CMA submission

The Need for Federal Investment in Climate-Resilient, Low-Carbon, Sustainable Health Infrastructure in Canada

Submission to the Minister of Intergovernmental Affairs, Infrastructure and Communities

March 6, 2023
Introduction

The Canadian Medical Association (CMA) respectfully submits four recommendations for health infrastructure funding for consideration as part of the Government of Canada’s development of new and renewed infrastructure funding consistent with *Building the Canada We Want in 2050* and the long-term vision for infrastructure investment.

Health care infrastructure constitutes critical community assets that need to remain open and provide services 24/7 during the most challenging of times. Deferred maintenance and chronic underfunding have left these facilities vulnerable to a host of environmental, social and economic challenges. Federal investment in health care infrastructure is needed not only to ensure the sector can meet the increasing health care needs of our population, but also to be able to better adapt to climate change-related emergencies and contribute to Canada’s net-zero strategy.

Canada’s health care sector is under unprecedented pressure. The COVID-19 pandemic exacerbated long-standing health care infrastructure challenges, with devastating impacts across the country. The immense overcrowding in long-term care homes contributed to over 80% of all COVID-19 deaths during the initial waves of the pandemic. Hospitals’ finite capacity was also consistently overwhelmed, resulting in unprecedented surgical and diagnostic imaging backlogs and delayed patient care. While the Canada Health Transfer (CHT) is the primary federal funding mechanism to support health care delivery, health infrastructure must be eligible for future federal infrastructure funding.

Climate-related emergencies pose physical risks to health infrastructure, including access to power, drinking water, emergency response facilities, road and air medical evacuation services, and supply chains for equipment, supplies and medicine. Disruption from climate-related events like wildfires and floods can disable critical health infrastructure exactly when it is most needed. Forced evacuations from health care facilities due to floods and wildfires are already a reality in Canada. Given that temperature and precipitation projections indicate continued change and instability under even the lowest-emission pathways, maintaining functional health systems and a healthy workforce demands attention to both global and local adaptation-related challenges.

Federal investment in health care infrastructure will increase the climate resiliency of Canada’s health care system and also contribute to Canada’s net-zero goals. The health care sector is estimated to be responsible for 4.6% of Canada’s total greenhouse gas (GHG) emissions. Canada has the second highest per capita GHG emissions from the health sector in the world. As a participant in the Alliance for Transformative Action on Climate and Health (ATACH), Canada has committed to advancing resilient, low-carbon and sustainable health system. Funding for health care infrastructure will be critical to achieving the goal of a sustainable health care system.
In June 2022, the CMA provided a submission to the development of the federal government’s first National Adaptation Strategy entitled “Addressing the health impacts of climate change.” Canada’s physicians strongly support the federal government’s efforts in coordinating a whole-of-government approach to adjust to a changing climate. Furthermore, in our 2023 pre-budget submission, the CMA recommended the federal government provide sustained investments to fully implement the National Adaptation Strategy in support of ensuring our country’s movement toward a low-carbon, resilient health system by 2050. To support the implementation of the National Adaptation Strategy and environmentally sustainable infrastructure, the CMA makes the following recommendations for federal action and investment in three priority areas.

Recommendation 1: Sustain federal investment in health infrastructure

Health care facilities are among the oldest public infrastructures in use today: almost 50% of health care facilities were built over 50 years ago. Aging infrastructure and deferred maintenance have left facilities especially vulnerable to the impacts of extreme climate events at a time when communities need them most. Some health care facilities have been constructed in high-risk zones such as flood plains and are at increased risk of closure and evacuation. These facilities, and the communities they serve, are at greater risk from adverse impacts and should be a priority for infrastructure investment, including retrofit or, in extreme cases, relocation. New standards for resiliency and environment performance (see recommendation 2) coupled with detailed facility and community assessments (see recommendation 4) will provide much-needed data to establish priorities for investment.

The replacement value of health facilities in Canada is estimated to be $162 billion, and deferred maintenance has been estimated at $15.4 billion annually. The investment needed to bring facilities up to an appropriate level of environmental performance will be sizable. Fortunately, Infrastructure Canada’s vision for the National Infrastructure Assessment includes several objectives that could enable a larger capital pool for these investments:

a) Improving coordination among infrastructure owners and funders: the magnitude of the investment required probably exceeds that of any one funding source. Health facilities have multiple funders from all levels of government as well as private sources of capital, necessitating coordination to achieve the funding objectives of recommendation 1.

b) Determining the best ways to fund and finance infrastructure: numerous institutions have called for innovation and diversity for capital sources in health care infrastructure. Innovation in funding approaches could be an essential ingredient in future funding.

In collaboration with provinces, territories and municipalities, the CMA strongly recommends that new federal funding be made available to support investments in health infrastructure to address risks arising from climate impacts. The exact amount needed to bring health facilities, and by extension health systems, up to date is a challenging question that needs to be addressed by Infrastructure Canada through its National Infrastructure Assessment process. Health facilities, many of which operate 24/7, are unique public assets, and as such, engagement with health systems experts, the community and other interested parties will also be important to ensure investments meet the community’s needs and facilitate the successful implementation of more resilient and energy-efficient infrastructure.
Efforts to expand the pool of funds available through increased coordination and innovation will be critical to securing the needed capital.

CMA recommends sustained investments in health infrastructure to improve Canada’s resilience, reduce Canada’s GHG emissions and ensure health infrastructure is managed in a more sustainable way.

Recommendation 2: Fund and support expanded environmental performance and resilience standards

Environmental performance standards are widely available for commercial buildings and have led to increased investment and performance. Standards such as the LEED and BOMA BEST are proven tools for identifying performance gaps and are useful as a motivation for strategic investment. When making investments in infrastructure, it is important to understand the performance that facilities are expected to achieve. The performance benchmark can be used to prioritize applications for investment, with emphasis given to facilities with larger performance gaps.

For physicians operating in private offices and clinics, standards can be especially valuable, especially where they may not have decision-making authority with respect to their buildings and operations (e.g., leasing). In this case, physicians can use standards such as LEED certification when making facility leasing decisions, to ensure that the facility in question has attained a specific level of performance.

Health facilities are unique assets and require environmental and resilience standards tailored to these circumstances. Standards must also take into consideration the level of ambition that is needed. Achieving net zero, for example, will require higher energy efficiency and cleaner energy sources than past standards. The level of ambition needs to be informed by health facility experts to drive investment decisions. Involvement of organizations with standards development expertise, such as Natural Resources Canada, Environment and Climate Change Canada and Emergency Preparedness Canada, would also be beneficial.

CMA recommends that the federal government support expanded environmental performance and resilience standards for health facilities.
Recommendation 3: Fund and support energy efficiency programs and investments in clean technology and equipment, as well as on-site renewable energy use

Owing to their physical needs, health care facilities’ capital items and infrastructure are significant sources of GHG emissions.11 A majority of these emissions are associated with energy usage and utility consumption.12 Energy efficiency improvements and other standards-driven improvements not only reduce emissions but also result in valuable savings that can be directed to further capital investment or patient care. A study by Schneider Electric estimated that investments in energy efficiency solutions in hospitals could reduce energy costs by 30%, translating to over $1 million in savings for a 235-bed hospital (with a 59.8% occupancy rate).13 Energy efficiency solutions can be complemented with green infrastructure projects and other nature-based climate solutions to further maximize emission reductions. A recent study in Ottawa demonstrated that green roofs could help reduce energy demand for cooling by more than 75%.14

When viewing a facility’s performance from a net-zero perspective, there are a number of significant trends that need to be facilitated through technology investment, including the following:

- Replace hydrocarbons (natural gas and oil) for heating, domestic hot water production and back-up power provisions with clean energy sources.
- Retrofit existing facilities (lighting systems, HVAC, building envelopes, etc.) to achieve the environmental performance standard.
- Invest in new energy systems (e.g., on-site generation and energy storage).
- Adopt green infrastructure projects (green roofs, tall wood and engineered wood structures, etc.).
- Leverage advances in digital health infrastructure (e.g., high-speed Internet) to support virtual health systems to reduce physician and patient transportation emissions associated with in-person visits, where appropriate.

The costs associated with these investments would be managed through recommendation 1. The identification of priority facilities for investment would be managed through the application of resiliency assessment combined with environmental performance data. Decisions to replace equipment or retrofit facilities offer opportunities to bolster resiliency capacity while improving energy performance and reducing energy costs and maintenance costs. The identification of priority investments needs to consider both environmental performance and resiliency as co-benefits of investment. Physicians who operate their own practice should also qualify for funding and be supported in seeking opportunities to improve the resiliency and environmental performance of their offices.

CMA strongly recommends that the federal government work with provinces and territories to scale up energy use reduction programs that support clean technology, equipment and clean retrofit techniques, including measures such as on-site renewable energy generation, storage and use.
Recommendation 4: Fund and support programs that undertake vulnerability assessments to identify specific local risks, including developing emergency-preparedness plans

The CMA is pleased to see an expansion of the HealthADAPT program included as one of the tenets of the newly released National Adaptation Strategy. Health systems are challenged by intensifying climate-related impacts. Maintaining functional health systems and a healthy workforce demands attention to both global and local adaptation-related challenges.

In its report entitled “The Health Costs of Climate Change,” the Canadian Climate Institute found that 27% of health care centres are at risk of flooding as they are located on 20- to 100-year floodplains. For example, as 84% of the Yukon’s health care facilities sit on floodplains, weather-related disasters driven by climate change could critically disrupt and damage important health infrastructure when it is needed most. Considering these facts and figures, governments and health authorities need to have emergency preparedness analyses, community communication strategies and updated infrastructure.\textsuperscript{15}

CMA is recommending that the federal government fund programs that undertake vulnerability assessments to identify specific local risks, including developing emergency-preparedness plans under the Emergency Management Strategy for Canada – Toward a Resilient 2030.

Conclusion

The CMA welcomes the opportunity to collaborate with the federal government to support moving toward environmentally sustainable infrastructure in all health care facilities. The human health co-benefits of action on climate and biodiversity are many. It has been estimated that if Canada meets its GHG emissions targets, we will save an estimated 112,000 lives between 2030 and 2050 through reductions in air pollution alone relative to a business-as-usual scenario.\textsuperscript{16} There are numerous additional health co-benefits related to our recommendations. These include improved physical activity levels, mental health benefits, reductions in heat-related illness and reductions in other long-term climate-related health impacts. The CMA urges all levels of government to take action now. New funding with the right vision for health infrastructure will go a long way to building a better, healthier and more inclusive Canada.

2 Ebi et al., 2018; Ghazali et al., 2018; Paterson et al., 2014


