The Vulnerability of Aboriginal People to the H1N1 Flu Virus

By Lyndsay O'Brecht

In April 2009, the first incident of the 2009 H1N1 flu pandemic occurred in North America¹. By June, H1N1 had spread internationally, with cases reported in 74 countries¹. Unlike the seasonal flu, young individuals who were usually more immune to the flu had little or no immunity against this strain^{1, 2}. Consequently, it was feared that H1N1 would result in vast worldwide mortality similar to those observed in the 1918-1919 pandemic^{1,3}.

With the introduction of a vaccine, the Canadian Pandemic Influenza Plan for the Health Sector (CPIP) issued a prioritization framework in order to protect those most susceptible to infection. The CPIP set out goals to administer the vaccine to all Canadians, monitor the effectiveness of the vaccine and prioritize distribution to high risk groups. High risk groups included children, pregnant women, people with certain underlying medical conditions (i.e. diabetes) and people with severely compromised immune systems^{1,4}. The World Health Organization (WHO) named Aboriginal people (AP) an at risk group to contract H1N1⁵.

Canadian Aboriginals consist of approximately 60,000 Inuit, 300,000 Métis and almost 1,000,000 First Nations (FN) individuals⁶. Common to all Aboriginal groups is a heritage of colonisation, which has resulted in loss of culture, language, land, and status. Over time this forced transition left obvious scars, with under education and poverty becoming unfortunate traits of the Aboriginal communities (AC)^{2, 7-9}. In AC, accessibility to hospitals is poor, overcrowding is frequent and incidences of medical conditions such as diabetes, respiratory tract illness, immune suppressing diseases (i.e. tuberculosis) and malnutrition is high 6,7,9 .

The FN communities, predominantly located in Manitoba and Northern Ontario, are isolated and impoverished^{2-4, 9}. Although FN comprise only 10% of Manitoba's population, this



10% accounted for one third of the 685 H1N1 cases as of July, 2009⁹. The Influenza virus may take a longer time to reach isolated AC, but the spread is rapid with higher fatalities compared to non-aboriginal populations^{2-4, 9}.

The 2009 Health Canada (HC) budget included \$305 million over two years allocated to FN and Inuit communities to strengthen health care infrastructure. In April 2009, HC and the Public Health Agency of Canada launched a public campaign to educate Canadians on proper safety precautions to limit the spread, which includes proper hand washing and self-isolation techniques. They made an effort to forward all information to AP using local contacts and conducted confidential surveys to monitor the knowledge acquired by FN people in order to improve communication⁴. The commitment to provide improved health care in remote AC has led to new initiatives aimed at reducing transmission. Local nurse stations are available 24 hours a day, health care personnel are equipped with protective gear and antivirals are available if needed.

Efforts to reduce the transmission of the H1N1 virus are not supported with the appropriate resources in AC. A 2001 AP Survey found that

"34% of Inuit living in the North, 19% of Aboriginals in rural areas and 16% of those in urban areas reported that there were times in the year when their drinking water was contaminated"⁶. Access to clean water or alcohol-based hand sanitizer and proper hand washing techniques can effectively remove the virus and prevent transmission^{4, 8, 9}. To address this issue, the government may have been more successful with hand sanitizer distribution until the underlying concerns unique to these communities can be attended to. In addition, prioritized distribution of the H1N1 vaccine to AP is important since it is more difficult for them to reduce risk of transmission.

As reported through laboratory testing, the WHO has conservatively estimated that 16,000 fatalities worldwide have occurred as a result of H1N1¹. As of June 2009, Canadian provinces and territories had received vaccines for 80% of the population. During the process, some provinces had requested to stop shipment because their current provisions were adequate. As the scare of the H1N1 pandemic has ebbed, it appears that the co-operation of medical technology, the government, and the people has curbed the spread of H1N1 away from the high fatality pandemic that it was originally feared to be¹. However, underlying issues specific to the AC need further attention as cases were disproportionately represented and AP are more susceptible to the H1N1 virus^{2-4, 6, 9}.

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References

- 1. World Health Organization. February 24, 2010. http://www.who.int/csr/disease/swineflu/frequently_asked_questions/risk/en/index.html.
- 2. Kirkey, Sharon. Vaccinate Canadians Under 40 and Natives First: Experts. The Vancouver Sun June 21, 2009, sec. Business.

- 3. Massey, P.D., Pearce, G., Taylor, K.A., Orcher, L., Saggers, S., and D.N. Durrheim. (2009). Reducing the risk of pandemic influenza in Aboriginal communities. Rural and Remote Health **9**: 1290.
- 4. Public Health Agency of Canada. August 24, 2009. http://www.phac-aspc.gc.ca/index-eng.php.
- MCC Ontario Sending H1N1 Response Kits to Remote Northern First Nations. Mennonite Central Community: Relief, Development and Peace in the name of Christ. November 19, 2009.
- King, M., A. Smith, and M. Gracey. (2009). Indigenous Health Part 2: The Underlying Causes of the Health Gap. Lancet 374: 76-85.
- Gracey, M., and M. King. (2009). Indigenous Health Part 1: Determinants and Disease Patterns. *Lancet* 374: 65-75.
- 8. Kermode-Scott, Barbara. (2009). Rates of infant mortality among indigenous children in Canada, the US, Australia, and New Zealand. *BMJ* **338**: b1379.
- 9. Barber, Mike. Aboriginal Populations Vulnerable to H1N1: Report. *The Vancouver Sun.* July 2, 2009, sec. Business.



Author Profile

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