

INNOVATION BRIEF

Climate: Planetary Health Menus and Procurement

I. What's the issue?

Climate change is the biggest global health threat of the 21st century

Canada has witnessed the profound impact that climate change can have on human health, with extreme weather events such as flooding from Hurricane Fiona, bigger and hotter wildfires across British Columbia, and droughts that threaten both the crops and animals on which we depend. According to the Lancet, climate change is "the biggest global health threat of the 21st century" (1) due to the direct effects of increased vector-borne diseases and death tolls associated with heat waves, as well as climate change's indirect effects "on water, food security, and extreme climatic events" (2). From community clinics to hospital ERs, health care professionals see the impact of climate change on both patients' physical and mental health on a daily basis, especially among the most vulnerable who are of advanced age, living with a chronic condition, or of low socioeconomic status (3).

The health care sector is one of the largest emitters globally

At the same time, health care is a considerable contributor to climate change. "If the global health care sector was a country, it would be the world's fifth largest emitter on the planet" (4) – that's equal to the annual greenhouse gas (GHG) emissions from 514 coal-fired power plants. Looking more closely, 71% of emissions occur from the health care supply chain, including production, transport,

and disposal of pharmaceuticals, chemicals, food, medical devices, and instruments (2). The reinforcing dynamic between climate change and the burden on the health system illustrates the inextricable link between human and planetary health.

Food is the single strongest lever for planetary health

According to the EAT-Lancet report (5), "food is the single strongest lever to optimize human health and environmental sustainability on Earth." More and more, literature on food, dietary patterns, and health outcomes encourages **planetary health diets**, which double the consumption of fruits, vegetables, and plant-based proteins, and decrease the consumption of added sugars and red meat by at least fifty percent.

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1. The Lancet (2021). "The Lancet Countdown on health and climate change."

2. Costello et al. (2009). "Managing the health effects of climate change."

3. Economist Impact (Sept. 12, 2022). "Do no harm: Healthcare professionals address sustainability and climate change."

4. Karliner, J., Slotterback, S., Boyd, R., Ashby, B. & Steele, K. (2022). "Health Care Without Harm: Health care climate footprint report."

5. Willet et al. (2019). "Healthy Diets from Sustainable Food Systems."

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A \$4 billion dollar opportunity hiding in the hospital basement

Canadian health care institutions spend \$4 billion on food services annually. However, health care food services are often seen as ancillary and largely disconnected from patient care outcomes.

Correspondingly, despite the good intentions of clinicians, dietitians, and food service staff, much of the patient tray is left uneaten and thrown out, representing an enormous amount of food waste and inefficient spending. The impact of this goes beyond waste management: the scientific team at Project Drawdown identifies reduced food waste and shifting to plant-rich as two of the most powerful interventions to curb climate change (6).

Food waste is an inefficiency that neither health care nor the planet can afford

The food that is thrown out also affects the number of days patients stay in hospital. Studies have found that patients who “are malnourished and consume 50% or less of food on their meal trays in hospitals have longer length of stay and increased risk of mortality” (7). The estimated cost to the Canadian health system is an estimated \$1.5-2.1 billion annually in extended stays (8).

These figures present a significant opportunity for health care to address patient and planetary health through thoughtful investment in the food it sources and serves. Aligning on sustainably sourced, culturally-appropriate planetary health menus is a powerful lever to better meet patient needs, more impactfully allocate health care dollars, and reduce carbon emissions.

\$2.1
billion

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Health care purchasing can drive shifts in agricultural production

Public institutions have a tremendous amount of buying power – and an unacknowledged power to influence trends in the food system. Request for proposal (RFP) evaluations focused on cost will continue to trigger a race to the bottom for the cheapest food. But RFPs that strategically measure what matters to the public sector buyer – protein content in plant-rich alternatives to meat, sustainable agriculture practices, or fair labour practices – allow public buyers to be influencers for more resilient food systems.

The following section highlights some of the most promising solutions that are emerging across the country to use food to enhance the patient food experience and patient health by investing in culturally appropriate, plant-rich sourcing practices that address unsustainable diets, food waste, and shifts toward sustainable agricultural practices.



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6. Project Drawdown. (2017). *Reduced Food Waste*.

7. Sorensen et al. (2021). Canadian Hospital Food Service Practices to Prevent Malnutrition. *Canadian Journal of Dietetic Practice and Research*, 82(4), 167-175. <https://doi.org/10.3148/cjdpdr-2021-013> %M 34286621

8. Curtis et al. (2016). Costs of hospital malnutrition. *Clinical Nutrition Volume 36, Issue 5, P1391-1396*. 2017, October 1. DOI: <https://doi.org/10.1016/j.clnu.2016.09.009>

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II. Emergent solutions

In 2021 Canada signed onto the COP26 Health Programme (9) mandate to improve the sustainability of its health care sector and to reduce its carbon footprint. Planetary health menu strategies are an important way to reduce carbon emissions and food waste, by shifting towards plant-forward, sustainably-sourced, culturally mindful menus. There is room for innovation to measure how menu changes can impact both GHG emissions and the overall nutrition.

Nourish is currently developing a **Planetary Health Menus** program with tools and supports for health care institutions, including access to a greenhouse gas calculator to track progress on their goals to reduce emissions.

Bold leadership by health care can have an outsize impact on healthy eating by creating healthier food environments for healthcare workforce, patients, visitors and by influencing healthier choices beyond their own walls. The five following areas of innovation highlight some of the most promising opportunities in health care.



Example of the plant-forward meals provided at CHU Sainte-Justine, a children's hospital in Montreal that sources locally (2022).

1) Planetary health as an organizational mandate

Vancouver Coastal Health has been on a path to accelerated action on planetary health, and formalized it as a priority strategic direction for the entire organization. To lead this work, Dr. Andrea MacNeill, Surgical Oncologist, was appointed as the first Medical Director of Planetary Health in 2021. The institution is currently developing a host of innovations including a planetary health education module for all staff, an overnight food program providing healthy and sustainable options to residents, and a sustainable food fair highlighting plant-based options that will be added to cafeteria and patient menus.

2) Low-carbon menu redesign

The Sustainable Menu Guide was developed by the Nourish Innovator Cohort and adopted by contributors, including the **CIUSSS de Montreal**. The guide helps food service managers to easily map out their more carbon intensive menu items and offers clear alternatives. Similarly, various sectors have started to undergo "carbon accounting", calculating the greenhouse gas impacts of their business activities.

9. World Health Organization. (n.d). [COP26 Health Programme](#).

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2) Low-carbon menu redesign (continued)

World Resources Institute developed the **Cool Food Pledge**, which includes a carbon accounting calculator specific to food emissions, to simplify carbon accounting in this sector. Using the calculator, hospitals in the United States and Europe have begun to tactically reduce the greenhouse gas emissions associated with their food services (10). A low carbon menu typically includes more plant-forward options and less meat and dairy. In New York City, **Health + Hospitals** has successfully made plant-based meals the default option at eleven hospitals, with non-plant-based alternatives available by request and as required. The first iteration of this program was rolled out in March, and currently boasts a 95% patient satisfaction rate.



3) Values-based procurement that shifts agricultural production

American healthcare provider and insurer **Kaiser Permanente** has made commitments to 100% sustainable food by 2025. They are working to achieve this goal through a ten-year business partnership with Food Service Partners. Through coordinated action, the American health care provider also pooled the purchasing power of multiple buyers to target the development of a cost-competitive hormone and antibiotic-free chicken. Their efforts shifted the market and brought down the price for all consumers, individual and institutional, to compete with industrial chicken.

In Ontario, **Mohawk Medbuy** (formerly MEALsource) adjusted its RFP evaluation when they realized their procurement process favoured incumbents and reinforced the unsustainable practices of dominant food service providers. They expanded their evaluation criteria beyond cost to weight additional values-aligned criteria, which resulted in a winning bid from a sustainable farmer who was a new entrant to the market. Drawing on the same principles of aligning organizational sustainability values with procurement processes, a collaborative from the first Nourish Innovator Cohort set out to develop a national tool for values-based procurement. The initial prototypes received strong interest but did not test well. More coordinated work is needed between health care procurement and food service teams to test and develop the language and practices that will help the practice of "putting your money to your mouth" to scale.

10. World Resources Institute. (2022). [Cool Food Progress Report](#).



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4) Food services that increase patient experience and reduce food waste

Paediatric hospital **CHU Sainte-Justine** is celebrated in Quebec and across Canada for its innovative approach to food services. In 2016, they timed a big facility renovation with the launch of a new room service program called *Délipapilles!* Since then, hospital staff have seen remarkable gains in patient satisfaction (from 50% to 99%) and decreases in food waste (from 45% to 5%). Due to their timing and careful planning, the transition was cost neutral. Other health leaders can look for windows of opportunity provided by the renegotiation of food service management contracts, facility retrofits, and new builds for increasing in the capacity for food service operations.

Other hospitals in the Anchor Cohort are currently experimenting with different methods of increasing patients' choices, including the **Royal Columbian Hospital** from the Vancouver Team and **St. Joseph's Hospital** from the London Team. Offering choices to patients provides a more dignified experience, improves patient satisfaction, and reduces tray waste, leading ultimately to a significant climate impact.

5) Onsite gardens and farmers markets

Gardening projects are proliferating across Canadian health facilities, including at **St. Joseph's Hospital** in London, **Black Creek Community Health Centre** in Toronto, **The Alex Community Health and Food Centre** in Calgary, and at **Grove Park Home** in Barrie, a long-term care facility whose residents also keep bees at an onsite apiary.

These efforts permit hyperlocal sourcing, and also act as a powerful entry point for an organization to educate and engage staff, patients, and residents about food, health, and sustainability. Other garden projects include commitments to reconciliation, such as in the Saskatchewan Health Authority, where a Truth and Reconciliation Garden was developed with Indigenous partners as a new way for staff and community to rebuild relationships with Indigenous knowledge, one another, and the land.



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Key Opportunities and Questions

- How might we fund the transition to planetary health? Plant forward menu changes in the short-term can help free up financial resources for more sustainable purchasing ("less meat, better meat" approaches); but depending on the facility, significant resources may be required for kitchen equipment and design upgrades.
- Food is personal and changing menus can be complex for patients. How do we harness Canadians' interest in climate action to communicate shifts to planetary health menus as gains, not personal losses?
- What is needed to encourage a culture of values-based procurement in health care? Are tools, education, a challenge, or another option the best pathway to deploy health care's \$4 billion food budget for planetary health?
- To target the biggest reductions of greenhouse gas emissions through switches to plant-forward menus and reduced food waste, what supports are more urgently needed to assist health care providers to lead these changes?
- Can health care draw inspiration from other sectors' sustainability improvements? What gaps need to be addressed?

IV. Additional Resources

- Climate Leadership in Canada: Vancouver General Hospital revamps hospital food for planetary health (Nourish Anchor Cohort Impact Vignette, Fall 2022)
- Willett et al. (2019). Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*, 393(10170), 447-492.
- Karliner et al. (2019). Health Care's Climate Footprint: How The Health Sector Contributes to the Global Climate Crisis and Opportunities for Action Marquez, A., & Gacad, A. (2019). A guide to sustainable menus: A step by step approach to sustainability. Nourish Leadership.
- Mehta, T., Carter, N., & Jethalal, N. (2021). Plant Based Data.
- "Changing Food Systems" Research Bibliography. (2022). <https://www.planetaryhealthalliance.org/bibliography>
- World Resource Institute. (2022). Cool Food Progress Report 2022. https://issuu.com/wricoolfood/docs/22_psh_0049_impact_report_issuu1

