

# COVID-19 pandemic: implications for First Nations communities in Canada

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## Abstract

A recent surge of Coronavirus disease 2019 (COVID-19) cases in First Nations communities during the second wave of the pandemic has raised concerns over the susceptibility of First Nations communities to COVID-19, as well as the preparedness of Canada's healthcare system in supporting isolated First Nations communities during the pandemic. Despite government initiatives and funding throughout the pandemic, it is well established that First Nations communities continue to face longstanding health disparities when compared to the rest of the Canadian population. In this commentary, we argue for a multidimensional approach that encompasses the social determinants of health for understanding the susceptibility of First Nations to COVID-19 outbreaks, and potential solutions aimed at primary prevention and community preparedness that will benefit First Nations communities across Canada. Based on this approach, we recommend that healthcare providers and community members advocate at both provincial and federal levels for proper housing, access to clean water, implementation of culturally competent care into practice, adequate health teaching and understanding of public health recommendations (e.g. proper handwashing techniques) and robust monitoring of patients who may be at risk for COVID-19 infection.

to the susceptibility of First Nations to outbreaks, as well as the preparedness of Canada's healthcare system in supporting isolated First Nations communities during the pandemic and beyond.<sup>2</sup> It is well known that Indigenous people in Canada, including First Nations, face numerous health disparities as compared to the rest of the population.<sup>3</sup> We argue for a multidimensional approach that encompasses the social determinants of health to further our understanding of the susceptibility of First Nations to a COVID-19 outbreak, and for potential solutions aimed at primary prevention and community preparedness for First Nations communities in Canada. This commentary outlines potential health risk factors and implications of the pandemic for First Nations within this framework. During these unprecedented times, it is imperative that physicians, allied health professionals, and community members advocate for necessary, population-specific health care resources for First Nations communities in response to COVID-19 and the broader health concerns that First Nations continue to face.

## COVID-19 and associated health risk factors

To gain a thorough understanding of the overall risk and susceptibility of First Nations communities to outbreaks of COVID-19, it is important to first acknowledge the comorbidities that may increase one's risk for infection. There have been a number of epidemiological studies examining risk factors associated with COVID-19. Comorbidities such as diabetes, hypertension, cardiovascular disease and chronic obstructive pulmonary disease (COPD) appear to be linked with COVID-19.<sup>4,5</sup> Additionally, more severe cases requiring intensive care unit admission have been found to be elderly patients, and those with comorbidities such as hypertension, diabetes, cardiovascular disease, malignancy, COPD and obesity.<sup>6-9</sup> Overall, the greater number of comorbidities correlates with poorer clinical outcomes.<sup>6</sup>

To our knowledge, there has not been a trial examining COVID-19 infection rates in First Nations populations compared to the general population. However, it is well established that First Nations people have elevated rates of comorbidities, including diabetes as well as cardiac and atherosclerotic diseases, potentially increasing their risk for COVID-19.<sup>10-13</sup> Furthermore, the poor health status of First Nations has been directly associated with social determinants such as poor diet, poverty and unemployment, poor familial relationships as a result of intergenerational trauma from residential schools, inadequate housing and poor access to health promotion and disease prevention programs.<sup>14</sup>

During the second wave of COVID-19 in Canada, there has

## Introduction

In Canada, previous statistics have suggested that on-reserve First Nations communities had lower case rates of Coronavirus disease 2019 (COVID-19) than the general population.<sup>1</sup> However, an alarming increase of cases in First Nations communities during the second wave of the pandemic has raised concerns as

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been an alarming increase of cases in First Nations communities, compared to relatively low case numbers earlier in the first wave.<sup>12</sup> Though the overall impact has yet to be determined, evidence from past pandemics suggests that First Nations people are at increased risk. For example, First Nations people were disproportionately affected by the H1N1 Influenza A virus in comparison to the general Canadian population.<sup>15</sup> During the first wave of this pandemic, First Nations people had higher rates of hospitalization and mortality compared to non-First Nations.<sup>15</sup> Recognizing the impact of the H1N1 pandemic, it is crucial that we mitigate the risk of a COVID-19 outbreak in First Nations communities. Higher rates of comorbidities observed among First Nations populations, along with social determinants of health which impact comorbidity in First Nations, may contribute to an increased risk of infection.<sup>15</sup> Thus, focusing on improving health disparities and the social determinants of health in the First Nations population has the potential to improve susceptibility to infection and health outcomes in Canada.

### Social determinants and susceptibility to COVID-19

It is evident that Canada as a nation was not adequately prepared for the COVID-19 pandemic, and this remains true for many of its First Nations communities. Canada is often praised for enjoying a high standard of living as well as being an international leader in health promotion and policy development.<sup>17</sup> However, despite this legacy, there has been little actual policy uptake of ideas and development of concrete strategies to reduce many of the current health disparities that exist amongst First Nations communities.<sup>17</sup> The overall health of Canada's First Nations is affected by social determinants, including pertinent socioeconomic indicators such as living conditions, education, income, employment, social support and access to health care services.<sup>18,19</sup> When individuals do not have access to the basics of life, they become increasingly vulnerable to serious adverse health outcomes – very much a reality for many First Nations across the country.<sup>20</sup> Indeed, the social determinants of health may also impact the susceptibility of First Nations to a COVID-19 outbreak.

Given the early stage of vaccine implementation for COVID-19 in Canada, public health measures are currently the most effective control interventions that exist for preventing community spread.<sup>18</sup> In wake of the pandemic, the Canadian government has enacted unprecedented measures to promote social distancing intended to help Canada “flatten the curve.”<sup>21</sup> Although many remote and isolated First Nations communities have adopted strategies to prevent the introduction of COVID-19 by restricting all non-essential travel in and out of the community, implementing social distancing poses some challenges in these communities.<sup>22</sup> For instance, overcrowded housing is prevalent among First Nations communities. It is not uncommon for multiple families or generations to live under the same roof, rendering social distancing ineffective and exponentially increasing the risk of viral exposure.<sup>23</sup>

In addition, suggested infection control strategies during the COVID-19 pandemic may be complicated by shortages in non-medical supplies. For example, the delivery and transportation of supplies such as soap, hand sanitizer and personal protective equipment to First Nations communities has been an ongoing

logistical challenge attributed not only to limited and disrupted transportation in and out of some communities, but also due to global shortages.<sup>18</sup> Furthermore, limited access to clean water on many First Nations reserves also decreases the possibility of maintaining proper hand hygiene.<sup>23</sup> Furthermore, food insecurity has been an issue for many First Nations communities for some time, and the downstream impact of the COVID-19 pandemic may have amplified this issue. Acquiring groceries locally is often not feasible for some families, as the price of food on First Nations communities in Canada, and especially in remote communities, is higher than most grocery stores in urban cities, with up to a 60% increase in cost on select reserves.<sup>23</sup> This may result in travel outside of the community, and possibly lead to increased risk for infection from contact in urban centres.

Providing culturally competent care and creating culturally safe environments for First Nations people, who tend to avoid seeking medical care due to factors such as negative stereotypes and systemic racism, is critical for fostering proper health teaching during the current pandemic.<sup>24</sup> Testimonials made by First Nations people in Canada demonstrate the difficulty of navigating the Canadian healthcare system, citing that it is biased and developed around Western medicine.<sup>25</sup> There are also often feelings of pressure to conform and adapt to the Canadian healthcare system, which is felt to undervalue First Nations health and not appropriately consider First Nations realities.<sup>25</sup> This bias toward Western medicine in the healthcare system has historic roots. Well known historical colonial practices, such as the creation of the reserve system, banning of Indigenous cultural practices, the residential school system, and the Sixties Scoop were aimed at assimilating and even eradicating Indigenous Peoples.<sup>26</sup> Many colonial medical and public health policies have restricted local Indigenous healing practices, often ignoring Indigenous medical knowledge.<sup>26</sup> Thus, strategies to actively work with communities to address their specific needs and incorporate First Nations healthcare goals should be prioritized.

### Preparedness and prevention

Currently, the Government of Canada's First Nation specific pandemic response plan to COVID-19 has been an integrated system that compliments the broader pandemic public health and safety measures of the provinces and territories. Despite these recommendations, there are ongoing issues regarding the equitable distribution of resources, pandemic funding and persistent concerns related to the ill effects of the social determinants that disproportionately affect First Nations communities. In order to improve population health, health equity must become a priority in the health sector, and measures to reduce disparities need to be integrated into health programs and services.<sup>27</sup> First Nations in Canada face numerous health disparities and inequities compared to the general population, and these issues persist. However, addressing the social determinants of health is considered one of the key principles for promoting more equitable health outcomes for First Nation communities, yet these basic health needs are often unmet.<sup>27</sup>

In First Nations communities, concepts of “social/physical distancing,” physical isolation and access to basic hygiene products and clean water are luxuries that are often not accessible or

achievable as they are to the rest of the country. According to Statistics Canada, 14.8% of First Nations people were living in crowded housing, with multiple people sharing bedrooms.<sup>28</sup> There are also 61 Canadian First Nations communities that remain on long term drinking water advisories as of February 2020.<sup>29</sup> Moreover, additional social determinants such as poor health status, food insecurity and poverty disproportionately affect First Nation communities and ultimately contribute to an increased vulnerability and susceptibility to COVID-19.

Despite these challenges, the majority of Indigenous communities in the country have updated emergency preparedness plans to combat the current pandemic.<sup>26</sup> Strategies built on Canadian public health recommendations, but targeted to the unique local needs of each community, have been created by a number of First Nations, Inuit and Métis communities.<sup>26</sup> For example, one First Nation community in Manitoba called for their medicine people to harvest and prepare medicines aimed at supporting personal immunity and helping to disinfect households and public spaces.<sup>30</sup> In addition, practices to support psychosocial well-being, such as sweat lodges, smudging, prayers and land-based activities, were achieved with physical distancing measures in place.<sup>30</sup>

To date, the Government of Canada has responded through Indigenous Services Canada (ISC) with \$4.2 billion to support the distribution of PPE among First Nations communities in Canada. Since April 1, 2020, funding to increase health infrastructure and support screening, assessment, and accommodation facilities has enabled over 120,000 swab samples for COVID-19 to be collected in First Nations communities.<sup>31</sup> With support of the Public Health Agency of Canada (PHAC), ISC has actively supported First Nations in ensuring pandemic plans are up-to-date and follow best practices.<sup>31</sup> Moreover, as several COVID-19 vaccines have now been approved by Health Canada, the Canadian government has identified Indigenous communities as a priority.<sup>32</sup> Communities identified as high risk will be prioritized to receive the vaccines early in the distribution process.<sup>32</sup> Despite these initiatives, improvement of the overall long standing negative effects of social determinants have yet to be addressed in the majority of First Nation communities in Canada.<sup>27</sup> From a public health perspective, physicians and allied health professionals must continue to advocate for improved social and public health measures and outcomes in First Nations communities. Focusing on social determinants has the potential to improve the burden of comorbidities and mitigate the risk of both the COVID-19 pandemic and future epidemics in First Nations communities.

## Conclusion

The ongoing health concerns faced by First Nations, including increased rates of comorbidities and overall poorer health status compared to non-First Nations, may increase their susceptibility to COVID-19. To address this issue, we recommend a multidimensional, collaborative approach aimed to alleviate the ill effects of the social determinants of health involving federal, provincial and community levels of support. Specifically, this approach should focus on enhancing community capacity for prevention and community preparedness for First Nations communities in Canada. It is imperative that physicians and

allied health professionals begin to advocate for improved social determinants of health for First Nations communities to respond to COVID-19 and future pandemics. Some examples include advocating at the provincial and federal levels for proper housing and access to clean water, implementing culturally competent care into practice, ensuring adequate health teaching and understanding of public health recommendations (e.g. proper handwashing techniques) and monitoring for patients who may be at risk for COVID-19. Collectively, health policy that focuses on improving health disparities and the social determinants of health, in direct communication and partnership with individual First Nations communities, has the potential to improve health outcomes during the COVID-19 pandemic, as well as the broader health concerns First Nations communities continue to face.

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