2009-2010 pH1N1 Influenza Pandemic Summary Report

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Epidemiology of pH1N1 in Toronto

• The World Health Organization declared an influenza pandemic in June 2009, after the emergence and rapid spread of a novel flu virus, pandemic H1N1 (pH1N1)

• pH1N1 caused a less severe pandemic than had been planned for in Toronto, with a low incidence of severe illness and mortality

• Over two waves of infection in Toronto, laboratory-confirmed pH1N1 illness reported to TPH included:
  • 2422 cases
  • 339 hospitalizations
    • 66 admissions to intensive care / ventilation
  • 30 deaths

• Reported laboratory-confirmed cases captured only a small fraction of the pH1N1 infections in Toronto
**pH1N1 Cases in 2009-2010 vs. Average Number of Seasonal Flu Cases from 1999-2000 to 2008-2009**

Source: Ontario Ministry of Health & Long-Term Care, Integrated Public Health Information System (iPHIS), extracted 14/04/2010.
Number of pH1N1 Cases by Age and Gender

- **Age Range (years):** <1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+
- **Number of pH1N1 cases per 100,000 population**

- **Unknown, Female, Male, Age-specific rate**

The diagram illustrates the distribution of pH1N1 cases across different age ranges, with separate bars for unknown cases and gender-specific cases.
The Public Health Response to pH1N1

- Surveillance
- Case investigation and management
- Public information and risk communication
- Immunization
- Flu assessment centres
- Stakeholder liaison
- Occupational health and safety
- Logistics and financial support
• Over 750,000 doses of pH1N1 vaccine were given in Toronto; approximately 30% at Toronto Public Health clinics, and 70% by community-based providers

• An estimated 28.2% of Toronto residents received pH1N1 vaccine

• In wave 2, hospitalized pH1N1 cases peaked at the same time as the vaccine became available in late October 2009

• TPH partnered with existing health care facilities to open five flu assessment centres

*The date immune by vaccination was calculated for each case by adding 10 days to their date of vaccination.

†The exposure date was calculated for each case by subtracting 2 days (typical H1N1 incubation period) from their episode date.

Source: Ontario Ministry of Health & Long-Term Care, Integrated Public Health Information System (iPHIS), extracted 14/04/2010.
• TPH has undertaken a comprehensive evaluation of the pH1N1 response, involving internal staff and key city, community and provincial partners in health and non-health sectors.

• Lessons learned will inform ongoing work by TPH and partners to strengthen pandemic and emergency planning, preparedness, and response.
Strengths of the pH1N1 Response

- Public information and risk communication provided through the TPH web site
- Collaboration with city, community and provincial partners established before the response through pandemic planning and training activities
- Provided access to pH1N1 vaccination for all Toronto residents, including vulnerable populations (e.g. clinics in shelters and drop-in centres)
- Implemented an innovative partnership model for flu assessment centres with existing health care facilities
Limitations of the pH1N1 Response

• Lack of a robust real-time surveillance system for influenza-like illness activity and its impact on the local health care system

• Mass immunization clinic logistical, service delivery and communications challenges (e.g. initial line-up management)

• Complex, changing messages concerning vaccine eligibility and availability, as provided by senior levels of government

• Protocols and requirements for community-based vaccine providers

• Lack of leadership for flu assessment centres, with no established role for Local Health Integration Networks (LHINs)
1. That the Minister of Health and Long-Term Care:

- update the provincial pandemic plan to specify the roles of the Ontario Agency for Health Protection and Promotion, and the LHINs;
- designate LHINs as lead for flu assessment centres, in partnership with local public health and primary care;
- mandate the use of real-time influenza-like illness surveillance systems;
- ensure that the Ontario Government Pharmaceutical and Medical Supply Service leads community-based influenza vaccine ordering for Toronto during a pandemic;
- direct the Chief Medical Officer of Health to plan and coordinate communication with the primary care sector; and,
- review different methods of pandemic influenza vaccine delivery, and include criteria in the provincial pandemic plan.
2. That the Medical Officer of Health report annually on pandemic influenza preparedness.

3. That the Board of Health request the City Manager to establish service agreements with community agencies for psychosocial response.

4. That the Board of Health share this report with key external stakeholders.
The 2009/2010 influenza season was “a different flu season”.

Healthcare workers (HCWs) were designated a priority group for pH1N1 vaccine when it became available in late October 2009.

The median coverage rates for pH1N1 flu vaccine among HCWs in institutional settings were comparable to recent seasonal flu vaccination rates, except in LTCHs, where the median rate was lower:

- 58% for acute care facilities;
- 59% for Complex Continuing Care hospitals; and,
- 38% for Long-Term Care Homes.

Influenza immunization coverage among HCWs in Toronto remains low despite efforts to increase the rates before and during the pH1N1 pandemic.