit) is Canada's premier green healthcare organisation, a virtual platform committed to supporting those seeking to build a stronger, healthier and more sustainable health service delivery system with improved access to best practice information, innovative goods and services that offer a clear environmental advantage to users, and the provision of a venue for stakeholders across Canada to work together to reduce healthcare's environmental impact.

Climate Change Impacts as Motivator

Worsening weather events continue to have negative impacts on both the health of Canadians and on the physical healthcare facilities (HCFs). They have also caught the attention of senior healthcare leaders who are beginning to embrace mitigation actions within their organisations.

Overall, Canada is warming at a rate more than twice that of the global average, with Canada's north warming at three to four times that rate (Rantanen et al. 2022). In 2022, a hurricane that was the strongest storm in Canadian history pummelled Atlantic Canada with over \$800 million in damage (Reinhart 2023). Floods have occurred in the provinces of Manitoba (Dawkins 2023), Nova Scotia (IBC 2023), and British Columbia (BC) in the past two years, which have added up to over \$1 billion in damage. The BC flood was considered an atmospheric river and was the most expensive natural disaster in BC's history (Gillett et al. 2022). Heat waves are becoming more common (Clark et al. 2021),

and in July 2023 several provinces reported a record number of heat alerts (O'Neill 2023).

In June 2023, [Canada's wildfires](#) made international news, and so far this year, Canada has endured 6,000 fires with over 1,5400,000 hectares burned. The carbon emissions from wildfires have surpassed 300 mega tonnes (Voiland 2023). Economically, in this decade, the total cost of weather-related disasters has grown to over 5% of Canada's annual gross domestic product (GDP), up from an average of 1% over the previous 30 years (Sawyer et al. 2020).

The [Health of Canadians in a Changing Climate: Advancing our Knowledge for Action](#) is Health Canada's assessment report on the health impacts of climate change. The report indicates climate change is increasing risks to health systems in Canada and can disrupt care and service delivery when Canadians need them most - during extreme weather and natural disasters. It further posits that reducing greenhouse gas (GHG) emissions within and outside the health sector can have significant immediate and long-term co-benefits for health and that the economic value of the health co-benefits can help offset the implementation costs of measures. Examples of impacts on HCFs and health systems from recent wildfires include:

- During forest fires, impacted HCFs such as hospitals and long-term care homes [had to close](#), and patients/residents were evacuated and transferred to safe locations.
- Smoke from forest fires required healthcare facilities, even those far away from forest fires,

to have air filtering systems. Where filtration was not in place, hospitals had to [cancel surgeries](#) due to poor indoor air quality.

- [Increase in asthma rates](#) during forest fire and smoke events resulted in increased use of health services.

This year, Canada has endured 6,000 fires, with over 1,5400,000 hectares burned

Prioritising Sustainability and Climate Resilience

Canada's commitment to climate change action and environmental sustainability is evidenced in the [Canadian Net-Zero Emissions Accountability Act](#), which became law on June 29, 2021, and enshrines in legislation Canada's commitment to achieve net-zero emissions by 2050.

Canada also recognises the importance of environmentally sustainable leadership in its healthcare system by formally committing to a climate resilient, sustainable, low carbon health system through the [World Health Organization](#) (WHO)-led initiative at COP 26 (conference of the parties) in Glasgow, Scotland.

The Coalition's vision of an environmentally sustainable, climate resilient, net-zero Canadian health system parallels the commitments of the Government of Canada as indicated above and aligns with multiple other Canadian healthcare organisations, many of which understand the inextricable link between human health and our environment, as indicated by the Joint Position Statement: [Toward an Environmentally Responsible Canadian Health Sector](#) signed by some of the largest healthcare organisations in Canada. They comprehend that a concerted effort is required to move our health system toward our mutual goal of environmentally sustainable, climate-resilient healthcare.

Canada joins other countries that have also introduced [carbon pricing](#) by implementing a carbon tax, gradually increasing over time. This commitment aligns with the country's healthcare facilities investing in carbon mitigation and resilient infrastructure.

[Accreditation Canada](#), in an effort to advance quality and safety in healthcare, released new standards for Leadership and Governance in June 2022, which, for the first time, include language surrounding environmental sustainability and climate change. For example, the new Accreditation Standards specify an organisation must reduce its impact on the environment and be prepared to respond to environmental and climate changes. This has been a major step in guiding our hospitals in environmental action; however, many agree the language will need to get stronger over time.

Involvement in International Activities

Canada's commitment to climate resilience and sustainability is also reflected in its participation in global initiatives such as the WHO's [Alliance for Action on Climate Change and Health \(ATACH\) Working Groups](#), where Health Canada co-chairs the climate resilience working group together with the Ivory Coast. Canadian experts, including those from the Coalition, participate in this and other working groups that focus on greening the supply chain, low carbon and sustainable healthcare, health system financing, climate action and nutrition.

Health Canada and numerous Canadian experts also actively contribute to many WHO resources, including [climate change and health: vulnerability and adaptation assessment](#) and [WHO guidance for climate resilient and environmentally sustainable healthcare facilities](#).

The Coalition's Resources

For over two decades, the Canadian Coalition for Green Health Care has championed environmentally sustainable healthcare practices and provided resources and assistance to help healthcare organisations become more sustainable.

The *Green Hospital Scorecard (GHS)*, a unique, made-in-Canada environmental benchmarking tool developed in collaboration with the Ontario Hospital Association and Ontario hospital representatives in 2013 and led by the Coalition since 2016, enables

hospitals to measure their environmental performance and progress towards sustainability goals (Voiland 2023; Sawyer et al. 2020). Since its inception, the [GHS has collected](#) data from over 90 Canadian hospitals.

The Canadian Coalition for Green Health Care has championed environmentally sustainable healthcare practices

More recently, a new [environmental scorecard](#) for long-term care and retirement homes (LTC/RH) has also been developed to assist in identifying, measuring and reporting on environmental performance while helping to enable sector-wide benchmarking of energy use, water use and waste management, pollution prevention, corporate leadership, food, transportation and climate change – a valuable tool for use by senior leaders to improve decision-making on topics of advancing sustainability and environmental performance.

Developed in partnership with Health Canada and the Nova Scotia Department of Environment, the [Health Care Facility Climate Change Resiliency Toolkit](#) includes a robust checklist to assist healthcare facilities in identifying areas within their facilities and departments which may be vulnerable to climate change which could ultimately impact their ability to deliver service during a natural disaster or climate incident.

The Coalition's [Environmental Stewardship Guidebooks](#) were created as condensed guidance primers for hospitals and long-term care homes in response to the newly released Accreditation Canada Standards. Senior healthcare leaders are encouraged to look at the most impactful GHG mitigation items listed in the guidebooks and to commence actions to reduce their GHG emissions. It is important to note that many of the listed actions are not expensive to implement, and many may actually begin to reduce an organisation's overall costs. Overt actions by leadership may also serve as an impetus for others to more fully engage in the greening process.

Important guidebook greening actions to consider in your organisation:

1. Create and implement a corporate leadership strategy that embraces GHG emissions reduction, climate change preparedness/mitigation and environmental sustainability.
2. Divest foundation/endowment funds of investment in fossil fuel companies and migrate to sustainable and low-carbon investments.

3. Adapt Choosing Wisely Canada principles of reducing unnecessary tests and treatments.
4. Ensure weighting for sustainability on all new procurement contracts meets a minimum 10% threshold.
5. Increase plant-based food options for patients by 25%.
6. Encourage and promote green transportation such as public transit, bicycles, e-bikes, etc.
7. Deprescribing medications wherever possible - reducing or stopping medications that may be harmful or no longer needed.
8. Remove the anaesthetic gas Desflurane from the formulary.
9. Remove centralised nitrous to eliminate pipe leakage.

10. Hire an energy manager to oversee and optimise all aspects of your hospital's energy use and coordinate programmes throughout the organisation.

Other resources include:

- *Green Office Toolkit for Clinicians and Office Managers* - This [toolkit](#) was designed to simplify and inspire the 'greening' of healthcare practices and office buildings.
- *A Circular Economy Model for Hospital-Generated PPE and Medical Single-Use Plastic (mSUP) Waste: Demonstrating Opportunities for Reduction and Reuse* - This project explored and identified reuse and reduction opportunities for [personal protective equipment \(PPE\) and selected mSUPs](#), which complemented and enabled resource conservation

- Electrifying the healthcare grid is also on the Coalition's radar with two [zero-emission vehicle projects](#): *Advancing awareness, support and adoption of zero-emission vehicles (ZEVs) and technology in Canada's health services sector and [Battery-Powered Micro-Mobility Solutions](#).*
- [Canadian Green Health Care Digest](#) is a free bi-weekly electronic digest delivering news about current and upcoming events and initiatives in green healthcare in Canada and beyond, as well as updates on Coalition activities and initiatives.

The Coalition encourages all healthcare facilities to join with your colleagues and help make our health system climate resilient, sustainable and low carbon.

Conflict of Interest

None. ■

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