pH1N1 Flu Virus (Human Swine Influenza)
Information Resources
Current as of December 7, 2009 at 4pm

Highlights

MOHLTC:  Ontario Expands Flu Immunization Program Seasonal and H1N1 flu shots now available to everyone

OAHPP:  Ontario Agency for Health Protection and Promotion Laboratory Pandemic H1N1 Surveillance Report November 30th

CDC:  New: Caring for Someone Sick at Home

EU:  EMEA agency publishes first weekly pandemic pharmacovigilance update

Literature

BMJ:  News: Fall in swine flu cases may not signal an end of the epidemic, warns Professor Donaldson

Vaccine:  Exposure to MF59-adjuvanted influenza vaccines during pregnancy—A retrospective analysis*


News

China Daily:  Flu outbreaks hit China’s army
Contents

Events

Updates by Jurisdiction

Ontario
  Ontario Ministry of Health and Long-Term Care (MOHLTC)
  Ontario Agency for Health Promotion and Protection (OAHPP)

Canada
  Public Health Agency of Canada (PHAC)

United States
  Centers for Disease Control and Protection (CDC)
  Center for Infectious Disease Research & Policy
  Other US Sources

Europe
  United Kingdom’s Health Protection Agency (HPA)
  UK Department of Health
  European Centre for Disease Control and Prevention (ECDC)
  European Union

International
  World Health Organization (WHO)
  Pan American Health Organization (PAHO)
  Australia and New Zealand

Other Resources
  Consumer Health Information Resources
  pH1N1 Clinical Information
  Research Articles
  Clinical and Public Health Practice Tools
  Historical Resources
  Travel Advisories
Events
Current / Upcoming
[FEB 3-5] International Symposium on Neglected Influenza Viruses
February 3-5, 2010 | Amelia Island, Florida
Sponsor: International Society for Influenza and other Respiratory Virus Diseases
Contact:
Gregory C. Gray, MD, MPH | Phone: (319) 384-5008 | gregory-gray@uiowa.edu

[ONGOING] "H1N1 and Pregnancy: Key Considerations for Vaccination and Management" : Online learning program for health professionals

mdBriefCase, in collaboration with the Public Health Agency of Canada and the Society of Obstetricians and Gynaecologists of Canada, has developed an online learning program for health professionals on H1N1 immunization and pregnancy.

The English version is now available. The French version will be posted on December 3rd.

To access the program:
www.mdBriefCase.com (for physicians)
www.rxBriefCase.com (for pharmacists)
www.AdvancingIn.com (for nurses and other healthcare professionals)

 Archived
[NOV 18] Clinical Laboratory Management Association: Review Epidemiology of Novel H1N1
[NOV 10] Assembly of First Nations and Health Canada to Co-host a Virtual Summit on H1N1 Preparedness November 10th, 2009
[ARCHIVED] COCA conference calls
[ARCHIVED] U.S. DHHS H1N1 Video Briefing archive
[ARCHIVED] Know what to do about the flu: webcast series from the U.S flu.gov

Ministry of Health and Long-Term Care (MOHLTC)
[DEC 04] Ontario Expands Flu Immunization Program Seasonal and H1N1 flu shots now available to everyone
For the surveillance period of November 22 to November 28, 2009:
• Influenza activity in Ontario was lower compared to the previous week.
• Fewer patients reporting influenza-like symptoms consulted sentinel physicians this week than the previous week.
• However, the rate of influenza-like illness (ILI) in patients seen by sentinel physicians continues to be above the average rate expected at this time of year.
• No health units reported widespread influenza activity for the current reporting week. Six health units reported localized influenza activity and 22 health units reported sporadic influenza activity.
• There are 8,538 confirmed cases of H1N1 flu virus reported through the integrated Public Health System (iPHIS).

[DEC 01] Planning for Extra-Curricular Activities for School-Aged Children

[DEC 01] Guidance for Faith-Based Groups

[NOV 27] “Join the Resistance” Ad Campaign Launch
Ontario has launched a $650,000 ad campaign to encourage college and university students to roll up their sleeves for the H1N1 flu shot. The ministry has arranged an e-mail blast about joining the resistance to more than 400,000 college/university students across the province. This is being done via 53 presidents of the Canadian Federation of Students and the College Students Alliance Students’ Unions who are deploying the message to their student base. We have also sent posters to public health units to support clinics ongoing through the end of the school semester.

[ARCHIVED] Previous MOHLTC updates and news conference video footage

Important Health Notices / Avis de santé important

[NOV 13] Information for Health Care Providers – pH1N1 Update

Ontario Agency for Health Protection and Promotion (OAHPP)

[DEC 02] Weekly Synthesis of Surveillance Information, Literature & Government Updates (Week ending Nov 27, 2009)

[DEC 07] Ontario Agency for Health Protection and Promotion Laboratory Pandemic H1N1 Surveillance Report November 30th

[ARCHIVED] Swine influenza outbreak page

Public Health Agency of Canada (PHAC)

PHAC issues national updates on H1N1-associated deaths on Tuesdays and Thursdays at 4 pm, and will report regularly on any unusual outbreaks or clusters of illness.

[DEC 06] Weekly Distribution of the H1N1 Flu Vaccine

[DEC 04] Vaccine Surveillance Report
Deaths Associated with H1N1 flu virus in Canada (as of Dec 03)
- New deaths reported Nov 26 – Dec 03: 28
- Cumulative total: 357

FluWatch Nov. 22 - 28, 2009 (Week 47) see attached file
- Nationally, the activity levels reported this week continued to decrease compared to the previous week.
- All FluWatch influenza indicators declined during week 47.
- The Pandemic (H1N1) 2009 strain accounted for nearly 100% of the positive influenza A subtyped specimens this week.
- The intensity of Pandemic (H1N1) 2009 in the population was moderately high with 804 hospitalizations, 139 ICU admissions and 56 deaths reported this week.
- Hospitalized cases occurred in all provinces and territories (P/T) that reported this week while the deaths were from all P/T except PE and 3 territories. From August 30 to November 28, 2009, a total of 6,314 hospitalized cases including 957 (15.2%) cases admitted to an intensive care unit (ICU) as well as 259 deaths had been reported.
- The proportion of severe cases (ICU admissions and deaths) among all hospitalized cases was lower in the second wave than in the first wave.
- A slight decline has been experienced in all provinces and territories as indicated in the continued decreasing number of reported hospitalized cases, ICU admissions and deaths reported this week.

Previous PHAC documents and updates

Centers for Disease Control and Prevention (CDC) and US Department of Health and Human Services

New: Caring for Someone Sick at Home
Will you know what to do if someone in your home gets the flu? This new online guide from CDC provides step-by-step instructions on how to care for someone sick in your home. Learn what you can do to help your family this flu season.

UPDATE: 2009 H1N1 Flu International Situation Update
This report provides an update to the international situation as of December 4, 2009. The World Health Organization (WHO) continues to report updated 2009 H1N1 flu-associated laboratory-confirmed cases and deaths on its Web page.

NEW: In The News Question & Answer on Antiviral Usage During the Pandemic
Significant increases in the proportion of hospitalized adults and children being treated with influenza antiviral drugs have been noted during the 2009 H1N1 pandemic compared to the proportion of adults and children that have been treated with flu antiviral drugs during past seasonal influenza epidemics.

FluView: 2009-2010 Influenza Season Week 47 ending November 28, 2009
During week 47 (November 22-28, 2009), influenza activity continued to decrease in the U.S.
• 956 (15.4%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division were positive for influenza.
• Over 99% of all subtyped influenza A viruses being reported to CDC were 2009 influenza A (H1N1) viruses.
• The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold for the ninth consecutive week.
• Seventeen influenza-associated pediatric deaths were reported. Twelve of these deaths were associated with 2009 influenza A (H1N1) virus infection and five were associated with an influenza A virus for which the subtype was undetermined.
• The proportion of outpatient visits for influenza-like illness (ILI) was 3.7% which is above the national baseline of 2.3%. Eight of the 10 regions reported ILI at or above region-specific baseline levels. Regions 6 and 10 reported ILI below their region specific baselines.
• Twenty-five states reported geographically widespread influenza activity, 17 states reported regional influenza activity, the District of Columbia, Puerto Rico and six states reported local influenza activity, and Guam, the U.S. Virgin Islands and two states reported sporadic influenza activity.

[DEC 04] Update: U.S. Influenza -Associated Hospitalizations and Deaths from August 30 to November 28, 2009

<table>
<thead>
<tr>
<th>Cases Defined by</th>
<th>Hospitalizations</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza Laboratory-Tests**</td>
<td>31, 320</td>
<td>1,366</td>
</tr>
</tbody>
</table>

[DEC 04] Update: H1N1 Flu (Swine Flu): Preparedness Tools for Professionals
FluAid, FluSurge, Flu Work Loss

[DEC 03] Podcast: 2009 H1N1 Information for Parents who have Children with High-Risk Medical Conditions

[DEC 02] Alert: Fraudulent emails referencing CDC-sponsored State Vaccination Program
CDC has received reports of fraudulent emails (phishing) referencing a CDC sponsored State Vaccination Program.

[DEC 01] NEW: Caregiver Instruction Sheet: Opening and Mixing Tamiflu® Capsules with Liquids if Child Cannot Swallow Capsules
This document provides instructions for caregivers on how to open and mix Tamiflu® capsules with a thick sweetened liquid for children who cannot swallow capsules.

[DEC 01] This tool is part of Preparing for the Flu: Communication Toolkit for Schools (Grades K-12)
This toolkit provides basic information and communication resources to help school administrators implement recommendations from CDC regarding flu.

[DEC 01] Update: Interim Guidance for Management of Influenza-Like Illness aboard Commercial Aircraft during the 2009-10 Influenza Season
This document provides updated guidance regarding management of influenza-like illness (ILI) before, during and after a flight, including personal protective measures for the crew, and reporting of ILI to CDC Quarantine Stations.

[ARCHIVED] Previous CDC documents and updates
Other US Sources

[DEC 03] American Society of Transplantation (AST), The Transplantation Society (TTS) and the Canadian Society of Transplantation (CST): Guidance on Novel Influenza A/H1N1 in Solid Organ Transplant Recipients

[DEC 02] United States Department of Labor Occupational Safety & Health Administration: Enforcement Procedures for High to Very High Occupational Exposure Risk to 2009 H1N1 Influenza

[DEC 01] AMA: Secretary Sebelius Addresses the American Medical Association Third National Congress on Health System Readiness

Center for Infectious Disease Research and Policy

[DEC 04] WHO: Flu increasing in some regions
In its global pandemic update, the World Health Organization (WHO) said today that flu activity has peaked in the United States, Canada, and some parts of Europe, but is increasing in central Europe, Russia, and some parts of western and central Asia. Respiratory illness activity is also intensifying in southern parts of China and Japan, as well as northwestern parts of India, Nepal, Sri Lanka, and Cambodia. In Africa the pandemic virus is cocirculating with the seasonal H3N2 strain. [Dec 4 WHO pandemic update]

[DEC 04] Official says many Californians now immune
California’s state epidemiologist has estimated that 11 million people, or close to 30% of the state’s population, have acquired immunity to the H1N1 virus through infection or vaccination, according to a report by the Riverside (Calif.) Press Enterprise. Dr. Gil Chavez estimated that about 3 million Californians have had the flu already. The story said close to 800 people in California were hospitalized because of H1N1 in the past week, and 12 died. [Dec 3 Press Enterprise story]

[DEC 04] Education secretary urges college students to get vaccinated
In recent comments to college journalists, Arne Duncan, US Department of Education secretary, urged students to get their pandemic H1N1 vaccine before going home for or during Christmas break, CNN reported today. He also urged college instructors to be flexible with students who are out sick with the flu. Yesterday the American College Health Association said preholiday vaccination could help prevent flu spread and protect students in the event of a third wave. [Dec 4 CNN story]

[DEC 04] Study finds low reproductive number for H1N1
Using lab-confirmed cases in the first 2 months of the H1N1 pandemic in Ontario, researchers estimated the basic reproductive number for the illness at a relatively low 1.31, according to the Canadian Medical Association Journal. The authors say public concern about the pandemic may have changed public behavior and medical practices, thereby lowering the observed number. The risk of hospital admission was estimated at 4.5% and the case-fatality rate at 0.3%. [CMAJ article]
Report explores early pneumonia cluster in Mexico
A review of severe pneumonia cases in San Luis Potosi, Mexico, a high-profile locale early in the pandemic H1N1 outbreak, reveals many cases occurred in young adults, particularly those who were obese. The findings, published in *Emerging Infectious Diseases*, also reveal that bacterial coinfections played a minor role in the 50 hospitalized pneumonia cases in April and May. Flu was confirmed in 15 patients, novel H1N1 in 10. [Dec 4 *Emerg Infect Dis* report]

Kenya, Togo to get Africa’s first stockpile vaccine
A WHO official said Kenya and Togo will be the first African countries to receive donations of pandemic H1N1 vaccine, Capital News, based in Nairobi, reported today. He said the first shipments, expected in January, will target high-risk groups such as healthcare workers. The countries will receive enough to vaccinate about 10% of their populations by March. [Dec 4 Capital News story]

Flu outbreaks hit China’s army
China's defense ministry said it has totaled 51 large pandemic H1N1 outbreaks among army soldiers, *China Daily* reported today. The report didn't list the number of cases. A health official with the Chinese Army said outbreaks involving hundreds of soldiers are difficult to manage. On Dec 2 the Army held a flu drill in Beijing. [Dec 4 *China Daily* story]

Health Protection Agency (UK)
[DEC 04] *Swine flu vaccination for pregnant women: frequently asked questions*
[DEC 03] *Weekly International Summary*
[DEC 03] *Weekly Pandemic Flu Media Update*
[DEC 03] *Weekly Epidemiological Update: 03 December 2009 (Week 49)*
[DEC 02] *Pandemic H1N1 2009 in England: an overview of initial epidemiological findings and implications for the second wave*
[ARCHIVED] *Swine Influenza page*

Department of Health (UK)
[DEC 03] *Pandemic influenza: indemnity cover and associated issues in England*
[DEC 02] *Flowchart for triage: swine flu patients - for GP practice managers and receptionists*
[DEC 02] *Advice from the H1N1 Critical Care Clinical Group*
[ARCHIVE] *DH Pandemic Flu site*
European Centre for Disease Prevention and Control (ECDC) and European Society for Clinical Microbiology and Infectious Diseases

[DEC 07] **Daily update – Pandemic H1N1 2009 (Dec 04 2009)**
- 17 EU countries reported widespread activity in week 48 while all EU reporting countries are still experiencing medium to very high influenza intensity
- A total of 1 066 fatal cases in Europe and EFTA countries and 8 731 in the rest of the world have been reported up to date
- EMEA advises of risk of fever among young children following pandemic vaccination

[DEC 04] **Weekly Influenza Surveillance Overview for week 46/2009**

[NOV 30] **ECDC EXECUTIVE UPDATE Pandemic influenza (H1N1) 2009 Issue 21 Monday, 30 November 2009**

[ARCHIVED] **Maps, surveillance summaries and previous ECDC updates**

**European Union**

[DEC 07] **European Medicines Agency advises of risk of fever in young children following vaccination with Pandemrix (Press release of Dec 4th, posted Dec 7th)**

[DEC 03] **EMEA agency publishes first weekly pandemic pharmacovigilance update**

[DEC 01] **Commission approves one dose for 2 H1N1 vaccines for adults**

[NOV 30] **Factsheet on Pandemic (H1N1)2009 by European Commission**

[ARCHIVE] **European Union Influenza H1N1 page**

**Pan-American Health Organization (PAHO)**

[DEC 02] **Regional Update. Pandemic (H1N1) 2009 (Nov 23)**

[ARCHIVED] **PAHO Influenza A (H1N1) Portal**

**Australia and New Zealand**

*All jurisdictions in Australia have ceased daily Pandemic (H1N1) 2009 data reporting.*

[DEC 02] **New Zealand Pandemic Influenza (H1N1) 09 Swine Flu - Update 163**
Sentinel surveillance data from the Institute of Environmental Science and Research shows that the current level of pandemic influenza activity in New Zealand is below baseline. However, there was a slight increase in visits to doctors for influenza-like
illness (ILI) during the week of 16-22 November 2009. The highest number of visits to doctors for ILI was reported by the South Auckland, Rotorua and Otago health districts, and amongst children and teenagers up to 19 years old.

**Australian Influenza Surveillance Summary Report No.29, 2009,**
**Reporting Period: 21 November 2009 – 27 November 2009**

**Key Items**

- As at 27 November 2009, there had been 37,435 confirmed cases of pandemic (H1N1) 2009 and 191 deaths reported in Australia.
- A pandemic influenza-associated death has been reported in a 33 year old male.
- The Therapeutic Goods Administration (TGA) has approved for registration the Australian-made Panvax H1N1 Vaccine Junior enabling children from 6 months to 9 years of age to be protected against the pandemic (H1N1) 2009 influenza.
- As at 22 November 2009, the WHO had received reports of over 622,000 confirmed cases pandemic (H1N1) 2009, including over 7,820 deaths. These reports are likely to significantly underestimate the actual number of cases and deaths that have occurred.
- Influenza-like illness (ILI) activity appears to have peaked in most parts of US and Canada. In Europe, widespread and increasing transmission of pandemic influenza virus was observed across much of the continent and most countries that were not yet experiencing elevated ILI activity in the previous few weeks saw a rapid increase in ILI.
- As at 27 November 2009, WHO had received reports of 75 oseltamivir resistant pandemic (H1N1) 2009 viruses that had been detected and characterised worldwide. All of these isolates showed the same H275Y mutation. All were found to be sensitive to zanamivir. More than 10,000 other clinical specimens of the pandemic (H1N1) 2009 virus have been tested and found to be sensitive to oseltamivir.
- WHO has reported that all pandemic H1N1 2009 influenza viruses analysed to date have been antigenically and genetically closely related to the vaccine virus A/California/7/2009.

[ARCHIVED]  [New Zealand’s H1N1 page]

[ARCHIVED]  [Australia’s H1N1 Update Bulletins]

**World Health Organization (WHO)**

*WHO no longer issues the global tables showing the numbers of confirmed cases for all countries. Regular updates describing the situation in the newly affected countries are provided.*

[DEC 04]  [Pandemic (H1N1) 2009 - update 77]

[DOC 03]  [Transcript of the 3 December 2009 press briefing]

[DEC 03]  [WHO use of advisory bodies in responding to the influenza pandemic]

[DEC 02]  [Oseltamivir resistance in immunocompromised hospital patients]

[ARCHIVED]  [WHO H1N1 Guidance Documents]

[ARCHIVED]  [Older WHO Updates]
International Society for Infectious Diseases

ProMed Posting: Comments re: Influenza pandemic (H1N1) 2009 (115): USA (WV), repeat infection
Out correspondents suggest 2 explanations for this case of pandemic (H1N1) 2009 virus reinfection in a mother and son. Dr Lenoir’s observations suggest that reinfection may on occasion be a consequence of transient immune suppression, whereas Professor Tang cites evidence that reinfection may occur more frequently than currently supposed.

pH1N1 Clinical Information

Due to Pandemic H1N1 Influenza and concerns about the 2009/2010 flu season, the EBSCO Publishing Medical and Nursing editors of DynaMed™, Nursing Reference Center™ (NRC) and Patient Education Reference Center™ (PERC) have made key influenza information from these resources freely available to health care providers worldwide. Contact your library for access.

Research Articles (1 week backfile)

What’s new today, plus a one week backfile. Articles with an asterisk (*) indicate that a subscription is required to view the full text. Contact your library for access to full text articles.

Medline literature search on H1N1 (current as of today)

[DEC 07] News: Fall in swine flu cases may not signal an end of the epidemic, warns Professor Donaldson
Mashta O. BMJ 2009;339:b5329

[DEC 07] Exposure to MF59-adjuvanted influenza vaccines during pregnancy—A retrospective analysis


[DEC 07] Campus Response to Novel Influenza H1N1.*

[DEC 07] Re: The State’s role and health - swine ’flu as a case study.*
Development of a real-time TaqMan PCR assay for the detection of porcine and bovine Torque teno virus.*

Guidance on Novel Influenza A/H1N1 in Solid Organ Transplant Recipients.

Safety of Influenza A (H1N1) 2009 Monovalent Vaccines: United States, October 1--November 24, 2009

Severe Pneumonia Associated with Pandemic (H1N1) 2009 Outbreak, San Luis Potosí, Mexico
Gómez-Gómez A et al. Emerg Infect Dis. 2010 Jan; [Epub ahead of print]. DOI:

Fatal Case of Pneumonia Associated with Pandemic (H1N1) 2009 in HIV-Positive Patient [letter]

Oseltamivir- and Amantadine-Resistant Influenza Virus A (H1N1)

Two cases of swine H1N1 influenza presenting with hematuria as prodrome.*

Estimated epidemiologic parameters and morbidity associated with pandemic H1N1 influenza

The Emergency Use Authorization of Peramivir for Treatment of 2009 H1N1 Influenza

Diagnostic Testing for 2009 Pandemic Influenza A (H1N1) Virus Infection in Hospitalized Patients
Uyeki T. NEJM. 2009; 361(23): e110.

Emergence of Oseltamivir-Resistant Pandemic H1N1 Virus during Prophylaxis
Early Assessment of Anxiety and Behavioral Response to Novel Swine-Origin Influenza A(H1N1)

Viral load in patients infected with pandemic H1N1 2009 influenza A virus.

Induction of cross-protective immunity against influenza A virus H5N1 by an intranasal vaccine with extracts of mushroom mycelia.

Clinical Performance of a Rapid Influenza Test and Comparison of Nasal Versus Throat Swabs to Detect 2009 Pandemic Influenza A (H1N1) Infection in Thai Children.

GPs are told to vaccinate all priority groups against swine flu before Christmas.
Pownall M. BMJ. 2009 Nov 30;339:b5110. doi: 10.1136/bmj.b5110. No abstract available

Rash associated with H1N1 influenza

Winthrop-University Hospital Infectious Disease Division's swine influenza (H1N1) pneumonia diagnostic weighted point score system for hospitalized adults with influenza-like illnesses (ILLs) and negative rapid influenza diagnostic tests (RIDTs).

Estimating the impact of school closure on social mixing behaviour and the transmission of close contact infections in eight European countries.

Continuous cell lines as a production system for influenza vaccines.


GPs are told to vaccinate all priority groups against swine flu before Christmas Pownall M. BMJ 2009;339:b5110. Published 30 November 2009, doi:10.1136/bmj.b5110.


From where did the 2009 'swine-origin' influenza A virus (H1N1) emerge? Gibbs AJ, Armstrong JS, Downie JC. Virology J 2009, 6:207 (24 November 2009)


Travel Advisories

WHO: Travel Safety
[NOV 19]  Travel Health Notice: Global H1N1 flu virus

[OCT 29]  H1N1 Backgrounder: Planes, Trains, Ferries and Buses—Advice for Travellers, Crews and Operators

[OCT 26]  Hajj Pilgrims: Recommendations for travel