

THE ROLE OF FOOD IN HOSPITALS

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May 2017

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ISSUE

Over the past several decades, health care reforms, restructuring, and constrained budgets have forced the examination of all costs in the health care system. The aging population, increasing rates of diet-related chronic disease, and the rapid pace of change are also placing significant stress on the health system. In the era of very limited budget increases, hospitals are pressured to cut costs and find efficiencies, while enhancing service delivery and improving patient outcomes. At the same time, there has been increasing focus on patient-centred care and value-based health care, as hospitals are ever more attentive to their impact on patients, staff, communities, the health system, the environment, and society at large.

In this context, the way hospital food is sourced, purchased, prepared, and delivered continues to change. Awareness is returning and spreading that good food in hospitals is part of health and healing. While the impact on the bottom line remains at the fore, patient and employee health and satisfaction are seen as very significant. Numerous hospitals are taking a leadership role in advancing healthy eating. Many facilities across the country are seeking innovative approaches in various aspects of food services, and these activities and initiatives, as well as their outcomes, deserve close attention.

This HealthCareCAN Issue Brief, funded by a grant from The J. W. McConnell Family Foundation, discusses the current state of food in hospitals, as well as the barriers and opportunities to improving food in these institutions. It also explores the potential benefits of hospital programs which address healthy eating and local and sustainable food procurement, and highlights a number of good food innovations within hospitals in Canada and internationally. While the focus is on patient food in hospitals, hospital retail food is also within the scope of this paper.

The food and nutrition needs of Canada's aging and frail long-term care population deserve equal attention, and many of the issues are the same as in hospitals. However, the role of food in long-term care facilities specifically is beyond the scope of this initial research.

Our Approach

A HealthCareCAN Steering Committee was formed to guide identification of key issues and the research approach. An environmental scan and literature review were completed to support this Issue Brief. The Steering Committee helped to select the 14 key informants who were interviewed by telephone using a standard interview guide between March and May 2017. These informants included dietitians, food service managers, procurement specialists, food manufacturers and distributors, health care food consultants, and the Chief of Staff of a major urban hospital. Interviews with a key informant from the U.S., and one in the U.K, were also completed to obtain an international perspective. See Appendices A and B.

THE CURRENT STATE OF FOOD IN HOSPITALS

There are different perceptions about the current state of food in hospitals in Canada. The media, for example, tends to pick up stories highlighting issues at opposite ends of the spectrum, such as patient complaints about foodⁱ or hospitals holding farmers' markets for staff and visitors.ⁱⁱ While it's safe to say the general public often takes a dim view of hospital food, other stakeholders point out that more attention is being paid to improving hospital food, and there are many initiatives underway to advance healthy and nutritious food in facilities across the country.

There is no denying the influence that economics and limited budgets have on food in hospitals. Most key informants underscored the ongoing constraints faced by food and nutrition services in hospitals. Some also characterized hospital food as a utility, an amenity in the background, and as mainly a support function and not necessarily one that is viewed as integral to patient care and recovery. Many key informants noted that food in hospitals often does not get the attention it deserves, and is not on the same footing as other components of care such as nursing or physical therapy for example. And, while hospital food and food services departments sometimes suffer from neglect and under funding, clinical dietitians still rely on food as a key part of their plan for patient treatment and education.

Spending on patient food in health services ranges from approximately \$8-\$15 per day,ⁱⁱⁱ and labour costs generally account for 70% of a food services budget.

Another challenge is the complexity of food supply chains. There are many players and the purchasing of goods by public institutions is regulated by institutional policies, provincial and federal regulations, and the Agreement on Internal Trade. Mechanisms for soliciting bids depend on the purchase amount. However, most hospitals and health care organizations source their food through group purchasing organizations¹ (GPOs) which negotiate contracts with suppliers and distributors, sourcing food primarily from the broadline supply chain.²

GPOs benefit hospitals through purchasing at economies of scale, and via negotiated manufacturer/distributor discounts and rebates, but hospitals can choose to source a percentage of their food outside GPOs and broadline distributors. This gives hospitals the flexibility to source directly from local producers, sometimes using innovative arrangements such as forward contracting³ or yearly minimum purchase agreements. However, there are numerous challenges to food sourcing. Some key informants indicated that several food products are designed primarily for the retail sector, not the health sector, and food quantities and pack sizes are too large for many hospitals. While GPOs assist hospitals to manage the complex system of hospital food purchasing, their role can and should be to ensure contract flexibility, facilitate collaboration among members, and understand changing hospital and community needs.^{iv} It should be noted that many GPOs and broadline suppliers source products on the basis of competitiveness, volumes, and price – and as institutions seek 'local' procurement options – supply may not be sufficient to meet current hospital demand.

¹ A group purchasing organization (GPO) pools the buying power of its member organizations to obtain quality supplies (including food) for the best price by aggregating volume. Examples include HealthPRO, Medbuy, and St. Joseph's Health System Group Purchasing Organization.

² A broadline supplier holds a large inventory of products (including food) and makes daily or weekly deliveries to hospitals. Examples include Sysco and Gordon Food Services.

³ A forward contract is an agreement between two parties giving the buyer an obligation to purchase an asset or good (and the seller an obligation to sell the asset/good) at a set price at a future point in time. (Investing Answers)

Sustain, the U.K. alliance for better food and farming, discusses sustainable and good food as:^v

- Contributing to thriving local economies and sustainable livelihoods - both domestically and, in the case of imported products, in producer countries;
- Protecting the diversity of plants and animals and the welfare of farmed and wild species,
- Avoiding damage to or waste of natural resources or contributing to climate change;
- Providing social benefits, such as good quality food, safe and healthy products, and educational opportunities.

Issues such as the need for common definitions of 'local' and 'sustainable' food among all stakeholders and supply chain members require attention. There are few commonly-accepted definitions of local food, and this impacts agreed upon metrics or tracking mechanisms to measure the use of local foods.^{vi} The transparency and traceability of alternate food systems (e.g. regional systems, community-based, sustainable food) also requires consideration.

Hospitals and health systems have the opportunity to influence how food is produced and distributed. Through their food purchasing decisions, hospitals can support food production that is local, humane, and protective of the environment.^{vii} Sustainable food products being sourced by institutions in Canada include antibiotic-free meat, free-range eggs, sustainably caught seafood, fair trade coffee and tea, and produce grown with minimal pesticides.

Values-based supply chains attempt to meet both volume and scale requirements as well as the goals of alternative food procurement initiatives. The values driving health care organizations' new food procurement initiatives, such as mutual benefit between supply chain members, environmental stewardship, and social equity need not necessarily be lost amid traditional supply chain norms.^{viii} Changing virtually any important aspect of food in hospitals will require collaboration between the institution and the supply chain. "Mindful procurement" is a term used by more than one key informant.

Changing demographics impact food, and this inevitably influences hospital food. Canadian patients come from a wide variety of backgrounds and cultures, with various food preferences. Many Canadians are also becoming more interested in healthy food and its origins, as well as the

impact of food on the environment. Millennials, for example, are known for wanting facts about the food they consume, and to know that what they are purchasing is good for the environment and society.^{ix} A 2016 study by the Canadian Centre for Food Integrity - a research group funded by the food industry - found that compared to other demographic groups, millennials have a lower level of trust in most of the groups who make up the food system, including farmers, grocery retailers, food companies, environmentalists, and government.^x And while millennials may not be the largest hospital patient demographic, they are aging and their parents are becoming hospital patients. Millennials are also hospital employees, and they are bringing their desire for healthier, tastier, eco-friendly foods with them.

Many key informants expressed the desire to modify certain laws, regulations, policies, directives, and standards related to food in health care. They described frustrations associated with overlap, gaps, applicability, compliance difficulties, jurisdiction, and more. Suggestions included both more and less regulation of food, policies that enable rather than hinder the changes they seek, development of a national food standard, implementation of new accreditation standards (or required organizational practices) for food services in hospitals, and more clarity around relevant definitions. Some concerns were also raised with respect to the impact of trade agreements (e.g. Agreement on Internal Trade, the North American Free Trade Agreement, and the Canada-EU Comprehensive Economic and Trade Agreement) on strategic public procurement. Advancements in this domain are not likely to come quickly, however with continued interest and advocacy from patients, families, staff, and others, appropriate and necessary changes and modifications to laws,

Canada's Food Guide, which is currently under revision, is intended to help guide food selection and promote the nutritional health of Canadians. Some key informants noted this tool is unrealistic for many hospital patients, including those who are very unwell, lack appetite, and require smaller food portions. Suggestions included less emphasis on these guidelines, or specific guidelines for hospital patient populations.

regulations, policies, and standards will ensue. Various departments and different levels within the federal, provincial/territorial, and municipal governments will be called on to respond.

There is general agreement that change is afoot with respect to hospital food: food service staff and managers care about the food served to patients; patients are acknowledging good food and suggesting areas for improvement; and administration and senior leadership are taking notice. There is an understanding that healthy, flavourful food and a positive food experience contribute to patient satisfaction, and may also positively impact quality of care and patient outcomes. Many stakeholders are committed to creating value through nutritious and healthy food, and to making a better connection between food and health. This also applies to food served to staff and visitors in hospital cafeterias, vending, volunteer, and franchise operations.

Key informants noted that, as anchor institutions rooted in their communities, hospitals are role models for wellness, good nutrition, and

healthy food. These institutions have the opportunity and moral authority to: offer quality food to patients, staff, and visitors; highlight the importance of the social determinants of health; and encourage positive changes in the food supply chain. Hospitals can also leverage their resources and their influence to help make their communities stronger as they carry out their mission.

ISSUES IN HOSPITAL FOOD

There are a number of pertinent issues in hospital food, as found in the literature and told by key informants. These are discussed in this section.

Patient Food Experience

There is an increased understanding that patients need nutritious, appealing food that tastes good in order for them to eat, regain their strength, and heal. There is also an increasing acceptance that healthy food can be good tasting. Key informants noted that patients value food, want to be healthier, and want some control over their food experience (fresher food, more choice, dietary preferences such as gluten-free, vegetarian, vegan, etc.). Food in hospitals can provide a small touch of normalcy in the patient's daily routine. Many key informants supported the idea of simple hospital menus with enticing, healthy offerings. Depending on the type of patient, and given the relatively short length of stay in hospital, interviewees expressed support for serving patients food that they will enjoy, and that will lend itself to patient recovery and a positive experience. Some interviewees also expressed a desire to decrease the number of hospital diets and menus, unless dietary restrictions are absolutely required.

Nutritious food that tastes good can also impact patient experience and patient satisfaction, and may contribute to a patient's overall sense of well-being and hopefulness on the road to recovery. A report by the Saskatchewan Health Quality Council, based on acute care patient experience survey data from 2009 to 2012, found that patients are four times more likely to rate their hospital as "10 out of 10 – best hospital possible" when they rate the quality of the food (taste, temperature, variety) as excellent.^{xi} Hospitals regularly assess patient satisfaction with hospital food, whether through proprietary, provincial, or regional surveys. Interviewees indicated there is a need for validated patient food satisfaction surveys that can be used across regions or across the entire country, to obtain patient feedback, determine best practices, and benchmark more widely.

A groundbreaking 'Seed to Feed' experience for Toronto's University Hospital Network's staff and members of the cancer survivorship programs is found at ELLICSR. Volunteer stewards help develop a garden from seed and maintain the garden as it grows. The harvest is used in the ELLICSR kitchen to teach cancer survivors how to cook healthy meals.^{xii}

Anecdotal evidence provided by our key informants suggests 30%-40% of patient food in hospitals is thrown away. This estimate is validated by a U.K. study that found that more than 40% of patient hospital food is wasted, a challenge which also results in lower than recommended energy and protein intake among patients.^{xiii} Confronted with this reality, hospitals are being challenged to minimize food waste. Wasted patient food is not necessarily due only to dislike; factors such as poor appetite and feeling unwell must also be taken into consideration. Still, flavourful food and/or more choice can lead to improved food intake and shorter hospital stays, may help patients recover, and will contribute to better patient experiences, less food in landfills (thus reduced methane emissions), and financial savings from less wastage, among other positive effects.

Food as Medicine

As organizations dedicated to health and healing, hospitals should model the provision of healthy, nourishing foods and environments that encourage food consumption to help patients strengthen and heal. Unprompted, the majority of key informants noted that “food is medicine.” Some interviewees also indicated that food service staff want to be part of interdisciplinary patient care teams, much like dietitians and nurses.

The importance of good nutrition and food consumption cannot be overstated, especially when it comes to recovery from illness.^{xiv} Good food and nutrition in hospitals is necessary because studies have shown that malnourished patients stay 2-3 days longer in hospital than nourished patients, and malnourished patients are at higher risk of readmission within 30 days.^{xv} Not only does malnutrition cost patients their health, it creates unnecessary costs to the health care system.^{xvi} A number of key informants commented on the prevalence and dangers of malnutrition among patients, and indicated a strong desire to address this risk through appropriate, appealing, and nutritious food.

Culturally Sensitive Food

Along with the imperative to increase the nutritional and sensory quality of hospital food, there is also a need for culturally appropriate food. Providing food that is familiar and acceptable to diverse groups is a sign of respect, and will help to increase patient satisfaction and reduce waste. One Toronto-area hospital operates one of the largest Chinese kitchens in Canada to meet the food preferences of a large segment of its patient population. Baycrest, a geriatric care facility in Toronto, operates one of the largest kosher kitchens in Canada. Moreover, food manufacturers and distributors are making greater efforts to source, prepare, and provide culturally-appropriate foods.

The provision of culturally appropriate food is also very significant for Indigenous peoples. Traditional foods, including country meats, game, fish, and berries are important from cultural, spiritual, and nutritional perspectives, and are associated with beneficial fat, carbohydrate, and nutrient profiles.^{xvii} According to the 2013 Alberta Regional Report of the First Nations Food, Nutrition & Environment Study, traditional food is safe and healthy to eat and the First Nations' diet is healthier when traditional foods are eaten.^{xviii} A similar study in British Columbia found that when Indigenous participants consumed traditional foods, they had higher daily intakes of nutrients that are important for healing, such as protein, vitamin D, iron, and zinc.^{xix}

Canadian laws and food regulations often present barriers to the use of traditional Indigenous foods in hospitals, mainly due to concerns about food safety traceability. However, there are examples of traditional foods successfully and safely incorporated into hospital menus, and the traditional knowledge of Elders can also help to improve the significance and safety of traditional foods in licensed institutional settings.^{xx}

In Sioux Lookout, a town in Northwestern Ontario, the Meno Ya Win Health Centre was developed by three levels of government and First Nations in the region in the early 2000s. Governing legislation allows the hospital to have uninspected meat on the premises, provided it follows rules for storing and handling the meat, including separate freezers, separate kitchen space, and separate utensils. The hospital cannot charge for wild foods, and hunters who donate the game must also follow rigid record keeping.^{xxi} To the extent possible, the hospital pays attention to regional variations and preferences in menu items, cooking style (fried, boiled, baked, roasted, dried, smoked, stewed, etc.), and cooking instruction is supported by Elders from several communities.^{xxii}

Depending on the regional situation and health regulations pertaining to wild game and other traditional foods, taking a stepwise approach to incorporating more traditional foods into health care environments may be prudent. B.C.'s Haida Gwaii Hospital and Health Centre began this work by developing a policy to bring in traditional foods once per month for social functions and cultural events. They now have a policy for using donated Canadian Food Inspection Agency-approved fish for patient consumption. The hospital's goal is to connect with food knowledge keepers and their traditional recipes, as they bring more local and traditional foods into the hospital setting.

Local and Fresh Food

Key informants discussed the noticeable interest among food service managers to increase the amount of fresh, in-season foods, and decrease reliance on pre-packaged and highly processed foods. Some facilities remain content with prepared foods and rethermalization, some are satisfied with outsourcing, and others use a combination approach. While a widespread return to cooking from scratch is not likely in the short-term (often because facilities do not have the necessary space or equipment), many hospitals are exploring ways to use healthier ingredients, new recipes, and innovative cooking and service methods. In some cases, food service staff are engaging in more food preparation – which may increase staff engagement and satisfaction – but also requires skill development.

B.C.'s Interior Health Authority estimates that 25% of the produce they buy is locally grown, depending on seasonal availability. That number rises to 30% if bread and dairy are included.^{xxiii}

One way to increase the amount of fresh food in hospitals is to redesign menus and identify local in-season foods that are available. Many hospitals are seeking to source and use minimally-processed foods, and numerous food service managers want to demonstrate the value of local foods. As noted by one key informant, hospital administration and leadership need to understand that it will take time and resources to pull away from the current dominant model of food procurement, and there will inevitably be bumps along the way. Several interviewees noted that sourcing local food likely has fewer harmful impacts on the environment, more positive impacts on local economies, and may result in patients receiving fresher food with better nutritional value than some imported foods.

Ontario's Greenbelt Fund, a grant program supported by the Ontario Ministry of Agriculture, Food and Rural Affairs, supports and enhances the viability, integrity, and sustainability of agriculture in the Greenbelt and the province. This fund has supported Ontario hospitals seeking to include more local food in their offerings. Tips from some of these hospitals include:^{xxiv}

- Focus on quality vs quantity. Offer portions that reflect the nutritional and energy needs of an aging population.
- Create a connection between the food and your clients. Let clients know they are eating local beef or potatoes (put it on the menu) – they will have much more “buy in.”
- Identify champions at all levels of the organization (when looking to incorporate more local food in the institution). Senior management and grassroots support are needed.
- Don’t be afraid to move slowly. Consolidate wins and keep moving.
- Work with your GPO. Insist on attaining the origin of your contracted food products.
- Increase the awareness of suppliers. Get to know the local food suppliers and invite them to be part of the process of change at your facility.

When asked what local food producers need to do to support more local, sustainable food in health care, key informants commented that local food producers should learn about how the health care food system functions and purchases food (including the Request for Proposal (RFP) process), and ask questions of GPOs. They may need to seek incentives to scale up or collaborate with other local producers (possibly in food co-operatives or food hubs for distribution and marketing) in order to meet the supply needs of hospitals and ensure product consistency. Local producers must meet food safety traceability standards which are designed primarily for global supply chains, and therefore this is an area requiring changes in procurement practices and policies that can support scale-appropriate innovations. Key informants also suggested that local producers must tell the story of what they do and how they contribute to their communities and to community health.

Hospitals would also benefit from up-to-date lists of local foods that are available. GPOs and food distributors could add value by creating and sustaining these lists, since hospitals generally do not have the resources to do so.^{xxv}

A recent exploration of institutional food service operations and procurement practices by Food Secure Canada and the J.W. McConnell Family Foundation identified key lessons to prompt supply chain shifts towards more sustainable food production and systems. Hospitals may consider the following, noting that some will require more time than others to implement:^{xxvi}

- Institutions must define what “local” means to them in order to begin engaging with supply chains.
- Certifications are only one part of sustainable food sourcing (need to consider the sustainable production methods of small farmers or fishers and other aspects of sustainability).
- Local food is often readily available but takes coordinated work to uncover.
- Pooling institutional purchasing power can create relationships with new suppliers.
- Rules of food procurement (e.g. accepting provincially inspected meat) can be changed to help level the playing field for small producers.
- Food service management contracts (including local, sustainable benchmarks for purchasing) are underused levers for change.
- Tracking food spending can be challenging, but is necessary for measuring progress and impact.

- Changing recipes and menus (e.g. “seasonable vegetables” instead of “green beans”) can open doors for local suppliers to deliver on sustainability goals.
- Cooking from scratch can deliver on both taste and price – by balancing increased labour costs with lower food costs from sourcing seasonal, whole ingredients.
- Developing a food culture that prioritizes local, sustainable food systems, facilitates an institution’s ongoing investment in change, and embeds new policies and practices.

Champions of healthy and good tasting food in hospitals understand that this is fundamental to nourishing patients and staff, and also recognize that food purchasing decisions impact the environment and surrounding communities. There is now growing recognition that food systems work is climate work, and healthy food leaders can be climate champions.^{xxvii} Consider, for example, balanced menus that lead to reductions in meat purchasing and in turn these savings can be used to purchase more sustainably-produced foods.^{xxviii}

Several interviewees also mentioned antibiotic resistance as a food safety and human health issue. Systemic overuse of antibiotics in agriculture increases antibiotic resistance among bacteria that can cause human infections.^{xxix} Some key informants suggested that hospitals and other health system stakeholders should call for an end to this agricultural practice. This presents an opportunity for hospitals to seek out antibiotic-free meat as part of their antimicrobial stewardship initiatives, recognizing that price and availability can pose challenges. Close collaboration and partnerships with suppliers will be necessary to achieve this goal. Efforts expended by stakeholders to address this challenge are expected to be valuable in light of the impact of antimicrobial-resistant pathogens and the impetus to address this issue.

Retail food in hospitals

Healthy food in hospitals pertains not only to patients, but also staff, visitors, and the surrounding community. Many hospitals are making efforts to increase the nutritional value of retail food offerings in cafeterias, gift shops, vending machines, and on-site franchises. As an example, all 20 hospitals in the Champlain region of Eastern Ontario have signed on to a *Healthy Foods in Hospitals Program*.^{xxx} This program is grounded within a set of nutritional standards, created by dietitians from hospitals and public health, that hospitals move through over time. In this way, hospitals are strong role models for health. Creating a supportive healthy nutrition environment means taking the onus off the individual from constantly having to resist their surroundings to make healthy choices. As anchor institutions, hospitals can model good nutrition through food services, as well as help to improve food environments internally and externally. People understandably equate the food service choices of institutions such as hospitals as "examples" they should follow in their own lives.

LEADERSHIP FOR ADVANCING FOOD IN HOSPITALS

While the role and impact of food and nutrition may sometimes be overlooked, some hospital leaders are paying attention to this matter. Executive-level champions have a role to play in helping to define food-related related goals, their importance, and how they link to the organization’s strategy. These senior champions can also offer their support for appropriate resourcing. Leaders should insist that food-related key performance indicators are monitored on a regular basis, and changes and improvements are made as necessary. While some may still see food as a utility, many leaders increasingly appreciate the importance of nutritious, appealing food and what it can do for their patients, staff, and communities. As Mr. Alex Munter, CEO of the Children’s Hospital of Eastern Ontario wrote recently, “Food is part of both health and healing. It’s also a vital part of quality of care and compassion....”^{xxxi}

Clinical champions can also help to profile the importance of healthy nutrition, both inside and outside hospitals. The most recent CIHI/Commonwealth Fund study on health, released in 2017, found that Canadian physicians ranked higher (50%) than physicians from other countries in discussing lifestyle choices with their patients, including healthy nutrition.^{xxxii} Within hospitals, physicians and other clinical champions such as dietitians can legitimize messages in support of healthy foods, and advocate for reductions in unhealthy foods in cafeterias and vending machines. Clinical champions can also speak to the impact of the social determinants of health – including income and the physical environment – both of which influence food choices. Healthy food and health promotion in hospitals can also support wellness among busy clinicians, who in turn can promote healthy lifestyles among their patients.

Most agree that leadership buy-in will expand as more research and evidence regarding the value of food and nutrition in health care becomes available. Questions related to food and patient experience, nutrition and patient outcomes, hospital food waste, and food cost/day (depending on the food service model) are just some of the areas requiring more research. In the retail setting, it is also important to demonstrate the value of any new food costs related to healthier food in the context of investing in employee health. The impact of hospital food choices on communities, and on sustainability, also needs more attention. Finally, research on the effectiveness and efficiency of the local and sustainable food supply chain would be valuable.

INNOVATIONS IN HOSPITAL FOOD

Despite the challenges associated with obtaining, preparing, and serving healthy and delicious hospital food, there are good news stories and a guardedly optimistic mood overall among key informants. Hospitals are beginning to share their experiences, and this will help to spread learnings and good practices and to accelerate change. Some of these innovations are shared in this section, and many more are occurring across the country.

New ways to serve patient food

Alternative models for serving food to patients have become more common over the past decade or so. These include restaurant-style menus, on-demand dining, room service, and hybrid models. Key informants indicated that these innovations positively impact patient satisfaction and help to reduce food waste. Lower waste costs may offset increased labour costs sometimes associated with on-demand food service models. In sectors including mental health, rehabilitation, and children’s hospitals, approaches that enable patients to make choices about their food, or even prepare or select their own food in serveries are expanding.

Oakville Trafalgar Memorial Hospital (Halton Healthcare Services) implemented a “Call to Order” room service food delivery model on its maternal child and medical/surgical units.^{xxxiii} Patients order by telephone from their hospital room anytime of day. A general “Call to Order” menu was developed and is applicable to a wide range of diets, and therapeutic and culturally appropriate menus are also available. Safeguards are in place to ensure that patients do not miss meals. The hospital has reported increased patient satisfaction and food waste reduction, and has eliminated the need for replacement trays.

The Centre Hospitalier Universitaire Sainte-Justine, a children’s hospital in Montreal, has also implemented room service model which provides patients with up to 3 meals daily. Five menus offer freshly cooked food all day long, delivered within approximately 45 minutes of ordering. “Délipapilles” allows patients to eat when they want to, anytime between 6:30am and 7:00pm.^{xxxiv}

Improving skills and new recipes

Partnerships can also stimulate innovation and success, and health care organizations and institutions in other sectors are teaming up to advance hospital food and nutrition. Toronto's St. Michael's Hospital partnered with George Brown College to create a guide for kitchen staff to learn the how, where, and when of local food purchasing and preparation. It includes a suite of recipes that is locally sourced and nutritious, including a nutritional label for each recipe to simplify a hospital dietitian's work.^{xxxv}

Hospital gardens

Glengarry Memorial Hospital's therapeutic garden^{xxxvi} was started in 2011. Since then, the garden has more than quadrupled in size and is used regularly by rehabilitation patients as part of their therapy. The garden now boasts 2,800 square feet and produces a variety of fruits, vegetables, herbs, and edible flowers. The greenhouse and row covers extend the garden's productivity into late November. Produce from the garden is used in the hospital's kitchens for meals, and some is used in cooking sessions with patients. The garden supports the hospital's efforts as it strives to achieve a silver designation within the Healthy Foods in Champlain Hospitals initiative.^{xxxvii}

Nourish leadership program

Launched in 2017, Nourish is a national initiative to build a future where the impact of food on health is understood and valued. Nourish hosts a community of practice for innovators across Canada who want to shape the future of food in health care, in addition to strategic communications and work to incite policy change and build more sustainable value chains in health care. The national cohort of 25 institutional innovators was selected with a vision of elevating the role of food in patient care and community wellbeing. The initiative is led by the J.W. McConnell Family Foundation and early partners including HealthCareCAN, Food Secure Canada, Canadian Coalition for Green Health Care, and Health Care Without Harm.

Innovators are working collaboratively on the challenges and opportunities of leveraging health care institutions to be anchors of health, within and beyond their walls. Through dialogue, project design, and practice, Nourish innovators are investigating and advancing the question: *How can food improve the patient experience, institutional culture, and community wellbeing?* Projects include, but are not limited to.^{xxxviii}

- Developing new menus that feature more sustainable, nourishing foods that promote healing and comfort;
- Shifting purchasing towards more local sustainable food sourcing;
- Engaging patients, families, and staff in decision-making and food education;
- Developing institutional policy that supports a culture of food for health; and
- Addressing social determinants of health.

Farmer's Markets

Sick Kids Hospital^{xxxix} in Toronto, and some other institutions across the country, have introduced Farmer's Markets on or beside their property. These markets provide a visual connection between food and health, and are a reminder that food is a key determinant of health.

Putting a spotlight on fresh, local produce

While not the first province to do so, the Quebec government has developed a local food strategy for the institutional market, focused on bringing more local produce into public institutions. Today, 33% of Montreal's health facilities ask their suppliers for local produce. The Laurentians Integrated Health and Social Service Centre (CISSS des Laurentides) created gardens in order to have easier access to local produce, to put more fresh food on the menu, and to encourage participation of its staff and residents. The East-Montreal Integrated University Health and Social Service Centre (CIUSSS de l'Est-de-l'Île-de-Montreal) increased the share of local food on the menus in 4 of their facilities by mobilizing suppliers, training staff, and organizing fruit and vegetable themed activities.^{xi}

Healthy eating policy

Nova Scotia Health Authority, Central Zone (former Capital Health District Authority) in Nova Scotia implemented a Healthy Eating Policy in 2011, as part of its work to achieve 100% healthy choices in all hospital restaurants, vending, retail, and catering. As one of the largest employers in the province, the organization acknowledged the impact it could have on the health and well-being of employees, physicians, staff, learners, volunteers, and visitors.^{xii}

INTERNATIONAL LESSONS ON HOSPITAL FOOD

Hospital food and nutrition in the United States is also evolving. While our health care systems differ, Canadian hospitals can still learn from the U.S. experience. Below is a sample of relevant initiatives.

As part of Health Care Without Harm,^{xiii} a worldwide collaborative campaign for environmentally responsible health care, many U.S. health organizations have signed the Healthy Food in Health Care Pledge. Those that sign the Healthy Food in Health Care Pledge agree to:

- Increase the offering of fresh fruits and vegetables, as well as other healthy foods.
- Identify and adopt sustainable food procurement options, including local food sources.
- Work with community stakeholders to increase the availability of fresh, local produce in the community surrounding the hospital.
- Encourage food providers to provide the hospital with environmentally friendly and sustainable food products.
- Request information from GPOs about the sources of hospital food purchased.
- Develop programs that engage with local farmers and food producers.
- Educate patients and the community about nutritionally sound, socially just, and ecologically sustainable food practices.
- Minimize food waste.
- Report annually on HFHC Pledge implementation.

Kaiser Permanente, an integrated managed care consortium based in California, currently spends approximately a quarter of its food budget on sustainable or local food. By 2025, their goal is to buy 100% of its food “locally or from farms and producers that use sustainable practices, including the responsible use of antibiotics.”^{xiii} Kaiser Permanente has also developed a Sustainable Food Scorecard to evaluate potential food and food service vendors' ability to support its sustainable food purchasing initiatives.^{xiv}

Partnership for a Healthier America (PHA), a nonpartisan non-profit led by health and childhood obesity advocates, has teamed up with hospitals and hospital food providers across the U.S. to deliver healthier options throughout their facilities.^{xiv} The 700 hospitals involved (10% of U.S. hospitals) are working to improve the nutritional quality of patient meals as well as offering healthier food options in on-site cafeterias. Just two years after implementing PHA's Hospital Healthier Food Initiative, employee health risk assessment data at MaineHealth showed consumption of five or more fruit and vegetable servings per day rose from 35% in 2012 to 53% in 2014.^{xlv}

A group of hospitals in the San Francisco Bay Area have launched the Farm Fresh Healthcare Project (FFHP) to increase sourcing of local and organic produce from small- to mid-scale farmers. Through innovative purchasing practices, FFHP hospitals make food a fundamental part of prevention-based health care, and are modeling healthy, sustainable food choices for their patients, staff, and visitors. Among their lessons shared, they note the importance of common definitions (healthy, local, sustainable); identifying internal and external food service champions; using existing distributors, where possible, to help meet logistical constraints; pooling purchasing power; incorporating seasonal produce into menus; supporting smaller scale farmers to become food safety certified; increasing supply chain transparency; and remaining persistent.^{xlvii}

Experiences and lessons can also be drawn from the United Kingdom. Hospitals in the U.K. have faced their own food and nutrition challenges, specifically in relation to recent varying levels of compliance with the British Dietetic Association's Hospital Food Standards^{xlviii} as well as Food Standards required by the NHS Standard Contract for Hospitals.^{xlix} The U.K. has adapted the Council of Europe's "10 key characteristics of good nutrition and hydration care." These include but are not limited to:^l

- Screening all patients for malnourishment or risk of malnourishment;
- Creating personal care/support plans enabling patients to have choice and control over their own nutritional care and fluid needs;
- Providing food and drinks alone or with assistance in an environment conducive to patients being able to consume their food;
- Providing nutrition and hydration in a flexible manner, centred on the needs of the patients, 24/7;
- Safely delivering food, drinks, and other nutritional care;
- Taking a multi-disciplinary approach to nutrition and hydration care; valuing the contribution of all staff, patients, carers and volunteers working together.

Dietitians, nurses, and food caterers in the U.K. work collaboratively to ready the environment and deliver food to patients, and they aim to protect mealtimes by disallowing non-essential activities during meals. "Mealtimes Matter" is the official NHS initiative that helps patients eat better by reducing noise and distractions on the ward and ensures those patients who need assistance receive it.^{li} Volunteers and willing family members are also encouraged to help patients focus on the meal experience, particularly their nutrition and hydration needs.

A small pilot of a protected mealtime program in a Canadian hospital^{lii} found the initiative (audit of interruptions, food intake, hand hygiene, and positioning practices) appeared to improve patient mealtime experiences and patient care. The researchers noted that a larger study is needed to determine the impact of a protected mealtime on other acute care wards and patient groups in hospitals across the country.

The Soil Association, the UK's leading food and farming charity and organic certification body, offers the Food for Life Hospital Leaders Circle for NHS Trusts that want to lead in the area of health promotion and food experience for patients, staff, visitors, and the wider community. And, the Soil Association's Food for Life Catering Mark provides a robust framework and inspected award, designed to help hospitals ensure that staff, visitor, and patient food is ethical, sustainable, fresh, free from additives and trans fats, and meets nutritional guidelines.^{liii} More than 10,000 meals are served in hospitals every day that meet Catering Mark best practice bronze standards.^{liv} In 2018, the NHS is also set to restrict the sale of sugary drinks and fatty foods in hospital cafes and canteens.^{lv}

Much like learning from hospital food experiences within our borders, Canadian hospitals can learn from and adapt other countries' hospital food initiatives and programs.

CONCLUSION

While nutritious, appealing food in hospitals may not have yet evolved to the point that all stakeholders would like, advances are being made. Concerns persist with respect to many issues including insufficient budgets and human resources; local and sustainable food procurement challenges; ensuring food safety and sustainability; balancing nutrition and taste; plate waste; and barriers to patient eating. Some hospitals, however, are nevertheless creatively finding their way through these challenges. To achieve wider spread of the innovations being seen, more research evidence and senior leadership buy-in are required.

Interest in fresh, local foods is growing, as is a "food for health" approach in hospitals. At this important juncture, there are opportunities to set goals, build on successes, and learn from experience. Institutions are becoming more aware of and are seeking to address environmental concerns regarding food, and many are also understanding their important role in helping to build healthy communities.

As hospitals move forward to advance their work in this area, there will be improvements in the sourcing, production, and delivery of nutritious and good tasting food. The more hospitals work together, discuss their learnings, and share good practices, progress will accelerate and systems will transform. Patients, families, staff, and physicians must be part of this journey.

Food is medicine – it is part of health care and not a utility – and leaders will be called upon to help build a healthy food and nutrition culture within their institutions and across systems. Understanding of the value of nutritious food as an early, upstream health intervention is advancing, and stakeholders want to build on the momentum that exists. Hospitals in Canada must continue to rethink their connection with food as an essential health care service, and as an investment in the health and wellbeing of patients, staff, and communities.

APPENDIX A

Steering Committee Members

- Bridget Davidson, Executive Director, Canadian Malnutrition Task Force
- Laurie Dojeiji, Network Mgr., H. Promotion, Champlain Cardiovascular Disease Prev Network
- Beth Hunter, Program Director, The J.W. McConnell Family Foundation
- Heather Keller, Chair of Advisory Board, Canadian Malnutrition Task Force
- Jennifer Kitts, Director, Policy and Strategy, HealthCare*CAN*
- Brad McKay, Chief Executive Officer, Healthcare Food Services
- Jane Pryor, Manager of Procurement, Halifax Regional Municipality
- Jennifer Reynolds, Institutional Food Program Manager, Food Secure Canada
- Dale Schierbeck, Vice-President, Learning and Development, HealthCare*CAN*
- Pat Vanderkooy, Public Affairs, Dietitians of Canada

Key Informant Interviewees

- Leslie Carson, Manager of Nutrition and Food Services, Whitehorse General Hospital
- Stacia Clinton, Natl Program Dir Healthy Food in Health Care, Health Care Without Harm US
- Steve Crawford, Business Development Specialist, Gordon Food Services
- Laurie Dojeiji, Network Mgr H Promotion, Champlain Cardiovascular Disease Prev Network
- Heather Fletcher, Director Support Services, St. Michael's Hospital, Toronto
- Javier Games, Act. Dir. Prov. Safety & Supply Mgmt Nutrition and Food Services, AHS
- Andy Jones, Past President, Hospital Caterers Association, UK
- Michael Knight, Manager Patient Food Services, The Ottawa Hospital
- Rosie MacLean, Maclean Food Consulting Inc.
- Lucie Mager, Consultant
- Brad McKay, CEO, Healthcare Food Services
- Jennifer Reynolds, Institutional Food Program Manager, Food Secure Canada
- Wendy Smith, Contract Specialist, MEALsource
- Dr. Jeffrey Turnbull, Chief of Staff, The Ottawa Hospital

APPENDIX B

The Role of Food in Hospitals - Interview Questions

- 1) How do you see the role of food in healthcare currently?
- 2) What trends have you seen regarding the role of food in healthcare over the past 10-15 years?
- 3) What is the desired future state?
- 4) What are two main challenges you have faced when advancing the role of food in your institution?
 - 4b) How did you overcome these challenges?
- 5) What current value is placed on food and nutrition in your institution?
- 6) What is needed to change the value proposition for food and nutrition in health care generally?
- 7a) Is your institution part of a group purchasing organization (GPO)?
 - 7b) In your opinion, what is the role of GPOs in improving food in healthcare?
 - 7c) What about direct purchasing? Contract purchasing?
- 8) What do you think local food producers should do to support more local, sustainable food in healthcare? (adequate supply, efficient distribution, capacity, etc.)
- 9) What do food service leaders/staff require to move ahead with improving food in healthcare? (capacity building, education/training, support from leaders/champions, technical assistance, local sourcing info, policies, evidence to demonstrate impact)
- 10) What innovations are happening in healthcare food and nutrition that we should do more of?
 - 11a) What healthcare food initiative/change would you implement tomorrow if you could?
 - 11b) What is the biggest barrier preventing you/your institution from doing this?
- 12) When it comes to local food purchasing, which food procurement policies and systems work well and which need to change to accommodate purchasing, inventory, and/or production procedures?
- 13) What strategies are needed to address the existing contractual, financial, and administrative issues when trying to improve food in healthcare?
- 14) What evidence/research is required to impact the business case regarding the role of food in healthcare? (Ask only if evidence was not elaborated on in #9)
- 15) What public policies/standards/regulations are needed to better support food and nutrition in healthcare?
- 16) What metrics do you use to evaluate food and nutrition in your institution?
 - 16b) What other metrics should be considered?
- 17) Are there other comments or feedback you would like to provide? Resources that I should access? Other individuals that I should speak to?

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