

## OPINION EDITORIAL

# An Innovative Approach to Improve Canada's Infectious Disease Pandemic Rapid Response in Marginalized Communities

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## INTRODUCTION

It appears that the occurrences of infectious disease pandemics are increasing globally. Developed countries like Canada, despite their medical advancements, are not immune or sufficiently prepared to prevent and control future pandemics. Studies demonstrate that infectious disease pandemics often begin in one country and spread to others through increased human movement during international travels [1]. For instance, the 2013-2016 Ebola Virus Disease pandemic began in Guinea and later spread to other countries within and beyond West Africa through transnational travel. Similarly, the 2003 Severe Acute Respiratory Syndrome (SARS) outbreak, began in China and spread to several other countries, including Canada [2].

Following the SARS outbreak, the Canadian government established the Public Health Agency of Canada (PHAC) to improve Canada's nationwide infectious disease preparedness [2]. The establishment of PHAC, along with several other measures, appears to have positively impacted Canada's overall infectious disease preparedness, demonstrated by a recently published 2019 Global Health Security Index report. The index rated Canada as one of the 'most prepared' countries for detecting and responding to an infectious disease

pandemic, ranking fifth among the 195 included countries [3].

However, due to the fragmented structure of Canada's healthcare system, rapid response performance remains suboptimal in marginalized communities [4]. Canada's lack of sufficient protocols for rapid response in marginalized communities, where there is a dire need, limits Canada's overall infectious disease pandemic preparedness [3]. Infectious disease reporting times in remote marginalized communities are inferior to reporting times in urban communities [5].

Additionally, the retention of healthcare workers in rural communities compounds Canada's rapid response capabilities, as many physicians only work in these regions on a temporary basis. These concerns, if not addressed, have the potential to impair nationwide infectious disease response in the case of a future global pandemic. Therefore, this paper contributes to the discourse on how Canada can improve its infectious disease rapid response measures by strengthening healthcare workforce retention. This will enable Canada to improve its response to future infectious disease pandemics in marginalized communities.

## EMERGENCY PREPAREDNESS

Emergency preparedness and response planning exists “as two phases within a broader cycle of health emergency management” [6]. Preparedness includes effective infectious disease surveillance to detect any public health event of global health significance, followed by a response phase to control the event before it spirals out of control [6].

A major aspect of a country’s infectious disease preparedness includes a strong healthcare workforce [6,7]. In Canada, marginalized communities experience a significant amount of inequalities regarding access to several social amenities, including healthcare services, when compared to other geographical areas [8]. For instance, although the federal government is responsible for healthcare financing in First Nations and Inuit populations, the provincial government takes on the responsibility of funding care for the Métis population. As a consequence of these differences in federal and provincial funding, a lack of coordination and equal treatment exists between these communities [8]. Although PHAC was established to improve response times across Canada, responses to an outbreak in these communities have not seen a measurable improvement [5]. Moreover, Indigenous people’s poor access to essential healthcare services further complicates access to current data on health service utilization, making it more difficult to develop responsive health policies [9].

## THE UNITED STATES OF AMERICA’S APPROACH

In comparison, infectious disease preparedness of other developed countries, such as the United Kingdom and the United States (U.S.), can be attributed to their effective implementation of a nationwide public health legislation. For instance, in 2013, the U.S. government introduced the Pandemic and All-Hazards Preparedness Reauthorization Act (PAHPRA) to strengthen their national health security strategy [4]. The implementation of the PAHPRA may have contributed to the U.S.’s efficient and effective response to public health emergencies during the 2016 Zika virus outbreak. Furthermore, the Center for Disease Control (CDC) utilized a

Strategic National Stockpile (SNS) of medicines and supplies to ensure nationwide access to preventative supplies for at-risk populations, such as pregnant women in the U.S. whose unborn children were susceptible to congenital microcephaly if infected with the Zika virus [5]. The SNS is a large supply of life-saving pharmaceuticals and medical supplies for public health emergencies in the U.S [10]. Additionally, the CDC provided regulatory programs centered on the safety of healthcare providers and researchers in contact with the virus, thereby creating a safe environment for healthcare workers in the event of an outbreak. These programs, created by the U.S., ensured that up-to-date guidelines were available to all responders during the outbreak, a strategy that Canada can adopt for its marginalized communities [9].

## POLICY SUGGESTIONS

Based on the narrative outlined in the previous section, this paper proposes some measures to improve healthcare worker preparedness within marginalized communities located in Canada. For one, Canada should prioritize the recruitment and retention of healthcare workers in marginalized communities, in order to address geographical disparities. An instance of this would be to adopt a strategy to retain qualified Indigenous healthcare workers within their own communities, which may be more effective than recruiting and deploying new doctors from other areas [11].

Although the federal government offers financial incentives to attract young doctors to work in these rural communities, additional incentives such as hardship allowances, can work to retain them [12]. Canada should also ensure that the recruitment of rural doctors is in collaboration with local community leaders [13]. Similarly, Canada’s provincial governments can adopt the U.S. policy of creating up-to-date guidelines in collaboration with rural communities, in order to determine suitable responses for each individual area. Collaborative policies have an advantage of making communities self-sufficient, whilst improving these communities’ infectious disease preparedness, thereby creating acceptable policies that align with their culture

[8,12]. Establishment of these policies can provide effective communication between rural communities and among all levels of the healthcare system, which will ultimately ensure an improved rapid response system across Canada [13].

## CONCLUSION

The outlined recommendations aim to mitigate the current gaps in Canada's rapid response approach within remote marginalized Indigenous communities. We conclude that Canada's rapid response to infectious diseases can significantly be improved through collaborative efforts between remote Indigenous populations and creating incentives to attract and retain healthcare workers in marginalized communities.

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