

Pandemic (H1N1) 2009 Syndromic Surveillance



Update – October 5, 2009

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The World Health Organization has declared a global pandemic of H1N1 influenza and the level of influenza pandemic alert is Phase 6. This reflects the spread of the disease worldwide, not the severity of illness. The WHO considers the severity of the influenza pandemic to be moderate.

Global Information

Pandemic (H1N1) influenza is the most common flu virus circulating worldwide. The World Health Organization reported on September 27, 2009 that there had been over 343,298 laboratory confirmed cases of pH1N1 reported by 191 countries/territories. At that time, at least 4,108 deaths had been linked to the virus.

Many countries, including Canada, have stopped counting all individual cases of pH1N1. Therefore, the number of cases reported is significantly lower than the number of individuals affected by the virus.

Southern Hemisphere

- Infection rates of influenza in most of the Southern Hemisphere have either returned to baseline levels or are continuing to decline.
- In the tropical region of South America a number of countries are reporting a decreasing trend in influenza activity. A few countries are reporting an increasing trend in influenza activity (e.g. Columbia and Cuba).
- This influenza season, pH1N1 was the dominant strain of influenza circulating in the Southern Hemisphere.
- Generally, in the Southern Hemisphere the effects of pH1N1 appear to be slightly worse than a normal influenza season; pH1N1 has resulted in an increased number of hospitalizations requiring respiratory critical care.

North America & Europe

- Influenza activity is widely variable across North America and Europe and pH1N1 infection rates are increasing.
- In the United States, increases in influenza activity are being reported in most regions.
- In Mexico, a high intensity of respiratory diseases has been reported over the past two weeks.
- Most of Europe is reporting low respiratory diseases activity, but parts of Eastern Europe are beginning to report localized increases in activity and France has reported levels of influenza illness above the seasonal threshold.

Asia

- Areas in Tropical Asia are currently reporting widespread pH1N1 illness and respiratory disease activity, increasing trends in influenza illness have been continuing throughout much of South and Southeast Asia (as seen in India and Bangladesh).
- In Japan, influenza activity is continuing to increase above normal levels for this time of year, which has signaled a very early beginning to the annual flu season.

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Anti-viral Resistance

Worldwide, there have been 28 known cases of oseltamivir resistant pH1N1 virus reported to the WHO. There is no evidence of spread of oseltamivir resistant pH1N1 from person to person.

National Information

Pandemic (H1N1) 2009 influenza activity is currently decreasing slightly across Canada. The Public Health Agency of Canada has reported as of September 26, 2009, 1479 hospitalizations and as of October 1, 2009 78 deaths have been reported among Canadian lab confirmed cases of pH1N1 (see Table 1).

While the virus is generally reported to cause mild illness among affected Canadians, a number of serious cases of pH1N1 have been reported among First Nations peoples and pregnant women. Aboriginals and pregnant women appear to have higher morbidity and mortality rates than the general population.

At Risk Groups:

Indigenous peoples in several countries (Canada, U.S., Australia and New Zealand) appear to be at increased risk for hospitalizations and deaths because of pH1N1 infection.

Pregnant women are vulnerable to complications from pH1N1 infection.

People with medical conditions (such as respiratory disease, asthma, cardiovascular disease, diabetes and immunosuppression) are at increased risk of severe illness and death if they become infected with pH1N1.

Table 1: Hospitalizations and deaths among Canadian cases of pH1N1 influenza by province.

Province	Hospitalizations	Deaths
British Columbia	52	6
Alberta	129	8
Saskatchewan	24	4
Manitoba	221	7
Ontario	374	24
Quebec	580	27
New Brunswick	2	0
Nova Scotia	17	1
Prince Edward Island	1	0
Newfoundland	3	0
Yukon	0	0
Northwest Territories	10	0
Nunavut	66	1
TOTAL	1479	78

Accurate as of October 1, 2009.

Hospitalizations accurate as of September 26, 2009.

Provincial Information

Influenza activity in Ontario decreased from June 2009 to August 2009; however, there was some indication that influenza activity in Ontario increased slightly in early September. Influenza activity in Ontario has not increased significantly over the past week. ILI rates in Ontario still remain above what is expected for this time of year. The pH1N1 virus continues to spread within communities in Ontario and 35 Health Units have reported laboratory confirmed cases of pH1N1. The pH1N1 virus is the primary strain of influenza circulating in Ontario at this time.

- ***pH1N1 has a population based mortality rate of 0.18 deaths per 100,000 Ontarians***
- ***pH1N1 has a population based hospitalization rate of 2.87 admissions per 100,000 Ontarians***

In the majority of Ontario cases illness caused by pH1N1 was mild. However, 379 people with the virus have been hospitalized and 24 people infected with the virus have died (as of September 30, 2009).

Ontario has moved towards more focused testing for this virus; health care providers have been asked to only have tests performed on patients requiring hospitalization and on patients at high risk of complications from the flu. Therefore the current case counts likely underestimate the true number of individuals that have been infected with the pH1N1 virus. As of September 26, 2009, a total of 4,089 laboratory confirmed cases of pH1N1 have been reported in Ontario.

Ontario now reports cases of pH1N1 on a weekly basis. The MOHLTC produces weekly flu bulletins which provide surveillance information on influenza activity within the province. Flu Bulletins may be accessed online at http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_08/flubul_mn.html

Local Information

4 confirmed cases of pH1N1 influenza have been reported in Peterborough County/City. One of these cases was hospitalized for this illness, but has since been released. Confirmed cases of pH1N1 have also been reported in neighbouring Health Units.

Surveillance of visits to the PRHC emergency department, local schools and family physicians indicates that in the past several weeks there has been an increase in respiratory and flu-like illnesses in the community.

During the past several weeks, one school reported student absenteeism greater than 10%. All three local pediatricians involved in the PCCHU's surveillance of local physicians, reported for the week of September 21-25 an increase in the number of patients reporting a fever and cough. A small cluster of individuals suffering a respiratory illness was also reported to the PCCHU within the past two weeks, however this illness was contained and did not spread further than the initial group involved.

Visits to the local PRHC emergency department for respiratory symptoms or influenza-like illnesses have generally been increasing over the past few weeks (see Figure 1); as well, there has been a very slight increase in the number of children being admitted to the PRHC for respiratory or flu-like conditions (e.g. pneumonias, fevers, etc.).

In the past two weeks (September 21, 2009 – October 4, 2009), on average the PRHC emergency department was visited by 5 patients each day with a fever or flu-like illness, and 18 people each day with respiratory symptoms, and 1-2 persons every day with symptoms of a febrile respiratory illness. Over the past two week the PRHC emergency department had on average 196 visits per day.