**Food Insecurity for Northern Indigenous Communities in Whitehorse, Yukon Territory**

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HLTH 5200: Canadian Healthcare System

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September 26, 2026

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**Exploring the Wicked Problem of Food Insecurity**

 The wicked problem we have chosen to address is food insecurity for Indigenous communities in Whitehorse, Yukon. Food insecurity is the inability to consume or acquire sufficient quality or quantity of food (Health Canada, 2020). The rates of food insecurity for Indigenous people in Canada are the highest among developed countries (Thompson, et al., 2023). Due to the Yukon’s unique climate and remote location Indigenous communities in the Yukon are at an increased risk of experiencing food insecurity ultimately leading to increased risk of disease and poor health outcomes such as obesity, diabetes and cardiovascular disease (Blom, et al., 2022). High food prices caused by transportation challenges make healthy, store-bought food unaffordable. Climate change and environmental degradation threaten traditional food sources for Indigenous communities such as fishing, hunting and gathering. Efforts like federal subsidies and trade corridors may lower costs but often threaten Indigenous communities' rights to sovereignty and self-governance. They may also reinforce dependence on large food distributors.

 Food insecurity in Indigenous communities in the Yukon is a wicked problem because it is complex and interconnected. Rajabiyazd, et al. (2021) define wicked problems as problems with high levels of conflict between stakeholders. Each stakeholder involved can provide an explanation of the problem from their perspective, which ultimately impacts their offered solutions. Solving the problem of food insecurity for Indigenous communities in Whitehorse requires collaboration between various stakeholders such as community members, community leaders, government officials and food suppliers and distributors.

 Proposed solutions by stakeholders are often in competition and or conflict with one another. For example, The Government of Canada has proposed a “northern trade corridor”, an expansive network of railways, roads, and pipelines which aim to increase regional and international trade and increase access to food supply in northern Indigenous communities (Thompson, et al., 2023). However, corridors such as these directly threaten the sovereignty of these communities. Indigenous community leaders seek to prioritize traditional ways of life, including natural food sources such as fishing, hunting, and gathering which are currently threatened due to rapidly changing climate which impacts harvesting periods and the migration of animals. The sub-arctic climate of the Yukon also limits the ability to produce local fruits and vegetables which creates a dependance on food distributors and the import of southern or international produce (Blom, et al., 2022). This over-reliance on food distributors leaves consumers with little options in terms of pricing, quality and selection of available foods.

**Population - Northern Indigenous Communities in Whitehorse Yukon**

There are 14 First Nations in the Yukon, 11 of which are self-governing (James-Abra, 2022). According to Statistics Canada (2022) in 2021 there were 8,810 Indigenous people in the Yukon (22.3% of the population). The population of the Yukon is 47,140 people (Government of Yukon, 2024). The Indigenous population is made up of First Nations (78.8%), Metis (14.6%), and Inuit (3.0%) (Statistics Canada, 2022). Indigenous children aged 14 and under, represent 23.2% of the total Indigenous population while non-Indigenous children under 14 represented 15.4% of the non-Indigenous population (Statistics Canada, 2022). Much of the Indigenous population lives in the city of Whitehorse, which accounts for 5,110 Indigenous people (Statistics Canada, 2022). Almost half (49.2%) of First nations households in Canada suffer with food insecurity. The Yukon people suffer from food insecurity at 17% of the population compared to the 8.3% of Canada, above the national average (Statistics Canada, 2022). The gender of Yukon is split 50% female and 50% male (Point2Homes, n.d.).

 The First Nations people in the Yukon’s yearly cycles were closely linked to the seasons due to the imminent need to have enough food for the harsh winters (Joe-Strack, J., & Cameron, K., 2021). They harvested salmon, caribou, cranberries, birds, and other traditional foods in preparation for the colder months (Joe-Strack, J., & Cameron, K., 2021). Food systems have been under threat, disproportionately for Indigenous people, due to climate change, industrialization, environmental degradation, recent pandemics, ability to access traditional lands and water sources, loss of cultural food harvesting knowledge and many other causes (Judge et al., 2022). Indigenous people face food insecurity at a rate six times higher than the national average (Judge et al., 2022).

Yukon First Nations experience food insecurity due to harsh weather patterns, remoteness, dependance on food imports, limited food production and loss of hunting lands and knowledge with the impacts of colonialism (Blom et al., 2022). Food insecurity puts Yukon First Nations people, including those in Whitehorse at health risks. Studies have shown relationships between food insecurity and adverse health outcomes in children (Seligman, 2009). Studies have also been completed on adults in relation to self-reported diseases and food insecurity including hypertension, hyperlipidemia and diabetes (Seligman, 2009). These connections could be from less consumption of nutrient rich foods, decrease of vitamin intake and higher processed food intake.

Kwanlin Dün First Nation and Ta’an Kwäch’än Council are the Nations that are found in what is colonially known as Whitehorse, Yukon (Indigenous Services Canada, 2025). Recent archaeological digs have confirmed hunting and fishing camps from more than 5,000 years ago located minutes from downtown Whitehorse (Kwanlin Dün First Nation, n.d.). According to the Government of Canada (2025a), Kwanlin Dün First Nation has a registered population of 1, 063 citizens. The Ta’an Kwäch’än Council has a registered population of 308 citizens (Government of Canada, 2025 b). Approximately 50% of the Ta’an Kwäch’än reside in Whitehorse (Ta’an Kwäch’än Council, n.d.).

**Context- Whitehorse, Yukon**

The Yukon Territory, one of Canada's three Territories is in the Northwest region of the country and covers an area of 472, 713 sq km (World Atlas, 2023). Whitehorse, the capital, is the urban hub for the smaller rural communities throughout the Territory (McPhee-Knowles & Gatensby, 2023; Staples & McTavish, 2023). Across the Yukon, communities experience food insecurity challenges shaped by northern geography and limited access (McPhee-Knowles & Gatensby, 2023).

 The 14 Yukon First Nations maintain overlapping traditional territories, which results in shared food harvesting grounds (Government of Yukon, 2021). Climate change increasingly affects traditional hunting, fishing, and gathering areas relied on for generations (McPhee-Knowles & Gatensby, 2023; Government of Yukon, 2021). For some urban Indigenous residents, accessing traditional lands may require travelling outside of Whitehorse, which is not always possible due to transportation barriers (Government of Yukon, 2021; McPhee-Knowles & Gatensby, 2023). Since the 1993 *Umbrella Final Agreement* ended reservations in the Yukon, First Nations do not have fixed reserve boundaries, adding complexity to land use and shared access to traditional territories (Government of Canada et al., 1993).

The Ta’an Kwäch’än Council, known as the people of the lake, traditionally harvested along Tàa’an Män, colonially known as Lake Labarge (Gotthardt, 2000). This lake is a 30-minute drive from Whitehorse. The Kwanlin Dün First Nation, known as people of the river, established villages and camps along the Chu Níikwän, colonially known as the Yukon River, which now flows through downtown Whitehorse (Kwanlin Dün First Nation, 2025; Kwanlin Dün First Nation, 2013). Present days, Kwanlin Dün’s main subdivision is away from the river and a 10-minute drive downtown. Both Nations’ lands were disrupted by colonial events such as the 1897 Goldrush, the construction of the Alaska Highway during World War II, and the creation of a dam in the 1950s (Kwanlin Dün First Nation, 2013). Both Nations continue to face pressures from population growth, climate change, and environmental degradation (Kwanlin Dün First Nation, 2013, McPhee-Knowles & Gatensby, 2023).

Most health and food support services, including the primary hospital and the territorial food bank, are located in Whitehorse (Yukon Anti-Poverty Coalition, 2023; Yukon Hospital Corporation, 2022). The rural community food banks are sent food by air and truck, which can be costly (Yukon Anti-Poverty Coalition, 2023). Larger grocery stores are also based in the capital, requiring rural residents to travel long distances for affordable goods, while smaller communities rely on costly local stores in between shops (McPhee-Knowles & Gatensby, 2023). Local government policies restrict food production and consumption, and only about 1% of local produce is purchased by government institutions like hospitals and schools (Government of Yukon, 2020; Yukon Food Security Network, 2024).

Food deliveries into the Yukon travel by a single highway, passing through Whitehorse (McPhee-Knowles & Gatensby, 2023; Yukon Government, 2021). Closures caused by washouts or wildfires can disrupt the supply chains. There have been past events where prolonged closures depleted Whitehorse grocery stores and required federal airlift of food (Canadian Broadcast Company, 2012).

Solution 1: Brenna **Community Greenhouses and Indoor Growing Projects**

Skinner et al. (2014) suggest that community and school greenhouse projects could support local food sourcing. Indigenous people continue to source food from two interactive systems, traditional and market (Skinner et al., 2014). In some climates fresh fruit and vegetables cannot grow for many months of the year. The loss of traditional lands may also contribute to not having enough harvestable substances to feed a family over the winter. Gardening without a greenhouse in Northern communities like the Yukon can be difficult due to climate extremes, inadequate soil, permafrost, and shorter growing seasons (Skinner et al., 2014).

There is a greenhouse in Inuvik, which is in Northern, Northwest Territories, which has a guaranteed growing season from mid-May to end of September (Skinner et al., 2014). This greenhouse has increased community beautification and pride, heightened sense of community, fostered community development and increased food security (Skinner et al., 2014). A greenhouse in Whitehorse, Yukon may be able to provide all these and provide fresh fruit and vegetables to the Indigenous people who live in Whitehorse. This could provide sustenance that they could preserve for the winter as well. This may support a decrease in health concerns related to subpar nutrient diets and food insecurities. Esmaeli and Barbosa et al., notes that greenhouses can use solar radiation for photosynthesis and heat, can utilize soilless cultivation methods to cut down on water usage, and can be installed a distance from urban areas if needed (as Cited in Vatistas et al., 2022). There is a shipping container located west of Whitehorse that was turned into a hydroponic greenhouse that uses solar power and well water to run; however, the size is not sustainable to feed many people (AG1052.ca, n.d.).

Solution 2: Joscelyne **Nursing advocacy for policy change to increase traditional foods in healthcare**

While both First Nations located within Whitehorse are self-governing, the Government of Yukon still has very restrictive and outdated rules when it comes to food safety and preparation of traditional food (Yukon Health and Social Services, 2014). An example of this is that we cannot cook all wild game that is donated. If someone tries to donate meat to serve the community, it needs to follow very strict rules. Examples of gifted moose organs (delicacies) to cook for the Elders. Organizations cannot accept them, as they do not follow the regulations of meat cuts or ground meat.

As Indigenous nurses we can use our professional voice and practice our advanced leadership by advocating to the government to allow for a change in the restrictive policies (Watts et al., 2023). We have been taught that food is medicine and is important to the community. With many Indigenous people struggling to afford the necessities (Thompson, et al., 2023), it feels wrong to turn away food. We are taught that no part of a hunt or gather goes to waste, as the plant or animal gave its life for us. A lot of Whitehorse First Nations have difficulty accessing traditional food (McPhee- Knowles & Gatensby, 2023), so why not start incorporating cultural teaching and healing as part of increasing traditional food to the community.

Solution 3: Chelsey **Establishing Community Freezer Programs**

Inuit communities in Newfoundland and Labrador have established partnerships with the Government of Canada to establish community freezer programs. These community freezer programs allow local harvesters to contribute to a food sharing program where community members can access locally harvested wild meats, fruits and vegetables. Unlike traditional food banks which are usually stocked by distributors and imported goods community freezers are a community led and supplied initiative which respects Indigenous food sovereignty (Organ, et al., 2014). Community freezers are also able to facilitate nation to nation trade when large scale harvesting is done. This increases the availability of meats which could be limited due to climate and landscape. Annually between community freezer programs the NunatuKavut and the Nunatsiavut governments exchange approximately 3000 lbs (about 1360.78 kg) of fish (NunatuKavut Government, n.d). Trading between communities, including communities which have established greenhouses, can help to ensure that there is consistent access to locally harvested food year-round. The startup costs of community freezer programs would take cooperation from the federal government and community leaders.

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