

INNOVATION BRIEF

Community Wellbeing: Food Prescriptions

I. What's the issue?

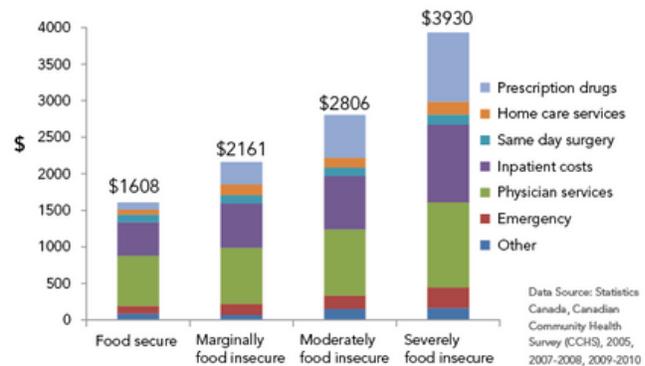
Food insecurity impacts health outcomes, and the health care sector

One in eight households in Canada experience food insecurity (1). Food insecurity has a direct impact on health outcomes, and is associated with poorer physical health, including chronic conditions such as cardiovascular disease, hypertension, and diabetes. Those experiencing food insecurity also report poorer mental health, with an increased risk of anxiety, depression, and mood disorders. "With 15.6% of people in the provinces living in food-insecure (marginally, moderately, or severely) households in 2019, this [latest Statistics Canada] report highlights that food insecurity remains a serious problem in need of urgent action" (2). Further, the PROOF project has identified that national data shows high rates of food insecurity among off-reserve Indigenous Peoples, noting this is likely underrepresented due to survey participation (3).

The impact of food insecurity on health status translates to higher costs for the health care systems. As shown in the diagram to the right, the more food insecure someone is, the higher their health costs will be across several streams of care: prescription drugs, home care, inpatient costs, physician services, and emergency services. Health care costs are 121% higher for those living with severe food insecurity (4).

Other research has found that "among adults who died prematurely, those experiencing severe food insecurity died on average 9 years earlier than their food-secure counterparts" (5).

Average health care costs incurred over 12 months by Ontario adults (18-64 years of age), by household food insecurity status



PROOF (2016). "The Impact of Food Insecurity on Health."

The interplay between food insecurity and increased rates of nutrition-related illness has further evidence in the findings of the Canadian Malnutrition Task Force (CMTF). CMTF surveys of patient populations found that **one in every two adults and one in every three paediatric patients are malnourished on admission to hospital**. While health care providers are becoming more informed and malnutrition screening tools are having great uptake, post-discharge interventions are very limited. Patients often return back into contexts where social and financial barriers to their health remain dominant, such as precarious housing, unemployment, and food insecurity.



NOURISH
The future of food
in health care.

1. Maple Leaf Centre for Food Security. (n.d.). [Understanding Food Insecurity](#).
 2. PROOF. (2022, Jan 7). [New food insecurity data for 2018/2019 from Statistics Canada](#).
 3. PROOF. (n.d.). [Indigenous Food Insecurity](#).
 4. Tarasuk, V., Cheng, J., de Oliveira, C., Dachner, N., Gundersen, C., & Kurdyak, P. (2015, Oct. 6). Association between household food insecurity and annual health care costs. *Canadian Medical Association Journal*, 187(14), E429–E436. DOI: <https://doi.org/10.1503/cmaj.150234>
 5. Lieffers, J.R.L., Ekwaru, J.P., Ohinmaa, A., & Veugelers, P.J. (2018, April 27). The economic burden of not meeting food recommendations in Canada: The cost of doing nothing. *PLoS One*. DOI: <https://doi.org/10.1371/journal.pone.0196333>

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Food insecurity is an issue of systemic oppression

Indigenous households and people living with a disability are particularly over-represented in the food insecurity statistics. Food insecurity is an issue of systemic oppression that manifests along lines of race, class, and ability. The current emergency food system is inadequate to address poor access to healthy and nutritious foods. Tackling the root causes of food insecurity include: meeting the need for equitable and liveable incomes for everyone; addressing treaty and economic issues related to access to land; acknowledging the systemic racism that is insidious across Canadian society, including the health system; and creating a sustainable food system. Health care can play a role by advocating for root cause solutions, investing in cultural competency and understanding Indigenous foodways, and enabling healthy and culturally-appropriate food environments through food programs within and beyond their walls.

The health care sector has an important leadership role to play to meet the urgent challenge and high cost of food insecurity. Health care leadership is needed to guide work across sectors with partners and government agencies to provide more comprehensive social and health support that wrap-around individuals, families, and communities.

II. Emergent solutions

Food prescribing provides direct food support for patient populations experiencing food insecurity to improve access and support healthy diets. Currently there is a wide field of experimentation by health care organizations across Canada and the US (6) with different food prescribing models. Food prescribing provides direct food support for patient populations experiencing food insecurity to improve access and support healthy diets. Early pilots show promising results for improving patients' food environments, increasing healthy food consumption, and strengthening food security (7). Early pilots show promising results for improving patients' food environments, increasing healthy food consumption, and strengthening food security. These models vary with different approaches for screening, prescription pathways, food sourcing, delivery, and impact metrics.

Food prescribing may prove to be as or more efficient than more costly health care interventions. Learning more about how these early pilots also build health and community will shape the discussion about the feasibility for long-term funding of these initiatives given cost-cutting pressures on health care. They may be as or more efficient than more costly health care interventions. An emerging possibility is the potential of food prescriptions to be understood like medical prescriptions: as necessary, cost-effective, long-term solutions that provide a compelling return on investment for building health and reducing health care service costs.



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6. Stotz, S. A., Budd Nugent, N., Ridberg, R., Byker Shanks, C., Her, K., Yaroch, A. L., & Seligman, H. (2022, October). Produce prescription projects: Challenges, solutions, and emerging best practices – Perspectives from health care providers. *Preventive Medicine Reports*, 29, 101951. DOI: <https://doi.org/10.1016/j.pmedr.2022.101951>

7. Heasley, C., Clayton, B., Muileboom, J., Schwanke, A., Rathnayake, S., Richter, A., & Little, M. (2021). "I was eating more fruits and veggies than I have in years": A mixed methods evaluation of a fresh food prescription intervention. *Archives of Public Health*, 79(1). <https://doi.org/10.1186/s13690-021-00657-6>

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Centring partnership with the communities

these programs aim to serve is another fundamental consideration. During the pandemic Nourish Food Rx grants supported a diversity of food access approaches from food boxes, gift cards, meal kits and Indigenous food sovereignty supports such as fishing kits. Aligning with social prescribing principles to integrate being responsive to community needs and voices, along with exploring how best to embed programs in clinical pathways, will be two fertile areas for further experimentation.

Food Prescription in the Nourish Anchor Cohort

The Saskatchewan, Toronto, and Montreal teams in the Anchor Cohort are leading food prescription pilots. Food security mechanisms to support better access to fresh and healthy foods in the community are also coming up for teams in Vancouver and Northern Ontario.

Saskatchewan: Apple-a-Day, a food prescribing trial funded by the Saskatchewan Health Authority, is launching in late October 2022 and will run for its first year in three communities across the province. By providing affordable fresh produce to those living on low incomes, the Apple-a-Day Initiative aims to better understand the problem of food insecurity while providing a real solution, and through this process create pathways towards a scalable model.

Quebec: In Montreal, the regional health organization CIUSSS Centre-Sud will be providing patients access to healthy foods through a partnership with community organization Carrefour Centre-Sud. Health care providers give patients with a "prescription" of a pre-paid grocery card called la Carte proximité, which can be redeemed at local produce markets in the neighbourhood. This is a win-win way of providing affordable, healthy, and also local and sustainable (where possible) food. The CIUSSS also offers a second element of their food security response, where meals in hospital cafeterias are made available for patients who attend appointments hungry.



Example of the Carte proximité in Montreal (2022).



Example of the fresh produce in Saskatchewan's Apple-a-Day program (2022).



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Toronto: Black Creek Community Health Centre is launching a 4-month food prescribing project for 15-20 households in the Jane and Finch neighbourhood of Toronto. It will run from November 2022 - February 2023, with a pre/post-measurement strategy to understand impacts on food security using indicators from the Maple Leaf Centre for Food Security evaluation frameworks. Criteria for selection is households with children who have been screened as food insecure. These households will receive gift cards that can be redeemed for 2 food boxes per month containing fresh fruits and vegetables, delivered to their homes.

Field Leaders Elsewhere in Canada

University Health Network (UHN): The UHN Food Rx program was delivered through a partnership with FoodShare. Initiated during the COVID-19 pandemic, patients experiencing food insecurity were prescribed a bi-monthly fresh food box delivered to their homes upon discharge from hospital. One finding from this work has been the importance of a patient-centred approach to identifying the need for support, which reframed food “prescriptions” to food “partnerships.”

Community Food Centres Canada (CFCC): CFCC has been scaling out their Market Greens program since 2018, and are currently operating in 28 communities (8). They support non-profit community markets which provide access to fresh, low-cost foods and offer Greens Prescriptions.

Greens Prescriptions from community health providers provide a fresh produce voucher to people who are managing chronic and diet-related illnesses, including Type 2 diabetes and heart disease. Program evaluation shows that Greens Prescription participants have incorporated more nutritious foods, such as vitamin-rich dark leafy greens, into their daily diets and have seen improvements in their physical health.

Provincial Farmers Market food coupon programs: B.C. (9) and Nova Scotia (10) both support programs for food coupon referrals through community organisations to food insecure households which recipients redeem at farmers markets.



Make water your drink of choice

Food prescriptions could help patients to meet the dietary suggestions from the [Canada Food Guide](#) (2019).



Registered Dietitian Phoebe Lee from the Toronto Anchor Cohort team workshops her team's idea of food prescription boxes (2022).



8. Community Food Centres Canada. (n.d.) [Innovate: Special Projects](#)
9. BC Farmers Markets. (n.d.) [BC Farmers' Market Nutrition Program](#)
10. Farmers' Markets of Nova Scotia. (n.d.) [Nourishing Communities Food Coupon Program](#)

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III. Key Opportunities and Questions

- From food insecurity screening to food prescription process and food distribution: what is the most efficient and dignified way to prescribe and distribute a food prescription? Who pays and for how long? What is the appropriate length of a food prescription intervention and what indicators of their impact on health and health care service provision costs are needed to incite investment?
- Can a broader food system frame successfully be integrated into prescription models to capture win-win's so that while building health we can also help to build local economies, food sovereignty, and sustainable supply channels for prescription pathways? Food prescribing could both boost a community's ability to grow and supply nutritious and culturally appropriate foods for their local populations and benefit by reducing provincial health budgets over the long-term.
- With limited resources for early experiments, is it more effective to focus first on specific patient groups (e.g., post-operative, pre-diabetic)? Which indicators signal impact from prescribing on building health and reducing health care costs? Challenges around attribution of short-term interventions like food prescribing within the complex mix of interventions that support population health and wellbeing are complex, but not insurmountable.

IV. Additional Resources

- Saskatchewan Health Authority takes food security and food sovereignty to the next level (Nourish Anchor Cohort Impact Vignette, Fall 2022)
- Heasley, C., Clayton, B., Muileboom, J., Schwanke, A., Rathnayake, S., Richter, A., & Little, M. (2021). "I was eating more fruits and veggies than I have in years": A mixed methods evaluation of a fresh food prescription intervention. *Archives of Public Health*, 79(1).
- Liefers, J.R.L, Ekwaru, J.P., Ohinmaa, A, Veugelers, P.J. The economic burden of not meeting food recommendations in Canada: The cost of doing nothing. *PLoS One* April 27, 2018.
- Stotz, S. A., Budd Nugent, N., Ridberg, R., Byker Shanks, C., Her, K., Yaroch, A. L., & Seligman, H. (2022, October). Produce prescription projects: Challenges, solutions, and emerging best practices – Perspectives from health care providers. *Preventive Medicine Reports*, 29, 101951.

