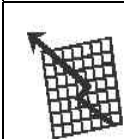


|                                                                                   |                                                                                   |                                           |                                                                                 |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------|
|  |  | <b>Ontario<br/>Influenza<br/>Bulletin</b> | <b>Ministry of Health and<br/>Long-Term Care</b>                                |
|  |  |                                           | <b>Public Health Branch</b><br><br><i>Volume 5, Issue 22<br/>March 29, 2002</i> |

**Week #12: Week Ending March 23, 2002**

**Influenza Activity in Ontario**

There were 113 cases of influenza A, and 42 cases of influenza B reported in the province for the week ending March 23, 2002. The reported upper respiratory isolates included: 58 respiratory syncytial virus (RSV), and 4 adenovirus (Table 1).

In Ontario, 35 more outbreaks were reported. Specifically, there were 31 influenza A outbreaks, 3 influenza B outbreaks, one outbreak involving both influenza A and B, and were detected by either rapid testing or viral culture. The following health units reported the influenza A outbreaks, Algoma, Brant County, Eastern Ontario, Grey-Bruce, Haldimand-Norfolk, Halton, Hamilton, Huron County, Kingston, Lambton, Leeds-Grenville-Lanark, Middlesex-London, Niagara, Peel, Peterborough, Renfrew County, Simcoe County, Thunder Bay, Toronto, and Wellington-Dufferin-Guelph. Oxford, Niagara, and Wellington-Dufferin-Guelph each reported one influenza B outbreak, and Wellington-Dufferin-Guelph also reported the combined influenza A and B outbreak.

The total number of institutional outbreaks to-date in Ontario is 161 (Tables 1, 2, and 3).

**Table 1. Comparison of Influenza Activity for the 2000-01 and 2001-02 Influenza Surveillance Seasons**

| Indicator                                        | 2000-01 Season             | 2001-02 Season             |
|--------------------------------------------------|----------------------------|----------------------------|
|                                                  | Week Ending March 24, 2001 | Week Ending March 23, 2002 |
|                                                  | Season-to-date             | Season-to-date             |
| <b>*Laboratory Surveillance (isolates) Total</b> | <b>693</b>                 | <b>1315</b>                |
| Influenza A                                      | 358                        | 778                        |
| Influenza B                                      | 335                        | 537                        |
| <b>Institutional Outbreaks</b>                   | <b>4</b>                   | <b>161</b>                 |
| Other Respiratory Viruses                        |                            |                            |
| RSV                                              | 2029                       | 1712                       |
| PIV1                                             | 26                         | 112                        |
| PIV2                                             | 10                         | 100                        |
| PIV3                                             | 249                        | 15                         |
| PIV4                                             | 25                         | 14                         |
| Other PIVs                                       | 1                          | 2                          |
| Adenoviruses                                     | 69                         | 106                        |

\*Centre for Infectious Disease Prevention and Control, Health Canada

**Table 2. Season-to-date Influenza Cases by Health Unit as Reported Through RDIS, 2001-02\*++**

| Health Unit                  | Number of Lab-Confirmed Influenza Cases** |            |
|------------------------------|-------------------------------------------|------------|
|                              | Type A                                    | Type B     |
| Algoma                       | 3                                         | 2          |
| Brant County                 | 4                                         | 0          |
| Bruce-Grey                   | 1                                         | 4          |
| Chatham-Kent                 | 1                                         | 0          |
| Durham                       | 13                                        | 16         |
| Eastern Ontario              | 32                                        | 3          |
| Halton                       | 3                                         | 10         |
| Hamilton-Wentworth           | 43                                        | 22         |
| Huron                        | 0                                         | 6          |
| Kingston                     | 15                                        | 4          |
| Lambton                      | 1                                         | 0          |
| Leeds, Grenville, Lanark     | 27                                        | 0          |
| Middlesex-London             | 3                                         | 0          |
| Niagara                      | 19                                        | 50         |
| North Bay & District         | 28                                        | 1          |
| Ottawa                       | 176                                       | 5          |
| Oxford                       | 1                                         | 0          |
| Peel                         | 14                                        | 14         |
| Perth                        | 40                                        | 24         |
| Peterborough                 | 3                                         | 2          |
| Porcupine                    | 11                                        | 4          |
| Simcoe                       | 8                                         | 4          |
| Thunder Bay                  | 3                                         | 0          |
| Toronto                      | 81                                        | 50         |
| Waterloo                     | 5                                         | 12         |
| Wellington, Dufferin, Guelph | 3                                         | 12         |
| Windsor-Essex                | 0                                         | 5          |
| York                         | 5                                         | 19         |
| <b>Total</b>                 | <b>543</b>                                | <b>269</b> |

\*Reportable Disease Information System

\*\*Public Health Units

++Due to a transmission delay with RDIS, the data is current up to week #10

**Table 3. Season-to-date Institutional Influenza Outbreaks by Health Unit in Ontario, 2001-02\***

| Health Unit                  | Type of Institution & Number of Outbreaks** |           |          |             |          |          | Organism(s) Identified     |
|------------------------------|---------------------------------------------|-----------|----------|-------------|----------|----------|----------------------------|
|                              | LTCF                                        | RH        | Hospital |             | DCC      | School   |                            |
|                              |                                             |           | CC Unit  | Other Units |          |          |                            |
| Algoma                       | 3                                           | 2         |          | 3           |          |          | Influenza A                |
| Brant County                 | 4                                           | 3         |          |             |          |          | Influenza A                |
| Chatham-Kent                 | 1                                           |           |          |             |          |          | Influenza A<br>Influenza B |
| Durham                       | 1                                           | 1         |          |             |          |          | Influenza A                |
| Eastern Ontario              | 4                                           |           |          | 2           |          | 2<br>2   | Influenza A<br>Influenza B |
| Grey-Bruce                   | 1                                           |           |          |             |          |          | Influenza A                |
| Halton                       | 1                                           |           |          |             |          |          | Influenza A                |
| Haldimand-Norfolk            | 3                                           |           |          |             |          |          | Influenza A                |
| Hamilton                     | 8                                           |           |          |             |          |          | Influenza A                |
| Hastings & Prince Edward     | 2                                           |           |          |             |          |          | Influenza A                |
| Huron County                 | 2                                           |           |          |             |          |          | Influenza A                |
| Kingston                     | 3                                           | 2         |          |             |          |          | Influenza A                |
| Lambton                      | 2                                           |           |          |             |          |          | Influenza A                |
| Leeds, Grenville, Lanark     | 6                                           |           | 1        | 1           |          |          | Influenza A                |
| Middlesex-London             | 2                                           |           | 1        | 1           |          |          | Influenza A                |
| Niagara                      | 3<br>2                                      | 1         |          | 1           |          |          | Influenza A<br>Influenza B |
| North Bay & District         | 2                                           |           | 1        |             |          |          | Influenza A                |
| Ottawa                       | 14                                          | 1         | 2        | 3           |          |          | Influenza A                |
| Oxford                       | 1<br>1                                      |           |          |             |          |          | Influenza A<br>Influenza B |
| Peel                         | 2                                           | 2         |          | 1           |          |          | Influenza A                |
| Perth                        | 1                                           |           |          |             |          |          | Influenza A                |
| Peterborough                 | 2                                           | 1         |          |             |          |          | Influenza A                |
| Renfrew County               | 3                                           | 1         |          |             |          |          | Influenza A                |
| Simcoe County                | 1                                           | 1         | 1        |             |          |          | Influenza A                |
| Sudbury & District           | 1                                           |           |          |             |          |          | Influenza A                |
| Thunder Bay                  | 9                                           |           |          |             |          |          | Influenza A                |
| Timiskaming                  | 1                                           |           |          |             |          |          | Influenza A                |
| Toronto                      | 11                                          | 4         | 2        | 2<br>1      | 1<br>1   |          | Influenza A<br>Influenza B |
| Waterloo                     | 3                                           | 1         | 1        | 1<br>1      |          |          | Influenza A<br>Influenza B |
| Wellington, Dufferin, Guelph | 4<br>1                                      | 1<br>1    |          |             |          |          | Influenza A<br>Influenza B |
| Windsor-Essex                | 1                                           |           |          |             |          | 1        | Influenza A<br>Influenza B |
| <b>Total</b>                 | <b>106</b>                                  | <b>22</b> | <b>9</b> | <b>17</b>   | <b>2</b> | <b>5</b> |                            |

\*Public Health Units

\*\*Sub-headings: LTCF (long-term care facility), RH (retirement home), CC (chronic care), DCC (day-care centre)

## Vaccine and Strain Characterization

No new strain characterizations were identified this week (Table 4).

The A/Panama/2007/99(H3N2)-like strain and B/Sichuan/379/99-like strain, is included in this year's vaccine, and the B/Hong Kong/22/01-like strain belongs to the B/Victoria/504/2000 lineage, which is not included in this year's vaccine. The B/Hong Kong/22/01-like virus is a new antigenic variant of the B/Victoria/504/2000-like virus, which was an epidemic strain during the 1988 - 1989 flu season.

This year's influenza vaccine B component provides protection mainly against B/Yamagata/16/88-like viruses, but as several studies have shown, this strain also provides some protection against the B/Victoria/504/2000-like viruses. The type A strains identified in Canada, and in Ontario, are included in the current season's vaccine.

**Table 4. Season-to-date Strain Identification and Characterization In Canada, 2001-02\***

| Province/Territory    | Strain Characterization                  | # of Strains Identified-to-date |
|-----------------------|------------------------------------------|---------------------------------|
| Newfoundland          | A/Panama/2007/99(H3N2)-like              | 2                               |
| Prince Edward Island  | 0                                        | 0                               |
| Nova Scotia           | A/Panama/2007/99(H3N2)-like              | 2                               |
|                       | B/Hong Kong/22/01-like                   | 1                               |
| New Brunswick         | A/Panama/2007/99(H3N2)-like              | 6                               |
| Quebec                | A/Panama/2007/99(H3N2)-like              | 42                              |
|                       | B/Sichuan/379/99-like                    | 1                               |
|                       | B/Hong Kong/22/01-like                   | 2                               |
| <b>Ontario</b>        | <b>A/Panama/2007/99(H3N2)-like</b>       | <b>58</b>                       |
|                       | <b>B/Sichuan/379/99-like</b>             | <b>2</b>                        |
|                       | <b>B/Hong Kong/22/01-like</b>            | <b>68</b>                       |
| Manitoba              | A/Panama/2007/99(H3N2)-like              | 7                               |
|                       | A/New Caledonia/20/99 (H1N2)-like        | 2                               |
| Saskatchewan          | A/Panama/2007/99(H3N2)-like              | 31                              |
|                       | A/New Caledonia/20/99 (H1N2)-like        | 2                               |
| Alberta               | A/Panama/2007/99(H3N2)-like              | 14                              |
|                       | A/New Caledonia/20/99 (H1N1)-like        | 1                               |
|                       | A/New Caledonia/20/99 (H1N2)-like        | 1                               |
|                       | B/Hong Kong/22/01-like                   | 1                               |
| British Columbia      | A/Panama/2007/99(H3N2)-like              | 20                              |
|                       | B/Sichuan/379/99-like                    | 1                               |
| Yukon                 | A/Panama/2007/99(H3N2)-like              | 2                               |
| NorthWest Territories | 0                                        | 0                               |
| Nunavut               | 0                                        | 0                               |
|                       |                                          |                                 |
|                       |                                          | <b>Total</b>                    |
|                       | <b>A/Panama/2007/99(H3N2)-like</b>       | <b>184</b>                      |
|                       | <b>A/New Caledonia/20/99 (H1N1)-like</b> | <b>1</b>                        |
|                       | <b>A/New Caledonia/20/99 (H1N2)-like</b> | <b>5</b>                        |
|                       | <b>B/Sichuan/379/99-like</b>             | <b>4</b>                        |
|                       | <b>B/Hong Kong/22/01-like</b>            | <b>72</b>                       |

\*Respiratory Viruses Section, National Microbiology Laboratory (NML), PPHB, Health Canada

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

The rate of influenza-like illness (ILI) reported through the Federal FluWatch system was 19 per 1,000 patients seen.

### **Laboratory Confirmations and Influenza Activity in the Rest of Canada**

Influenza activity is at the level of localized in regions of seven provinces and Saskatchewan reported widespread activity. Ontario reported 23 outbreaks in long-term care facilities (LTCFs), three in hospitals and four in schools, which is a continuation of the levels seen for the past month. Alberta and Nova Scotia also continue to experience influenza outbreaks in LTCFs and schools. Sentinel physicians reported 23 cases of influenza-like illness (ILI) per 1,000 patient visits, which is the expected rate for this time of year. Health Canada received 2,172 reports of laboratory tests for influenza: 320 (15%) were positive for influenza A and 41 (2%) were positive for influenza B (see table). The National Microbiology Laboratory antigenically characterized 304 influenza isolates to date this season: 212 were A(H3N2); six were A(H1); four were B/Sichuan/379/99-like, and 82 were B/Hong Kong/22/01-like. Of the six A(H1) isolates identified antigenically, five were characterized by genetic analysis to be a new influenza A(H1N2) strain. The H1N2 strains were identified from specimens taken since December 2001 from patients in Alberta (one), Saskatchewan (two) and Manitoba (two). The majority of B/Hong Kong/22/01-like viruses were identified from specimens taken in Ontario. The B/Hong Kong/22/01-like viruses are antigenically different from the vaccine strains and the current vaccine is expected to provide limited cross-protection against these viruses. The A(H3N2), A(H1) and B/Sichuan/379/99-like viruses are similar to the current vaccine strains.

Source: Health Canada, FluWatch: <<http://www.hc-sc.gc.ca/pphb-dgspsp/fluwatch/index.html>>

### **Influenza Activity in the United States**

During week 11 (March 10-16, 2002), 276 (19.8%) of 1,395 respiratory specimens tested by World Health Organization (WHO) and National Respiratory Virus Surveillance System (NREVSS) laboratories were positive for influenza. The overall proportion of patient visits to sentinel physicians for influenza-like illness (ILI) was 2.0%, which is above the national baseline of 1.9%. The proportion of deaths attributed to pneumonia and influenza was 9.3%, which is above the epidemic threshold of 8.2% for week 11. Five state and territorial health departments reported widespread influenza activity, 26 reported regional activity, 18 reported sporadic activity, and 1 reported no influenza activity.

Source: Centers for Disease Control and Prevention: <<http://www.cdc.gov/ncidod/diseases/flu/weekly.htm>>

### **Influenza Activity in the World**

No new information reported since the last Bulletin.

Source: WHO, Communicable Disease Surveillance and Response: <<http://www.who.int/emc/diseases/flu/country.html>>

Visit the Ministry of Health and Long-Term Care website weekly for the current issue, or back issues, of the *Ontario Influenza Bulletin*: <[http://www.gov.on.ca/MOH/english/program/pubhealth/flu\\_bul/flubul\\_mn.html](http://www.gov.on.ca/MOH/english/program/pubhealth/flu_bul/flubul_mn.html)>