Influenza Activity Continues

The peak for the season (week 9). (See graph and table on page 4.)

ILI Outbreaks

One ILI outbreak in a school in VCHA was reported during week 11; no pathogen was identified. Five lab-confirmed influenza A/H3 outbreaks were reported in LTCFs in VCHA, FHA and IHA and one A/H1 outbreak and one A/H3 outbreak were reported from hospitals in VCHA, and IHA. Since the start of the season (Sept 28), specimens have been submitted to BCCDC Laboratory Services in relation to 101 ILI outbreak investigations. Influenza was identified in 36 (35%), rhino/enterovirus was identified in 13 (13%) of the investigations, RSV in 7 (7%), human metapneumovirus (HMPV) in 5 (5%), parainfluenza in 3 (3%), coronavirus in 2 (2%), and adenovirus in 1 (1%). No pathogen was identified in the other 34 investigations. (See graph on page 5.)

Please remember to notify BCCDC if an outbreak of ILI occurs in your region, by emailing ilioutbreak@bccdc.ca and attaching the outbreak report form (a copy is found at the end of this report).

Sentinel Physicians

In week 11, 0.87% of all patient visits to sentinel physicians were attributed to ILI. This proportion is within the expected range for this time of year. Though slightly higher than week 10 it remains below the peak for the season (week 9). (See graph and table on page 4.)

Oseltamivir Resistance Oseltamivir Resistance
To date (March 26, 2009) during the 2008-09 season, BCCDC has assessed 148 A/H1N1 isolates for oseltamivir resistance; 136 show genotypic evidence of oseltamivir resistance, and the other 12 are indeterminate and undergoing further assessment through sequencing of the neuraminidase gene. Thus, all A/H1N1 specimens for which oseltamivir sensitivity could be determined have so far been found resistant to date in BC during the 2008-09 season.

Health care providers considering use of antivirals are advised to consult public health and surveillance updates and to stay informed about influenza activity and resistance patterns throughout the season. The BCCDC has posted interim guidelines, for clinician reference, concerning antiviral options in the context of evolving resistance patterns:

Canada Canada

FluWatch FluWatch
During week 11 (Mar 15-21), influenza activity increased compared to last week but it is within the expected range for this time of year. Thirty ILI outbreaks were reported: 10 in LTCFs (BC, ON, QC, & NB), 14 in schools (BC, SK & NB), 3 in a hospital (BC & AB) and 3 other outbreaks (facilities not described). The proportion of tests that were positive for influenza increased from the previous week (percentage positive = 17.9%; 824/4,592). Since August 24, 2008 provincial/territorial laboratories have detected 7,227 cases of influenza, 4,264 (59%) influenza A and 2,963 (41%) influenza B. The national rate of ILI visits to sentinel physicians increased from 22 per 1,000 to 28 ILI consultations per 1,000 patient visits in week 11, which is within the expected range for this time of the season. http://www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory National Microbiology Laboratory
Since Sept 1 and as of Mar 25, 694 influenza isolates from provincial and hospital labs have been characterized at the National Microbiology Laboratory (NML):
154 A/Brisbane/59/07(H1N1)-like* from BC, AB, SK, ON, QC, NB, NS, & PEI;
132 A/Brisbane/10/07(H3N2)-like* from BC, AB, SK, MB, ON, QC, PEI, & NL;
7 B/Florida/04/06(Yamagata)-like* from AB, ON, & QC;
361 B/Malaysia/2506/04(Victoria)-like from all ten provinces.
and 40 B/ Brisbane/60/08(Victoria)- like
* indicates a strain match to the vaccine component.

INTERNATIONAL

Avian Influenza Avian Influenza
Since 2003 and to date (Mar 23, 2009), the WHO has confirmed 412 human avian influenza A/H5N1 cases and 256 deaths, with 1 additional cases reported in Egypt in the last week. For more information on human avian influenza cases please visit:
http://www.who.int/csr/disease/avian_influenza
For further information on confirmed avian influenza outbreaks in poultry, please visit: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_Ai-Asia.htm.

**Vaccine Composition**
This year’s (2008-09) influenza vaccine contains the following virus antigens:
- A/Brisbane/59/2007(H1N1)-like
- A/Brisbane/10/2007(H3N2)-like
  Note: A/Uruguay/716/2007(H3N2) is antigenically equivalent to A/Brisbane/10/2007(H3N2) and may be included by vaccine producers.
- B/Florida/04/2006(Yamagata lineage)-like

The WHO has announced the recommended components of the 2009-10 northern hemisphere influenza vaccines:
- A/Brisbane/59/2007(H1N1)-like
- A/Brisbane/10/2007(H3N2)-like
- B/Brisbane/60/2008(Victoria lineage)-like
Thus, only the B component will be changed from the 2008-09 vaccine. Additional information can be found here: http://www.who.int/csr/disease/influenza/recommendations2009_10north/en/index.html.

**Activity Level Definitions**
*Sporadic influenza activity*: sporadically occurring ILI and laboratory-confirmed influenza during previous 4 weeks, with no outbreaks.

*Localised influenza activity*: as for sporadic activity, but with ILI outbreaks in schools and worksites, or laboratory-confirmed influenza outbreaks in residential institutions occurring in less than 50% of the influenza surveillance regions during the week of reporting.

*Widespread influenza activity*: as for localized activity, but with outbreaks occurring in greater than or equal to 50% of the influenza surveillance regions during the week of reporting.

**List of Acronyms**
- ACF: Acute Care Facility
- AI: Avian Influenza
- FHA: Fraser Health Authority
- HMPV: Human metapneumovirus
- HSDA: Health Service Delivery Area
- IHA: Interior Health Authority
- ILI: Influenza-Like Illness
- LTCF: Long Term Care Facility
- MSP: BC Medical Services Plan
- NHA: Northern Health Authority
- NML: National Microbiological Laboratory
- OIE: World Organization for Animal Health
- RSV: Respiratory syncytial virus
- VCHA: Vancouver Coastal Health Authority
- VIHA: Vancouver Island Health Authority
- WHO: World Health Organization

**Web Sites**
1. **Influenza Web Sites**
   - Canada – Flu Watch: http://www.phac-aspc.gc.ca/fluwatch/
   - USA Weekly Surveillance reports: http://www.cdc.gov/flu/weekly/
   - European Influenza Surveillance Scheme: http://www.eiss.org/index.cgi
   - WHO – Weekly Epidemiological Record: http://www.who.int/wer/en/

2. **Avian Influenza Web Sites**
   - World Organization for Animal Health: http://www.oie.int/eng/eng_index.htm

3. **This Report On-line**
   - http://www.bccdc.org/content.php?item=35

**Contact Us:**
Epidemiology Services
BC Centre for Disease Control (BCCDC)
655 W. 12th Ave, Vancouver BC V5Z 4R4
Tel: (604) 660-6061 / Fax: (604) 660-0197
InfluenzaFieldEpi@bccdc.ca
**WEEKLY SENTINEL ILI**

Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 19 Seasons
Sentinel Physicians, British Columbia, 2008-2009

![Graph showing percentage of patient visits due to ILI per week compared to average percentage for the past 19 seasons.]

**SENTINEL INFLUENZA-LIKE ILLNESS BY HEALTH AUTHORITY**

<table>
<thead>
<tr>
<th>HEALTH AUTHORITY</th>
<th>Week 11</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mar 15-21</td>
<td>ILI Visits</td>
<td>Total Visits</td>
</tr>
<tr>
<td>Fraser</td>
<td></td>
<td>7</td>
<td>1,114</td>
</tr>
<tr>
<td>Interior</td>
<td></td>
<td>0</td>
<td>228</td>
</tr>
<tr>
<td>Northern</td>
<td></td>
<td>0</td>
<td>161</td>
</tr>
<tr>
<td>Vancouver Coastal</td>
<td></td>
<td>28</td>
<td>1,810</td>
</tr>
<tr>
<td>Vancouver Island</td>
<td></td>
<td>8</td>
<td>1,643</td>
</tr>
<tr>
<td><strong>BC Total</strong></td>
<td></td>
<td><strong>43</strong></td>
<td><strong>4,956</strong></td>
</tr>
</tbody>
</table>
ILI OUTBREAKS

Number of Influenza-Like Illness (ILI) Outbreaks Investigated or Reported, Compared to Current ILI Rate and Average ILI Rate for past 19 years, per Week
British Columbia, 2008-2009

- 5 -
LABORATORY SUMMARY

Virus Isolates and Percentage of Respiratory Specimens Submitted to BC Provincial Laboratory Diagnosed Positive for a Virus, per Week
British Columbia, 2008-2009

Virus Isolates and Percentage of Respiratory Specimens Submitted to Children and Women's Health Centre Laboratory Diagnosed Positive for a Virus, per Week, British Columbia, 2008-2009
Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to ilioutbreak@bccdc.ca or fax to (604) 660-0197

**ILI**: Acute onset of respiratory illness with fever and cough and with one or more of the following: sore throat, arthralgia, myalgia, or prostration which *could* be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

**Schools and work site outbreak**: greater than 10% absenteeism on any day, most likely due to ILI.

**Residential institutions (facilities) outbreak**: two or more cases of ILI within a seven-day period.

### SECTION A: Reporting Information

| Person Reporting:          | ______________________ |
| Health Authority:          | ______________________ |
| Contact Phone:             | ______________________ |
| Full Facility Name:        | ______________________ |
| Title:                     | ______________________ |
| Email:                     | ______________________ |
| HSDA:                      | ______________________ |

Is this report:
- [ ] First Notification *(complete section B below; Section D if available)*
- [ ] Update *(complete section C below; Section D if available)*
- [ ] Outbreak Over *(complete section C below; Section D if available)*

### SECTION B: First Notification

**Type of facility:**
- [ ] LTCF
- [ ] Acute Care Hospital
- [ ] Senior’s Residence *(if ward or wing, please specify name/number: ______________________)*
- [ ] Workplace
- [ ] School *(grades:________)*
- [ ] Other *(________)*

Date of onset of first case of ILI (dd/mm/yyyy): __________ / _______ / ______

<table>
<thead>
<tr>
<th>Numbers to date</th>
<th>Residents/Students</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With ILI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitalized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Died</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION C: Update AND Outbreak Declared Over

Date of onset for most recent case of ILI (dd/mm/yyyy): __________ / _______ / ______

If over, date outbreak declared over (dd/mm/yyyy): __________ / _______ / ______

<table>
<thead>
<tr>
<th>Numbers to date</th>
<th>Residents/Students</th>
<th>Staff</th>
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<tbody>
<tr>
<td>Total</td>
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</tr>
<tr>
<td>Died</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION D: Laboratory Information

Specimen(s) submitted?
- [ ] Yes *(location: ______________)*
- [ ] No
- [ ] Don’t know

If yes, organism identified?
- [ ] Yes *(specify: ______________)*
- [ ] No
- [ ] Don’t know