Building Local Food Capacity as a Food Security Strategy for Northern Indigenous Communities**
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Summary
Over the past several decades, Indigenous populations in Canada have undergone dietary and lifestyle transformations which have resulted in alarming rates of obesity and obesity-related diseases, especially type 2 diabetes mellitus. Forced settlement patterns and the depletion of wild food resources as a result of Euro-Canadian colonization abruptly altered their food consumption and physical activity patterns. Even though lack of physical activity is an important contributor to the chronic disease pandemic, the dietary transition in northern communities brings substantial challenges when it comes to obtaining nutritious foods. Throughout northern Canada, the primary reasons for food insecurity include the high cost of market food, restricted availability/access to nutritious foods, and lack of government support for nutritious food programs. The exorbitant costs of market foods throughout the north have led to recent calls for a resurgence in local modes of food procurement. While it is clear that there are important benefits to traditional diets, there are critical barriers in acquiring sufficient amounts of wild food for regular consumption, despite the relative abundance of wild food sources in most northern regions. As a result, people in many Indigenous communities are both struggling to harvest land-based foods and have limited access to quality market foods, thus limiting regular access to healthy foods. Communities are searching for solutions to this dietary dilemma.

Current Realities
For thousands of years prior to the westernization of food systems (e.g., better food transport, access to processed foods), Indigenous populations in Canada primarily consumed plants and animals obtained from the land. Dietary practices were regionally and historically diverse, with some groups drawing almost entirely from animal food sources, while others benefited more significantly from agriculturally produced food items. Over the last 30 years, researchers have established that access to nutritious foods in remote First Nation communities of Canada is limited and costly when compared to the obtainability of low cost, poor quality, processed foods (Pal, Haman et al. 2013). Though many of these populations may prefer to include more land-based foods in their diets, people are generally required to rely heavily on store-bought foods. The limited store options in most northern communities provide a very large selection of highly processed foods, candies, and sugary drinks, whereas the diversity of nutritious foods is extremely limited. Consequently, residents in northern communities have limited access to nutritious foods, a fact that has contributed to Indigenous peoples experiencing a disproportionately higher burden of chronic disease compared with non-Indigenous Canadians (Haman et al. 2010). Research by the Indigenous Health Research Group (IHRG) in northern Canada, documenting the prevalence of overweight/obesity and the incidence of type 2 diabetes, revealed numbers that exceed not only national averages but Indigenous national averages as well. These numbers are of grave concern and provide a grim prognosis for improvement, especially when situated within the context of high food costs and limited availability of healthy food options.

Scientific opportunities and challenges
As health researchers, we would like to think there is value to our work in that it continues to draw attention to the health disparities Indigenous peoples are facing and the various factors contributing to them. And while people should be aware of the disparities Indigenous peoples are facing, identifying/researching these issues clearly is not enough. In fact, these results are having very little impact on the communities themselves and, for the most part, are not telling
people anything new. Community members are keenly aware of the increasing prevalence of obesity-related diseases and their tragic health impacts. They are also aware that they do not have regular access to affordable nutritious foods and that it is increasingly difficult to get access to land-based foods for a variety of reasons, such as cost, knowledge and availability. How communities are responding to these challenges, in particular by restoring connections with the land and learning to move forward though local land-based solutions, deserves closer attention.

In 2009 our research group was provided a funding opportunity to study and support land-based food programming that our community partners wished to develop, enhance, and sustain. This opportunity marked an important change in how we began to think about and approach community-based research. In this case, it was made clear at the outset of the project that community participation was contingent on each community having ownership over the projects, that their own unique interests were being met, and that the project was being conducted according to community protocols. Land-based programming and food procurement was at the core of all the projects in nine different First Nations across Canada, but each community envisioned distinctive strategies in achieving land-based programming goals. Funds were used to develop local food procurement infrastructure, train youth in local harvesting methods and food preparation techniques, and provide nutritional/cooking information.

To date, important strides have been made in documenting community efforts to develop local food strategies as a means of addressing high levels of food insecurity in remote northern Indigenous communities. These efforts, however, must be accompanied with the acknowledgement that food access and food quality do not necessarily translate into improved dietary habits. What needs to be done, then, is to assess how local food efforts are impacting individual behaviours, and if these efforts are leading to the positive changes necessary for chronic disease prevention/reduction to occur. Are people in the community eating healthier as a result of the local food initiatives operating in their community? If there are even the slightest improvements in diet, what impact are these modifications having on individual health? Thus, researchers will need to develop, implement, and evaluate the effects of these initiatives to provide important information about the overall value of these programs from a chronic disease perspective. This will help researchers in their goal of addressing the food-related health issues that Indigenous communities are facing. If evidence can be provided that local food initiatives are positively affecting the health of individuals and communities, there will be greater likelihood of ongoing support for these programs. Here we see the important role researchers can play by putting research results into action to help communities maintain and develop local food initiatives in their efforts to improve community health.

**Policy Issues**

- Hunter-support programs, such as the Income Security Program for Cree Hunters and Trappers, signed under the James Bay and Northern Québec Agreement, must be implemented nationally and supported by federal and provincial/territorial governments. This program puts money into the hands of families who spend at least 120 days harvesting local foods. The financial support for the harvesting of traditional food follows recommendations made by the Royal Commission on Aboriginal Peoples and reflects what was put forth in *Canada’s Action Plan for Food Security* (1998). At present there are regional and provincial programs supporting the development of local food initiatives (e.g., Food Matters in Manitoba, the Remote First Nations Food Systems Project in British Columbia), but a federal commitment to support land-based food initiatives across the country is necessary.

- There are several factors influencing wild food availability in regions across Canada, two of which are climate change and the depletion of resources as a result of overfishing/overhunting. In most regions in Canada, Indigenous peoples who rely on wild foods for daily sustenance are competing with commercial and sport fishing/hunting. More effective policy that ensures Indigenous people’s unmediated access to land based food
resources and the greater enforcement of existing policies, are required to restrict access to sport and commercial fishing in Indigenous territories as agreed upon by treaty or as unceded (i.e., lands not surrendered to the Crown). Both federal and provincial/territorial governments have jurisdictional obligations here and must be involved in policy creation and enforcement.

- Resource development/extraction in northern Canada is highly contentious because of the potential environmental impact and encroachment on traditional Indigenous territories. Private and government interest in resource exploration provides interesting policy opportunities to support land-based food initiatives. Currently, engagement and negotiations between companies (e.g., mining companies, oil companies) and Indigenous Nations about seeking access to traditional lands emphasize economic development and job opportunities for local populations where development sites (e.g., mines) are established. These negotiations must also be accompanied with a minimal financial commitment directed towards environmental restitution, building local food capacity with Indigenous Nation partners, and land-based food programming.

- Canada is facing significant international pressure to reduce carbon emissions (based on its heavy economic reliance on fossil fuel-burning industries), which will inevitably lead to more progressive and substantial carbon taxation at both the federal and provincial/territorial level. This provides an opportunity to use a percentage of these taxable revenues for building/sustaining land-based and local food programming in regions most impacted by fossil fuel burning industry.

- In 1991, Canada developed its Northern Contaminants Program to help limit environmental contaminants in land-based foods and to assist people in making informed choices around the safe consumption of land-based foods. The program has achieved considerable success, but there needs to be more stringent sampling and testing by provincial ministries of wild food sources to ensure these foods are safe for consumption. Advocating increased consumption of locally procured food as a food security initiative without implementing safeguards to ensure foods are safe to consume is not acceptable. In addition to testing edible wildlife, the policy must also provide remediation/contingency support in areas of potential risk.

- In 2014 Education Aboriginal Affairs and Northern Development Canada introduced its First Nations Education Act in an attempt to close the gap in education outcomes for on-Reserve First Nations Peoples. The act has been met with controversy as it serves as another example of the federal government making unilateral decisions about Indigenous education without proper consultation and input from the people themselves. The public controversy points to the need to accommodate Indigenous perspectives into education planning and curriculum. Part of this curriculum should consider what Wawakapewin (northern Ontario) Elder and educator Simon Frogg describes as Land-Based Education, which would reflect Indigenous epistemologies while still meeting provincial standards. For Simon it is critical to build land-based education programs to provide youth with the necessary skills to get on the land and learn how to hunt/prepare foods as their ancestors have.

References:

**A policy position paper prepared for presentation at the conference on Food Safety, Security, and Defense (FSSD): Food Security and Diet-linked Public Health Challenges, convened by the Institute on Science for Global Policy (ISGP), Sept. 20–23, 2015, at North Dakota State University, Fargo, North Dakota, U.S.