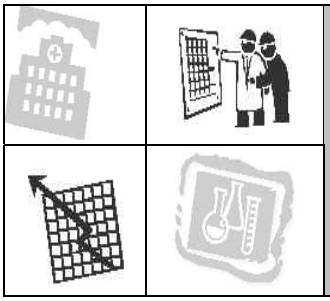


# Ontario Influenza Bulletin

**Ministry of Health and Long-Term Care**

***Public Health Branch***

*Volume 7, Issue 7, 2003*

## Week #50: Week Ending December 13, 2003

**Influenza Activity in Ontario**

Widespread influenza activity was reported in all health regions of the province during the week ending December 13. Confirmed influenza cases and institutional influenza outbreaks were reported in at least one of the health units in each health region during this period. Ontario laboratories reported 385 influenza A isolations to the Center for Infectious Disease Prevention and Control (CIDPC), Health Canada. Also reported, were the following upper respiratory isolates and detections: 35 respiratory syncytial virus (RSV), 19 parainfluenza type 1 (PIV1), 10 parainfluenza type 2 (PIV2), 9 parainfluenza type 3 (PIV3), and 28 adenoviruses (Table 1). Fifty-four influenza like illness (ILI) outbreaks were reported during this surveillance period, and 35 (68%) of the ILI outbreaks were due to influenza A. Health units reported 262 confirmed influenza cases (all influenza A) through the Reportable Diseases Information System (RDIS) (Table 2).

**Table 1. Comparison of Influenza Activity in Ontario for the 2002-03 and 2003-04 Influenza Surveillance Seasons**

| Indicator | 2002-03 Season | 2003-04 Season |
|---|---|---|
| | Week Ending, December 14, 2002 (week 50) | Week Ending December 13, 2003 (week 50) |
| | Season to Date** | Season to Date*** |
| ***Laboratory Surveillance (Flu isolates)Total** | **67** | **753** |
| Influenza A | 67 | 753 |
| Influenza B | 0 | 0 |
| Other respiratory Viruses | | |
| RSV | 169 | 114 |
| PIV1 | 52 | 125 |
| PIV2 | 9 | 71 |
| PIV3 | 164 | 43 |
| PIV4 | 2 | 4 |
| Other PIVs | 0 | 2 |
| Adenoviruses | 49 | 40 |
| **No. of ILI Visits to Sentinel Physicians (ILI Rate/1000 patients seen for all reasons)** | **20** | **103** |
| **+Institutional Influenza Outbreaks** | **3** | **35** |
| **+Institutional ILI Outbreaks** | **3** | **54** |

*Center for Infectious Disease Prevention and Control (CIDPC), Health Canada

**Consistent with Health Canada year round surveillance periods (only for Laboratory Surveillance Data)**

** August, 2002 – December 14, 2002; + October 27, 2003 - December 13, 2003

***Season to Date; August 24, 2003 - December 13, 2003

Note: 16 public health and hospital laboratories in the Province report to the CIDPC

**Table 2. Week Ending December 13, 2003 Influenza Cases in Ontario Reported Through the Reportable Disease Information System (RDIS), 2003-2004 (September 1, 2003 to December 6, 2003)**

| Health Unit | Number of Lab-Confirmed Influenza Cases | | | |
|---|---|---|---|---|
| | Influenza A | | Influenza B | |
| | Week 49 | Week 50 | Week 49 | Week 50 |
| Chatham-Kent | 0 | 1 | | |
| Durham Region | 13 | 19 | | |
| Grey-Bruce | 2 | 7 | | |
| Haliburton-Kawartha | 21 | 28 | | |
| Halton | 4 | 19 | | |
| Haldimand-Norfolk | 1 | 2 | 0 | 1 |
| Hamilton-Wentworth | 75 | 127 | | |
| Hastings-Prince Edward | 0 | 8 | | |
| Huron | 0 | 5 | | |
| Kingston-Frontenac | 19 | 38 | | |
| Leeds-Grenville | 0 | 1 | | |
| Middlesex-London | 4 | 7 | | |
| Niagara | 1 | 10 | | |
| North Bay | 0 | 1 | | |
| Ottawa-Carleton | 1 | 2 | | |
| Oxford | 0 | 4 | | |
| Peel | 19 | 61 | | |
| Peterborough | 56 | 67 | | |
| Porcupine | 8 | 29 | | |
| Simcoe | 4 | 12 | | |
| Sudbury | 0 | 4 | | |
| Toronto | 28 | 57 | | |
| Waterloo | 1 | 5 | | |
| Wellington-Dufferin | 0 | 4 | | |
| York Region | 2 | 3 | | |
| **Total** | **259** | **521*** | **0** | **1** |
| ***262 new cases of influenza A were reported during week 50** | | | | |

**Table 3**

| Influenza-related Deaths reported through RDIS for Sept. 1- December 13, 2003 = 5 | | | | |
|---|---|---|---|---|
| **Health Unit** | **Age** | **Sex** | **Type of Flu** | **Prior Condition** |
| **York Region** | 87 | M | Flu A | Related to Ship Cruise Outbreak |
| **Peterborough** | 11 | M | Flu A | Underlying Medical condition |
| **Halton** | 8 | F | Flu A | Underlying medical condition |
| **Halton** | 78 | F | Flu A | Underlying medical condition |
| **Haliburton** | 98 | F | Flu A | Institutional Outbreak-related |

**Table 3. Institutional Influenza Outbreaks by Health Unit in Ontario, 2003-2004 for Week 50 (December 7, 2003 – December 13, 2003)**

| Health Unit | Type of Institution | # of Outbreaks | Organism Identified | RAR (%) | SAR (%) | Complications |
|---|---|---|---|---|---|---|
| Algoma | NH | 1 | Flu A | 0.8 | 0.0 | None |
| Durham | RH | 3 | Flu A | 5.3 | 0.7 | None |
| | NH | | Flu A | 1.3 | 0.0 | None |
| | NH/RH | | Flu A | 7.5 | 0.9 | 1 pneumonia |
| Grey-Bruce | NH | 2 | Flu A | 9.4 | 0.0 | None |
| | HFA | | Flu A | 0.7 | 1.3 | None |
| Halton | NH | 1 | Flu A | 9.0 | 0.0 | 1 Pneumonia |
| Hastings | NH | 2 | Flu A | 0.4 | 0.0 | 1 Hospitalized |
| | LTCF | | Flu A | 8.6 | 4.5 | None |
| Hamilton City | ACH | 1 | Flu A | 7.4 | 4.0 | N/A |
| Leeds Grenville | LTCF | 1 | Flu A | 34.8 | 8.6 | 2 Hospitalization |
| Middlesex-London | LTCF | 1 | Flu A | 0.5 | 1.4 | None |
| Niagara | NH | 6 | Flu A | 9.9 | 1.9 | None |
| | NH | | Flu A | 12.5 | 0.0 | 1 hospitalization |
| | HFA | | Flu A | 13.4 | 2.7 | 1 hospitalization |
| | HFA | | Flu A | N/A | N/A | None |
| | HFA | | Flu A | 20.0 | 0.0 | None |
| | CCH | | Flu A | 13.3 | 0.0 | None |
| Northwestern | ACH | 1 | Flu A | 1.3 | 0.0 | N/A |
| Ottawa | RH | 6 | Flu A | 7.6 | 0.0 | None |
| | RH | | Flu A | 10.7 | 0.0 | None |
| | RH | | Flu A | 17.2 | 0.0 | None |
| | NH | | Flu A | 22.2 | 3.2 | None |
| | NH | | Flu A | 1.8 | 0.0 | None |
| | NH | | Flu A | 3.6 | 0.0 | None |
| | ACH | | Flu A | 3.8 | 5.3 | None Reported |
| Perth | HFA | 1 | Flu A | 4.7 | 0.0 | None |
| Simcoe | LTCF | 1 | Flu A | 13.2 | 3.3 | 2 pneumonia, 1 hospitalization |
| Sudbury | NH | 1 | Flu A | 2.1 | 0.4 | 1 hospitalization, 1 death |
| Toronto | NH | 1 | Flu A | 6.6 | 1.1 | None |
| Waterloo | RH | 2 | Flu A | 1.2 | 0.0 | None |
| | ACH | | Flu A | 35.3 | 0.0 | N/A |
| Wellington-Dufferin | RH | 1 | Flu A | 16.7 | 0.0 | None |
| Windsor | NH | 2 | Flu A | 7.1 | 0.0 | none |
| | NH | | Flu A | 1.6 | 0.3 | none |
| York Region | HFA | 1 | Flu A | 4.4 | 0.0 | 1 hospitalization |
| **TOTAL** | | **35** | | | | |

**Summary of Types of Institutions that Experienced Flu Outbreaks**

| No. of Institutions | No. Outbreaks |
|---|---|
| **LTCFs** | |
| NHs | 14 |
| HFA | 6 |
| Other LTCFs | 4 |
| **RHs** | 6 |
| ACH | 3 |
| CCH | 1 |
| **Combined Institutions** | 1 |

RAR: Resident Attack Rate (# of residents ill/total number of residents)*100
SAR: Staff Attack Rate (# of staff ill/total number of staff)*100
NH = nursing home, RH= retirement home, combined facility consists of 2 or more types of institutions, e.g., a NH section and a retirement home (RH) section; CCH = chronic care hospital, ACH= Acute Care Hospital, LTCF = long term care facility

***Federal FluWatch Sentinel Physician Surveillance Activity in Ontario***

The overall rate of influenza-like illness (ILI) reported through the Federal FluWatch system were 103 ILI patients seen per 1,000 patients that were seen by the sentinel physicians for all reasons, including ILI. This is the first week that the rate has exceeded 100 ILI patients per 1, 000 patients seen by sentinel physicians for all reasons in the province. The ILI patients rates among

children were higher than the overall rate: 122 ILI patients/1,000 patients seen for all reasons in the 0-4 year age group and 275 ILI patients/1,000 patients seen for all reasons among the 5-19 year age group.

**Canada: December 7 to December 13, 2003 (Week 50)**
Widespread activity reported in the Interior of British Columbia and throughout Ontario. Localized or sporadic activity in all other provinces and territories, except Newfoundland and Labrador. Across Canada, during the week ending December 13 (week 50), sentinel physicians reported 52 cases of influenza-like illness (ILI) per 1000 patient visits, which is within the baseline rate for this time of year.

**Laboratory Confirmations**
Health Canada received 3,983 reports of laboratory tests for influenza, including 691 (17%) influenza A detections and 0 (0%) influenza B detections. Detections of other respiratory viruses are at or below the expected range for this time of year.
***Source: http://www.hc-sc.gc.ca/pphb-dgspsp/fluwatch/03-04/w44_03/index.html#top***

**Vaccine and Strain Characterization**
The National Microbiology Laboratory has antigenetically characterized 294 influenza viruses to date; 267 (91%) A/Fujian/411/02(H3N2)-like, 25 (8.5%) A/Panama/2007/99(H3N2)-like, 1(0.3%) A/NewCaledonia/20/99(H1N1)-like and 1(0.3%) H1N2. **The Ontario laboratories submitted 111 influenza viruses and all were antigenically characterized as A/Fujian/411/02(H3N2)-like.**
***Source: National Microbiology Laboratory (NML), Population and Public Health Branch (PPHB)***

**Influenza Activity in the United States:**
Influenza activity in the United States continued to increase during week 50 (December 7 - 13, 2003). One thousand three hundred sixty-five (35.8%) of 3,814 specimens collected from throughout the United States and tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories were positive for influenza. Of these, 262 were influenza A(H3N2) viruses, 1,080 were influenza A viruses that were not sub-typed, and 23 were influenza B viruses. Of the influenza A(H3N2) isolates that have been characterized to date; 25% were antigenically similar to the vaccine strain A/Panama/2007/99 and 75% were similar to the new drift variant A/Fujian/411/2002. The proportion of patient visits to sentinel providers for influenza-like illness (ILI) overall was 7.4%, which is above the national baseline of 2.5%. The proportion of deaths attributed to pneumonia and influenza was 7.2%, which is below the epidemic threshold for the week. Thirty-six state health departments reported widespread influenza activity, 12 states and New York City reported regional activity, 1 state and the District of Columbia reported local influenza activity, and 1 state and Puerto Rico reported sporadic influenza activity.
**CDC advises that for details of the 2003-04 influenza season in the US to date, with details on severe illness and deaths, to see: MMWR:** <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5249a1.htm>
***Source: Centers for Disease Control and Prevention (CDC): <http://www.cdc.gov/ncidod/diseases/flu/weekly.htm>***

**International Influenza Activity:**
**WHO/EISS summary:** Influenza activity associated with influenza A(H3N2) viruses continues to rise substantially in some countries in Europe (Finland, France, Norway, Russian Federation and Switzerland ), but has declined in the UK, Portugal and Spain. An increasing trend has also been observed in a number of other European countries (Denmark, Italy and Ukraine) where influenza activity currently remains low. Most outbreaks to date have been due to A/Fujian/411/2002(H3N2)-like viruses with some due to A/Panama/2007/99(H3N2)-like viruses and to a lesser extent other viruses. So far, there have been very few reports of influenza A/Fujian/411/2002-like virus being detected in Asia.

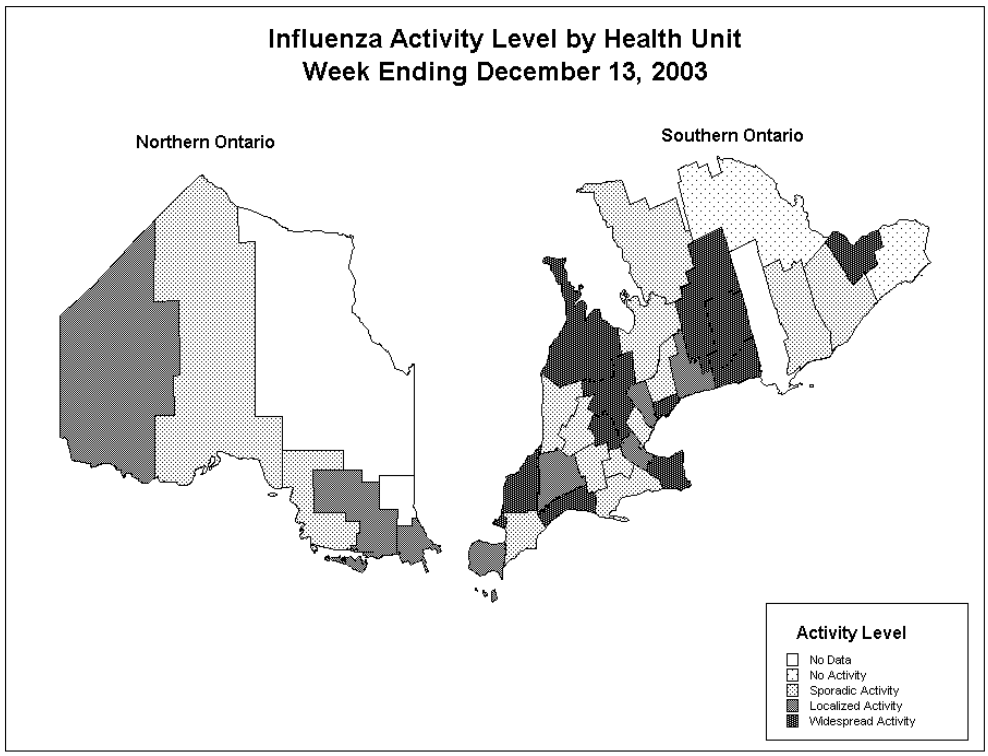
**Note: Globally, approximately 60% of strains are well inhibited by A/Panama antisera.**
***Sources:*** *WHO*: http://rhone.b3e.jussieu.fr/flunet/www/index.html
***EISS***: http://www.eiss.org

**Influenza Vaccine Components and Protection for 2003-04 Season**
NACI recommended that the trivalent vaccine for the 2003-04 season in Canada contain an A/Panama/2007/99 (H3N2)-like, an A/New Caledonia/20/99 (H1N1)-like, and either B/Hong Kong/330/2001-like virus or B/Shadong/7/97-like antigens.
***Source:*** *http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/ccdr-rmtc/03vol29/index.html#acs*

**Note: WHO advises that A/Fujian/411/2002-like strains are drift variants of the A/Panama/2007/99 vaccine virus. Therefore antibodies produced against the A/Panama/2007/99-like strain do cross-react with A/Fujian/411/2002-like strains, but at a lower level than to the vaccine strain itself.**



**Erratum Flu Bulletin Vol. 7 Issue 6**: For the week ending December 6, Ontario Laboratories reported 132 (not 296) influenza A isolations to the Center for Infectious Disease Prevention and Control (CIDPC) of Health Canada : 24 respiratory syncytial virus (RSV), 18 parainfluenza type 1 (PIV1), 7 parainfluenza type 2 (PIV2), 6 parainfluenza type 3 (PIV3), 0 parainfluenza type 4 (PIV4), 1other PIVs, and 5 adenoviruses.


Influenza Activity Level by Health Unit
Week Ending December 13, 2003
Northern Ontario
Southern Ontario
Activity Level
No Data
No Activity
Sporadic Activity
Localized Activity
Widespread Activity