

Medical experimentation and the roots of COVID-19 vaccine hesitancy among Indigenous Peoples in Canada

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As the second wave of the pandemic sees case numbers rise to dangerous levels across the country, it has become clear that Indigenous people are particularly vulnerable to coronavirus disease 2019 (COVID-19). The figures released by the Manitoba First Nations COVID-19 Pandemic Response Coordination Team reflect this vulnerability. Despite making up just over 10% of the total population of the province, First Nations people make up 71% of active cases with COVID-19 and 50% of patients in the intensive care unit; the median age of death from COVID-19 for First Nations people is 66 compared with the provincial median of 83 for Manitobans, overall.¹

This should come as no surprise to anyone who has read the dozens of studies, reports and royal commission findings published during the past two decades. Study after study has shown the vulnerability of First Nations, Métis and Inuit communities to health crises like the one we are currently facing. This vulnerability is very much the product of a Canadian colonial policy regime that has guaranteed that Indigenous Peoples have reduced access to adequate health care, healthy food and clean water, while also experiencing much greater levels of overcrowded housing, homelessness and incarceration.

All of these factors increase the possibility both of contracting COVID-19 and of having severe health complications as a result. It is therefore imperative that Indigenous Peoples receive priority access to vaccines for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

However, many Indigenous people have expressed substantial hesitancy and



Nurse takes blood sample from boy at the Alberni Indian Residential School (Port Alberni, BC) as part of a series of nutrition experiments conducted in residential schools between 1948 and 1952.

even opposition to vaccination for COVID-19. After the arrival of 1200 doses of the Moderna vaccine in his home community, former Assembly of First Nations National Chief Matthew Coon Come articulated his concerns in a widely shared social media post, writing “Mistissini is now the experimental rats of this experimental vaccine.”²

Historical legacies

The fears and hesitancy articulated by Coon Come are, of course, not universal, and many Indigenous leaders have come out strongly in support of vaccines. However, the reality is that these concerns are nonetheless widely held by many First

Nations, Inuit and Métis people. As former Manitoba Keewatinowi Okimakanak Grand Chief Sheila North explained: “Back in residential school days, [people], that are now elders, remember being used as guinea pigs or [having] vaccines tested on them when they were children without their permission or their family’s permission.”³

These concerns, fears and experiences need to be taken seriously by doctors and other health care professionals and need to be differentiated from the “anti-vax” movements that have thrived on social media in recent years. The reality is that well-documented examples of Indigenous Peoples being subjected to medical experimentation exist. One of the authors of this article has published research regarding a series of nutrition experiments conducted in several Manitoba Cree communities in the 1940s, as well as in six residential schools between 1948 and 1952.⁴ Historian Maureen Lux has similarly documented multiple instances of medical experimentation on Indigenous Peoples, including a 12-year trial of the experimental bacille Calmette-Guérin vaccine for tuberculosis on Cree and Nakoda Oyadebi infants in Saskatchewan during the 1930s and 1940s.⁵ A whole range of experimental surgical and drug treatments were also administered to Indigenous patients, without their consent, within Canada’s racially segregated system of Indian Hospitals during the early postwar years.⁵

The legacies of the racist paternalism that left Indigenous Peoples uniquely vulnerable to medical experimentation and abuse can be seen in the more recent story of Brian Sinclair, who died as a direct result of racist treatment at the hands of hospital staff and physicians. They can also be seen in the testimony of nearly 60 Indigenous women who launched a class action lawsuit seeking damages for what they describe as forced sterilizations by Saskatchewan doctors over the past 25 years.⁶

Indigenous Peoples, then, have every reason to be wary of the Canadian medical system. Given that recent studies show that Black people, in particular, are much more likely to reject SARS-CoV-2 vaccination than their White counterparts — in large part because of well-documented experiences of medical abuse and experimentation — we need to start taking this seriously.⁷

Vaccine hesitancy

The influenza A virus (H1N1) pandemic is an instructive example of vaccine hesitancy among Indigenous Peoples. As studies have shown, Indigenous Peoples’ experiences of Canadian colonialism already “deeply affected their perceptions of the [H1N1] vaccine and pandemic” and increased vaccine hesitancy.⁸ These issues were then exacerbated by problematic public health messaging and actions.

A disturbing example of this occurred in 2009 when, during an H1N1 outbreak, the federal government sent body bags to four Manitoba First Nations communities instead of shipments of antivirals, hand sanitizer and flu kits.⁹ The story spread and contributed to distrust across the country. Although there is no genetic predisposition to or additional risk of more severe outcomes from H1N1 for Indigenous Peoples, they were nonetheless listed as a stand-alone category of people who should receive the H1N1 vaccine among all identified high-risk groups. Zeroing in on Indigeneity alone meant that many were left feeling like guinea pigs.⁹

Canada is already setting itself up for similar failures with the SARS-CoV-2 vaccines. Limited and late information about both COVID-19 and the approved vaccines have each contributed to vaccine hesitancy among Indigenous Peoples.¹⁰ It also means that those on the ground are being asked to fill an informational vacuum among an already skeptical population with few resources. The lack of information is why Lesa Semmler, member of the Legislative Assembly in Inuvik and a former nurse, has been pushing for community-focused and community-driven educational efforts. “People need time,” she told the CBC. “You need the health education before [the vaccines arrive].”¹⁰

Similar to the H1N1 pandemic, then, the prioritization of Indigenous Peoples and communities to receive SARS-CoV-2 vaccines raises questions. Recent statements that Canada could not meet its pledge to end boil water advisories by March 2021 because of COVID-19 — all while early priority shipments of the vaccine are being sent to Indigenous communities — only feeds into the narrative that Indigenous Peoples are being used to test the safety and effectiveness of the

vaccine before it is administered to the rest of the population.

Conclusion

What, then, needs to be done to ensure that as many Indigenous people as possible receive SARS-CoV-2 vaccines that we, the authors, believe to be lifesaving?

For a start, doctors and other health professionals need to educate themselves before going into communities to administer vaccines. Too many are unaware of Canada’s shameful histories of racially segregated health care and medical experimentation, and therefore misunderstand the nature of vaccine hesitancy.

Public health messaging about the risks of SARS-CoV-2 infection and the benefits of receiving the vaccine also must clearly be positioned in a way that speaks to Indigenous Peoples’ historical and contemporary experiences with Canadian settler colonialism. Risk attributes must also be described individually rather than simply categorizing Indigeneity as an individual risk category.

This means jettisoning a one-size-fits-all public health messaging strategy. Pandemic messaging will be more effective if delivered directly by Indigenous Elders, leaders and health practitioners who have trust and credibility in their communities. For many communities, this means that public health messaging needs to focus not only on the health and wellness of the people receiving the vaccine, but also on the health and wellness of our families, communities, the land and the next seven generations.

One of the, perhaps insurmountable, short-term problems that we face is that there has never been a reckoning for the legacy of medical experimentation and other abuses targeted at Indigenous Peoples within Canadian medical institutions. In the long term, an inquiry into the history of medical experimentation in Canada and reparations to the affected communities will be required.

Before that happens, though, there also needs to be a vaccine strategy that puts the onus on Canada for doing what is necessary to prove to Indigenous communities that the vaccine is safe, effective and in their best interests. And this should have started months ago.

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References

1. Manitoba First Nations COVID-19 Pandemic Response Coordination Team Weekly Bulletin. Winnipeg: Assembly of Manitoba Chiefs; 2021. Available: https://d5d8ad59-8391-4802-9f0a-f5f5d600d7e9.filesusr.com/ugd/38252a_7918036c62914724a5b6b3afa3231479.pdf?index=true (accessed 2021 Jan. 13).
2. Pashagumskum J. Former AFN national chief and Cree grand chief speaks out against vaccine. *APTN News* [Winnipeg] 2020 Jan. 7. Available: www.aptnnews.ca/national-news/former-afn-national-chief-and-cree-grand-chief-speaks-out-against-vaccine/ (accessed 2021 Jan. 13).
3. Rodriguez J. To tackle vaccine hesitancy, Canada can't ignore race, racism: health experts. *CTV News: Coronavirus* 2020 Dec. 16, updated 2020 Dec. 17. Available: www.ctvnews.ca/health/coronavirus/to-tackle-vaccine-hesitancy-canada-can-t-ignore-race-racism-health-experts-1.5234212 (accessed 2021 Jan. 13).
4. Mosby I. Administering colonial science: nutrition research and human biomedical experimentation in Aboriginal communities and residential schools, 1942–1952. *Soc Hist* 2013;46:145–72.
5. Lux MK. *Separate beds: a history of Indian hospitals in Canada, 1920s–1980s*. Toronto: University of Toronto Press; 2016.
6. Indigenous women kept from seeing their newborn babies until agreeing to sterilization, says lawyer. *CBC Radio* 2018 Nov. 13. Available: www.cbc.ca/radio/thecurrent/the-current-for-november-13-2018-1.4902679/indigenous-women-kept-from-seeing-their-newborn-babies-until-agreeing-to-sterilization-says-lawyer-1.4902693 (accessed 2021 Jan. 13).
7. Callaghan T, Moghtaderi A, Lueck JA, et al. Correlates and disparities of intention to vaccinate against COVID-19. *Soc Sci Med* 2020 Dec. 23 [Epub ahead of print]. doi: 10.1016/j.socscimed.2020.113638.
8. Driedger SM, Maier R, Furgal C, et al. Factors influencing H1N1 vaccine behavior among Manitoba Metis in Canada: a qualitative study. *BMC Public Health* 2015;15:128.
9. Driedger SM, Cooper E, Jardine C, et al. Communicating risk to Aboriginal Peoples: First Nations and Metis responses to H1N1 risk messages. *PLoS One* 2013;8:e71106.
10. Zingel A. Work with communities to address vaccine hesitancy, say Indigenous leaders. *CBC News North* 2021 Jan. 8. Available: www.cbc.ca/news/canada/north/work-with-communities-vaccine-hesitancy-indigenous-leaders-1.5865677 (accessed 2021 Jan. 13).

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