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COVID-19, First Nations and Poor Housing

“Wash hands frequently”
and “Self-isolate” Akin to
“Let them eat cake” in First
Nations with Overcrowded
Homes Lacking Piped Water

By Shirley Thompson, Marleny
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Introduction

Emergency measures are deemed universally necessary to prevent the transmission and control of COVID-19. Around the world, people are asked to: wash hands often, maintain physical distance and quarantine in your shelter (WHO, 2020, Health Canada, 2020). These are effective measures to slow down the transmission of the virus (WHO, 2020) but in communities with overcrowded homes that lack piped water and with no hospitals — how can Canada make this pipe dream a reality?

This article analyzes Canada's directive to isolate-in-place and to wash your hands to reduce public health risks from COVID-19 considering the triple jeopardy faced by many First Nations — health, health care and infrastructure. Many First Nations in northern Manitoba are discussed, with a special focus on two remote northern reserves, Wasagamack and Garden Hill First Nations in Island Lake. Now is an extraordinary time when COVID-19 has exposed the cracks in the fabric of globalized society. So

many systems, including the health care system and the food supply system, have been seriously disrupted. However, not only cracks but an abyss is visible in First Nation communities. Before COVID-19, government underfunding of housing, water infrastructure, education, roads, health, and other services on reserve, compromised the well-being of First Nation people on reserves for many decades (Palmer, 2019; Elash & Walker, 2019). Public health tenants of safe and healthy living conditions that meet basic needs for sufficient water, shelter and food, etc., fall short on many Canadian First Nation reserves (Anderson et al., 2016; Pritty, 2018). This article looks at the health of people on First Nation reserves to determine their vulnerability to COVID-19 in light of the existing health services and the available infrastructure. Further, the health risk from housing and water infrastructure issues in First Nations are discussed before concluding with some policy recommendations.

Health and Health Care of People on First Nation Reserves

According to the Public Health Agency of Canada (PHAC), people with certain pre-existing health conditions and individuals with weaker immune systems, as well as older people, are more at risk of developing complications from COVID-19 (Statistics Canada, 2020). Disease rates on First Nation reserves are many times higher than the rates for other Canadians. For example, age-standardized prevalence rates for diabetes in Canada are 17.2 per cent for First Nation people living on-reserve, 10.3 per cent for First Nations people living off-reserve, and 7.3 per cent for Métis people, compared to 5 per cent for the general population (Crowshoe et al., 2018). As well, hospitalization for asthma and respiratory tract infections are higher for First Nations people on reserve than other Canadians (Carrière, Garner & Sanmartin, 2017).

Higher rates of contagious diseases on First Nation reserves are linked to infrastructure issues (Statistics Canada, 2020). The crisis of overcrowded housing on First Nation reserves correlates with higher rates of many diseases, including a 50 times higher prevalence of tuberculosis (TB) for people on First Nation-reserves compared to other Canadians (ISC, 2020b). Considering COVID-19 is much more contagious than TB,

the risks, from overcrowded housing on First Nation reserves for COVID-19 transmission, are great. Another example is viral hepatitis, which is spread by contaminated water and food, being universal on many reserves by age 20 (Minuk et al., 2003), linked to the inadequate water systems. The transmission of viruses from inadequate infrastructure on First Nation reserves for housing and water is very concerning for COVID-19 and was implicated in the high rates of H1N1 on reserve.

The H1N1 crisis sent a wake-up call in 2009 of the deadly impacts of pandemics without adequate infrastructure on First Nation reserves. One of Manitoba's 17 remote fly-in communities, Garden Hill First Nation (population 4074 at the time) (INAC, 2013), had hundreds of people sick from H1N1 and three of the 11 Manitobans (27 per cent) who died from H1N1. The government's immediate response to the epidemic was sending in body bags with only minor improvements to improve water access, which will be discussed further in this paper.

The health care needs of First Nations are presently not met on their reserve or nearby. Most First Nations located in isolated or remote areas have smaller health care facilities, such

as nursing stations. Typically the lack of hospitals and doctors necessitates people living on reserves to travel far distances to meet all but basic health care needs (Statistics Canada, 2020, FNIGC, 2018). The lack of nearby hospitals, particularly for communities lacking access roads, are barriers to health care, with one in ten First Nations people living on reserve having unmet health care needs in the preceding 12 months (FNIGC, 2018). Those in remote communities, who would need ventilators or acute care for COVID-19, must fly out for emergency medical care, presenting a bottleneck for not only airplanes but also, in many cases, for helicopters to reach the airports. For example, three of the Island Lake reserves need a helicopter to transport people to the airport, during the two months or more of ice-break-up/freeze-up (May and November typically).

The facilities to isolate sick people on First Nation reserves are limited, according to Garrison Settee, Grand Chief of Manitoba Keewatinowi Okimakanak (MKO), a political advocacy organization that represents 26 Northern Manitoba First Nations. Chief Settee commented: “The overall shortage of buildings in which we can set up field hospitals or self-isolation units is coming up daily as a concern for Northern First Nations” (Graham, 2020).

Therefore, people on First Nation reserves are in double jeopardy having more health issues but less access to health services (Statistics Canada, 2020). With health vulnerabilities and barriers to accessing health care, prevention of COVID-19 is critical. However, do First Nations have the water and housing infrastructure to follow public health advice to prevent diseases, for example, to wash often?

Frequently Washing your Hands while Rationing and Running out of Water

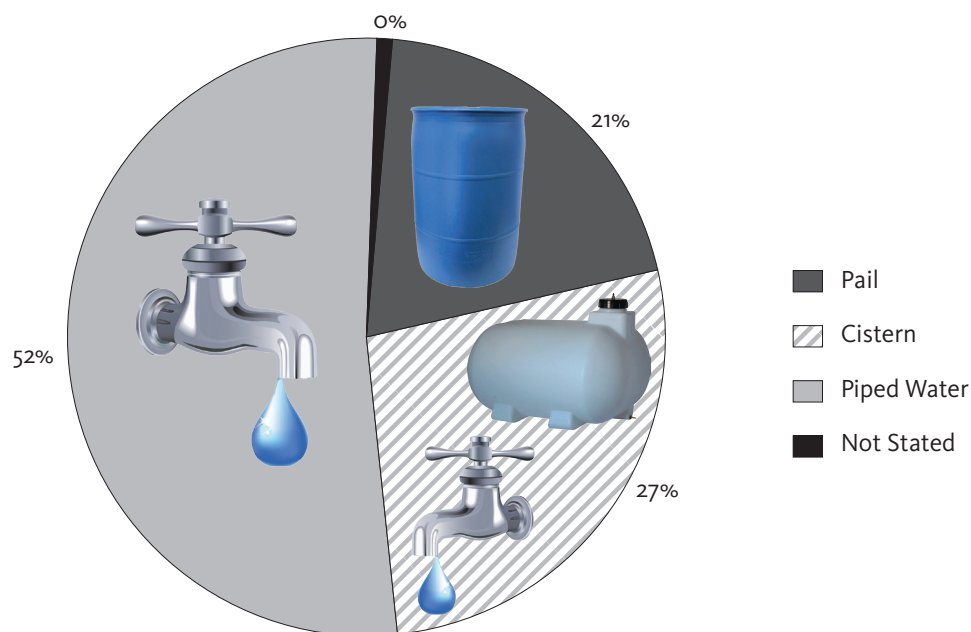
Washing hands is vital to prevent COVID-19, but what if the water is contaminated or of insufficient quantity, so that people run out of water? Water systems on First Nations reserves, according to the National Assessment of First Nations Water and Wastewater Systems (Neegan Burnside Ltd, 2011), harbor considerable risk, with 73 per cent of water systems on First Nation reserves being either high risk (39 per cent) or medium risk (34 per cent). Boil water advisories are common. Disruptions in supply also occur, for example Wasagamack's water treatment system breaking for a week in May 2020 during COVID-19, with no water supply to the health centre and community (N. Whiteway, personal communication, May 07, 2020). These risks, though high, are underestimated as the First Nation risk appraisal overlooked the risks for cisterns and barrels. In terms of water quality, the contamination of cisterns is the leading cause of boil-water advisories in First Nations communities (Moffatt & Struck 2011; Baird, Summers, & Plummer, 2013; Farenhorst et al., 2017).

Hauling water is mostly a prairie-Province problem with the truck-to-cistern drinking water supply chain reaching 31 per cent and 21 per cent cisterns in First Nations in Manitoba

and Saskatchewan, respectively, plus 5 per cent having no water system (Neegan Burnside Ltd, 2011). Meanwhile, across Canada's First Nations, the rate is much lower at 13.5 per cent cisterns, and 1.5 per cent having no water system (Neegan Burnside Ltd, 2011). Truck delivery of water is easily disrupted under normal conditions, with constant reports of shortages of water, but the COVID-19 emergency brings further disruption hazards. Although First Nation water systems, like all water systems, need to be reliable and sustainable under all conditions, in Manitoba, only 2 per cent had an emergency response plan. As well, only 4 per cent had a source water protection plan, 5 per cent had a maintenance plan, and 26 per cent had a certified backup operator (Neegan Burnside Ltd, 2011), which shows the weaknesses in these systems.

In northern Manitoba, many First Nation homes have cisterns that run out of water frequently. For example, 50 per cent of their homes run dry, according to Chief Larson Anderson from Norway House: "About half of the homes in Norway House are often left without water for one to 10 days, because of overcrowding and tanks that quickly run dry" (Grabbish, 2020). Insufficient trucks to keep up with the water de-

FIGURE 1 Water Supply by Pail, Cistern or Pipe in Garden Hill Homes (n=384)



SOURCE: Barkman, Monias & Thompson, 2018

mand creates water shortages or with the sewage truck, overflowing sewage (Harper, Whiteway & Thompson, 2018). Also, the quality of water is a concern. Cisterns are easily contaminated by soil, groundwater, as well as rodents. To decontaminate necessitates regular cleaning, but First Nations lack adequate budgets to clean these confined spaces (Lebel & Reed, 2010; IAND, 2006). Contamination of cisterns can occur at many points along the chain, at initial treatment, the transportation process, transfer to barrels or cisterns, microbial growth in the cistern, and the household distribution system (Bradford et al., 2018). However, other houses have no running water.

The lack of water service, to many homes, was considered a factor in H1N1 deaths in Garden Hill First Nation (Elash & Walker, 2019). Before the H1N1 epidemic, Garden Hill First Nation lacked any water service to most homes (Thompson, Thapa & Whiteway, 2019). To improve water access to homes after H1N1, the Federal government paid for water and sewage cisterns. Cisterns were

a low-cost band-aid solution, with First Nation Employment and Training having to fund the local workers to retrofit the homes. Between 2011 and 2016, 769 housing units were retrofitted with cisterns in Island Land (MB Partnership, 2020), with some homes not receiving cisterns for various reasons (e.g., lack of electricity, broken cistern, housing not up to code or mobile home, etc.) (Harper, Whiteway & Thompson, 2018). Then, in 2018, 21 per cent of the 384 houses surveyed in Garden Hill First Nation used barrels, and 27 per cent used cisterns (Barkman, Monias & Thompson, 2018). See graph 1. Based on this survey, the CBC reported 180 households were without running water (Elash & Walker, 2019).

Homes in many other First Nations lack running water. According to a survey with 87 of 200 households at South Indian Lake First Nation (Statistics Canada, 2016), 33 per cent use barrels for water without any water service (Thompson & Pritty, 2020). Barrels provide less than 500 gallons of water, which typically run out of wa-

ter after a few days, even with rationing. As well, in South Indian Lake First Nation, 47.5 per cent of homes use “honey buckets” or “slop buckets”. Homeowners typically dump these buckets in their back yard, which provides an on-going source of contagion. Similarly, the 2018 survey of 384 houses in Garden Hill First Nation found 21 per cent relied on honey buckets with another 27 per cent having sewage cisterns (Barkman, Monias & Thompson, 2019).

Therefore, to wash hands regularly to prevent COVID-19 requires upgrading of the First

Nation water systems to be reliable and sustainable under all conditions. Cisterns and barrels are only a temporary measure, until piping can be installed, as the cisterns compromise the quality and quantity of water. The Office of the Parliamentary Budget Office (2018) calculated that a minimum cost of \$3.2 billion is required for First Nation on-reserve water systems to be at the same standards as Canadian communities. This investment is necessary to help prevent future pandemics but also to improve health on reserves overall.

Self-Isolation and Physical Distancing in an Overcrowded House

The Public Health Agency of Canada recommends that people isolate at home if they may have COVID-19 (ISC, 2020a). However, this public health advice is difficult to adhere to in overcrowded homes on First Nation reserves. Grand MKO Chief Garrison Settee stated: "...with the COVID-19 pandemic; however, we do need to pay attention to the lack of housing as it directly impacts our ability to follow public health advice designed to mitigate the impacts of the virus on the vulnerable citizens in our communities" (Graham, 2020). Overcrowding is associated with a higher risk of the spread of infectious diseases, such as COVID-19.

Overcrowded housing is a common issue on reserves (Brandon & Peters, 2014; Bonnycastle, Simpkins, & Siddle, 2016). In 2016, 37 per cent of First Nations people on reserve lived in unsuitable housing, compared to 8.5 per cent for the non-Indigenous population, according to the National Occupancy Standard (NOS). Housing suitability — a measure of crowding — refers to whether the dwelling has enough bedrooms for the size and composition of the household (Statistics Canada, 2020). In remote First Nations, NOS rates are higher yet, at approximately 53 per cent for both Wasagamack and Garden Hill

First Nations, according to Table 1, with person/room rates 24 times and 22 times Canada's average. In St. Theresa Point First Nation, the chief reported cases of 23 people live in a two-bedroom home where "they had to take turns sleeping" (Puxley, 2016).

With limited housing available on First Nation reserves, grown children, with offspring and spouses, often have few choices but living with their parents. One-quarter (25.4 per cent) of people living on First Nation reserves lived in multigenerational households in 2016, which is four times the rate of non-Indigenous population (6.1 per cent). Grandparents living alongside their children and grandchildren create a greater risk of viral exposure to older Indigenous adults, an at-risk group for severe COVID-19 symptoms.

The physical condition and quality of a home, including the state of repair, allergens, and mold, are associated with an increased risk of the spread of infectious diseases (Statistics Canada, 2020). The percentage of homes in need of major repairs was highest among First Nations people living on reserve (44.1 per cent). For example, a 2015 survey on housing, completed by 408 Nisichawayasihk Cree Nation houses (formerly known as Nelson House) community, found 58 per cent

TABLE 1 The State of Housing in Two Remote First Nations Compared to Canada

Housing Issue	Canada	Wasagamack	Garden Hill
More than 1 person/room	1.9%	45.6% (24X)	42.6% (22X)
Rooms/dwelling	6.2	4.4	4.7
Housing Unsuitable (NOS)	8.5%	52.6%	53%
Major Repairs needed	6.5%	82.6% (13X)	61.8% (9.5X)
Not Suitable	4.9%	52.6% (11X)	54.5% (11X)

NOTE (X)- Times or multiplication of the rate for Canada.

SOURCE Statistics Canada, 2016.

have mold problems (Nisichawayasihk Housing Authority, 2015) and 52 per cent needed major repairs (Statistics Canada, 2016).

The Federal government management of reserve housing started in the 1960s and 1970s. Due to a lack of planning for population growth, maintenance, and repair, these homes were overcrowded and in disrepair by the 1980s (Belanger, 2016). Harold Calla, Executive Chair, First Nations Financial Management Board, describes First Nation reserve housing deficit as surpassing \$3 to \$5 billion (Senate Committee on Aboriginal Peoples, 2015) and the infrastructure deficit of \$45 billion to \$50 billion (Cala, 2017). This overcrowding on reserves results in First Nation people having a higher incidence of precarious housing or homelessness (e.g., living in homeless shelters, transitional housing, or residential facilities for victims of abuse) (Statistics Canada, 2020).

In conclusion, Federal Programs do not provide adequate, safe, and healthy housing on First Nation reserves, making First Nation people

on reserve at higher risk from COVID-19. The Assembly of First Nations (2020) estimates an additional 130,000 housing units are needed by 2030. Four out of every five on-reserve households live in homes that need significant repairs, and are below the standard for adequate housing (Lgui, 2019). To deal with the housing deficit, a Treaty, Indigenous, and human “rights-based approach” needs to be the foundation of the First Nation Housing strategy (AFN, 2020). The United Nations Rights for Indigenous Peoples (UNDRIP) Article 23, calls for an Indigenous-led approach:

Indigenous peoples have the right to determine and develop priorities and strategies for exercising their right to development. In particular, indigenous peoples have the right to be actively involved in developing and determining health, housing and other economic and social programs affecting them and, as far as possible, to administer such programs through their own institutions.

States of Emergency Declared by First Nation Communities

First Nations leaders have declared states of emergencies to protect their First Nation communities, knowing that their lack of infrastructure is a death sentence under COVID-19 (Hatherly, 2020). Proactively, First Nations erected barricades in most remote First Nation communities in mid-March to limit outsiders coming in with contagion (Hatherly, 2020), including Northern Manitoba.

The chiefs of northern Manitoba First Nations called on the Province to cut off travel to northern Manitoba, which was initially rejected. However, later on, April 17, 2020, the Province did enact a “travel ban for northern Manitoba (north of the 53rd parallel), with exceptions for essential travel” (APTN, 2020). Despite this, HudBay mining operations are business as usual, according to the HudBay spokesperson, as “traveling north for employment and the delivery of goods and services are exempt” (Hatherley, 2020). Resource development projects continue to have workers travel in and out of northern Manitoba, despite First Nations calling for a shut down of their operations (Haverley, 2020). The negative impact of workers from resource industries nearby to First Nations is evident in Northern Ontario’s Gull Lake First Nation. Six people

from Gull Lake First Nation caught COVID-19 after 17 people at the nearby mine contracted it (Walters, 2020). But First Nations leadership can be credited with keeping the virus out of northern communities. As of May 10, 2020, 175 positive COVID-19 cases are confirmed on First Nations reserves in provinces (with British Columbia at 39, Alberta at 29, Saskatchewan at 35, Ontario at 41 and Quebec at 31), resulting in 17 hospitalizations and two deaths (ISC, 2020c). Lockdowns have effectively prevented the transmission from reaching remote communities and Nunavut to date.

Without immunity to European contagions, the remote Anishiniwuk and Ininiw (previously described as Oji-Cree and Cree, respectively) communities were able to survive smallpox and other disease plagues on their land. With sustenance (food, fish, medicines, etc.) from the land and by applying physical distance through living on their traplines in their vast traditional territory, they were able to survive (Thompson, Whiteway & Harper, 2019). To deal with COVID-19 many First Nations are sending out hunters and fishers to their traplines to both provide physical distancing and obtain food from the land. Supports for wild foods (fish-

ing nets, gas, seeds, and tarps for living on the land) will help to provide continuous supplies of traditional food to people living on reserve and the land. With many skilled hunters and fishers

in the community, as well as abundant wildlife and vast areas, wild foods provide a significant, sustainable source of food, to supplement commercial foods.

Policy Recommendations

Preventing contagions reaching at-risk First Nation reserve communities, until a vaccine is achieved, is the key way to stop transmission of COVID-19. First Nation leadership's decision to lock down borders and erect barricades should be fully respected and supported. Mechanisms to achieve collaboration among all service providers, (e.g., health workers, RCMP, mental healthworkers, construction workers, resource workers, etc.) to support First Nation leadership COVID-19 plan, including lockdowns, are needed. To enforce the northern travel ban, a checkpoint at Grand Rapids, which is the gateway to the north, would help prevent non-essential workers (Wallace, 2020). The lack of infrastructure and vulnerability of First Nations has to be considered in every decision by every level of government, which necessities reclassifying resource extraction workers (e.g., workers at HudBay and Keeyask Dam) as non-essential, in close vicinity to First Nations to shut down.

As well, in the short term, special funding has to be put in place through Indigenous-led organizations for dealing with the lack of infrastructure. Although \$100 million was given by the Canadian government to charities to deal with the urgent food needs of Canadians,

including Indigenous people from COVID-19, none are Indigenous organizations, and most do not serve First Nations or rural Indigenous communities (Levi & Robin, 2020). Further, the \$305 million fund established by the federal government for Indigenous communities to address COVID-19 for "emergency" and "temporary" proposal funding was not at the scale or proportionality available to other communities (Levi & Robin, 2020). Food security needs urgent attention as roughly half (50.8 per cent) of households in First Nation reserves (FNIGC, 2018) experienced food insecurity and 75 per cent in remote and northern communities, prior to COVID-19 (Thompson et al, 2012). This means most households had inadequate or unstable access to nutritious food due to financial constraints, before COVID-19, compared to 1 in 8 Canadians (4.4 million Canadians). Food security will only get worse with COVID-19. Sustainable supports to keep these communities fed and with drinking water require supports for fishing, hunting, store-bought food and gas for extra water delivery. First Nations require aid in the billions to prevent a massacre (Levi & Robin, 2020). For the long term, local capacity building and billions in infrastructure spend-

ing is needed to ensure communities can sustain basic needs, including water, housing, and food (Palmater, 2019; Levi & Robin, 2020). This

must be done in partnership with First Nations, to build capacity, social enterprise and support self-determination.

Conclusion

Asking people to wash their hands and isolate in overcrowded homes without running water is like asking people, unable to afford bread, to eat cake. Washing hands regularly and self-isolating provides limited means for prevention in First Nations communities due to their lack of critical infrastructure (Belanger, Weasel Head, & Awo-soga, 2012). With the overcrowding of homes, water issues, and lack of infrastructure, particularly in remote and northern communities, just one COVID-19 case on a reserve has huge potential to spread widely and devastate the community. Adequate resources are required for First Nations to build local capacity and infrastructure for homes, water, and other necessary infrastructure. This price tag, even in the short term, has to go beyond \$305 million for emergencies into the billions of dollars. With the large infrastructure deficit, billions are required to ensure water; housing and food systems are safe, sustainable, and healthy.

The First Nation infrastructure crisis is more than a building problem or a health problem for COVID-19 transmission and health care. It is a colonial systems' problem. The historic and present-day displacement and removal of Indig-

enous peoples from traditional lands, cultures, and lifeways; racism, exclusion, and economic marginalization; and legislation, policies, and practices have undermined the collective and individual well-being of Indigenous peoples (Thistle, 2017). Indigenous peoples' poor health outcomes are from the infrastructural inequalities and regional underdevelopment generated by colonialism (Christensen, 2016).

The root of the health inequity needs to be addressed to prevent dire consequences from pandemics by shifting policy, major investments in capacity building and infrastructure funding. A change in governance to Indigenous self-government is needed to bring about reconciliation and adequate infrastructure for First Nation reserves to protect the health of Indigenous peoples.

Indigenous people hold the answers to their own well-being. Restoring self-governance and stewardship of traditional territories by the Indigenous peoples of Canada is needed. The tremendous wealth from the natural resources in their ancestral territories should benefit Indigenous peoples to ensure healthy infrastructure in First Nations (Thompson, Thapa & Whiteway, 2019).

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