Plain
Language
Summary

influenza

The 2009 H1N1 influenza pandemic among First Nations, Inuit and Métis peoples in Canada: Epidemiology and gaps in knowledge

What we know about Indigenous Peoples and H1N1

Most of the research on the H1N1 influenza generally focused on the Canadian population. When Indigenous people were included in research studies, they mainly looked at First Nations living on-reserve and rural/remote populations. There were fewer studies on H1N1 influenza among Inuit and/or Métis populations.

It is difficult to know the exact numbers of First Nations, Inuit and Métis who were infected by the H1N1 virus. This is mainly because people did not self-identify as Indigenous when they presented at clinics and hospitals. What is known is that:

- Inuit were over-represented during the first wave of the pandemic
- First Nations were more over-represented during the second wave; and
- Métis were consistently under-represented in both waves.

Indigenous people were over-represented among those hospitalized with H1N1, admitted to intensive care units (ICUs), and who died as a result of the H1N1 influenza.

The rates and severity of H1N1 influenza amongst Indigenous peoples varied across the two waves of the pandemic and across Canada. While more Indigenous people were admitted to hospital during the second wave than the first, proportionately they accounted for more H1N1 cases during the first wave. There was a fairly strong link between the severity of H1N1 influenza and where people lived. Individuals living in remote and isolated communities were more likely to report severe outcomes from H1N1. We also know that:

- Manitoba and Nunavut were the most severely impacted during the first wave of the influenza.
- Most hospital admissions of Indigenous people during the second wave were recorded in other provinces, particularly Alberta.
- Manitoba had the highest rates of hospitalization, but also had the youngest and poorest First Nations reserve populations, which likely made them more vulnerable to the spread of influenza.

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These regional differences can be explained in part because of varied levels of preparedness within communities and provinces. As well, the development of immunity across a community (herd immunity) likely contributed to the differences between the two waves.

Unlike other seasonal influenzas, where hospital admission rates and severe outcomes are greatest among the elderly, the H1N1 influenza pandemic affected a much younger population. The vulnerability of younger adults to the H1N1 influenza virus, especially during the first wave, is significant given the relative youthfulness of the Indigenous population.

Women have a higher risk of developing severe H1N1 influenza infection, particularly during pregnancy. All pregnant women across Canada were at increased risk of severe illness during both waves of the H1N1 pandemic. Indigenous women have higher fertility rates compared to non-Indigenous women. They were also over-represented in all cases of pregnant women admitted to hospital and ICU with H1N1 influenza.

Gaps in knowledge about H1N1 and Indigenous Peoples

Despite the number of studies that have been done to date, there still remain gaps in information in the following areas:

- The health outcomes of critically ill H1N1 patients (e.g. those who experienced kidney injury and/or failures and pregnant women and their fetuses)
- The experiences of Inuit and Métis peoples with the 2009 H1N1 influenza pandemic
- Regional-based experiences and outcomes with the outbreak
- The experiences of urban Indigenous people with the 2009 H1N1 influenza pandemic

In sum, there is consistent evidence indicating that First Nations people in particular were at increased risk of severe outcomes from H1H1 influenza, especially during the first wave of the pandemic. There were some strong associations between certain risk factors and severe H1N1 outcomes that may help explain some of this over-representation, including age, pregnancy, and geography. The Indigenous population has some unique characteristics that may have contributed to these findings. It is much younger than the non-Indigenous population, Indigenous women have higher fertility rates compared to non-Indigenous women, and more Indigenous people are likely to live in rural and remote areas where there may be challenges to accessing quality health care.

The three papers in this series include:

1. The 2009 H1N1 influenza pandemic among First Nations, Inuit and Métis peoples in Canada: Epidemiology and gaps in knowledge
2. Determinants of the prevalence and severity of influenza infection in Indigenous populations in Canada
3. Pandemic planning in Indigenous communities: Lessons learned from the 2009 H1N1 influenza pandemic in Canada

Additional NCC documents in this series are available at: http://nccid.ca/collection/influenza/

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