



Influenza Activity Continues to be Sporadic in BC

Contents:

Overview	Page 1
Sentinel Physicians	Page 1
ILI Outbreaks	Page 1
Laboratory Reports	Page 1
Oseltamivir Resistance	Page 1
Canadian Data	Page 2
International Data	Page 2
Avian Influenza	Page 2
Vaccine Composition	Page 3
Activity Level Definitions	Page 3
List of Acronyms	Page 3
Web Sites	Page 3
Weekly ILI Graph	Page 4
ILI by Health Authority	Page 4
ILI Outbreaks Graph	Page 5
Lab Summary Graphs	Page 6
ILI Outbreak Form	Page 7

Sentinel Physicians

Based on the historic range for this time of year, the rate of ILI visits to sentinel physicians was lower than expected. In week 51, the percentage of all patient visits due to ILI was 0.25%; final sentinel ILI rates for week 52 are still pending. (See graph and table on page 4.)

ILI Outbreaks

Since the start of the season (Sept 28), specimens have been submitted to BCCDC Laboratory Services in relation to 24 ILI outbreak investigations. Rhino/enterovirus was identified in 9/24 (38%) of the investigations, RSV was identified in 1 (4%) investigation, and no pathogen was identified in the other 14 investigations. (See graph on page 5.)

Laboratory Reports

During weeks 51 and 52 (Dec 14 – 27, 2008), BCCDC Laboratory Services tested 102 respiratory specimens. Influenza A was identified in 9 specimens. Of these, 5 were sub-typed as H1, 1 was sub-typed as H3, and the other 3 have yet to be sub-typed. Ten specimens tested positive for rhino/enterovirus, 9 for RSV, 3 for parainfluenza, and 2 for adenovirus.

During weeks 51 and 52 (Dec 14 – 27, 2008), Children's and Women's Health Centre Laboratory tested 192 respiratory specimens. Influenza was identified in 4 specimens (2 influenza A and 2 influenza B). Eighty-three (43%) specimens tested positive for RSV, 2 for adenovirus, and 2 for parainfluenza. (See graphs on page 6.)

Highlights

During weeks 51 and 52 (Dec 14 – 27, 2008), BC laboratories reported 11 positive respiratory specimens for influenza A and 2 positive specimens for influenza B. Of the influenza A isolates that have been sub-typed to date this season, 89% (24 / 27) were A/H1. Oseltamivir resistance has been reported in a high proportion of A/H1N1 viruses to date this season. Forty-three percent of respiratory specimens tested at BC Children's and Women's Health Centre were positive for RSV with only 2 influenza A and 2 influenza B detections by that Centre. No influenza outbreaks were reported in weeks 51 and 52, and the rate of ILI visits to physicians remains lower than average for this time of year.

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).

Oseltamivir Resistance

During the 2007-08 season, oseltamivir resistance was identified among circulating A/H1N1 viruses worldwide. Testing in Canada



indicated that 26% of last season's A/H1N1 isolates were resistant to oseltamivir. Influenza activity remains low, and only a small sample of viruses is yet available for assessment for the current season. To date (Dec 31), BCCDC has assessed 19 A/H1N1 isolates for oseltamivir resistance; 14 show genotypic evidence of oseltamivir resistance, and the other 5 are indeterminate and undergoing further assessment through sequencing of the neuraminidase gene. These specimens were from community-based cases of ILI; none was associated with an outbreak.

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 shared interim guidelines for antiviral options in the context of evolving resistance patterns with local health authorities. Local health authorities may be consulted for more information.

CANADA

Flu Watch

During week 51, sporadic activity was reported in BC, Alberta, and Quebec. No outbreaks in LTCFs have been reported in Canada since week 36 of last season (Aug 31 – Sept 6). Since August 24, 2008 provincial/territorial laboratories have detected 162 cases of influenza, 99 influenza A and 63 influenza B. The national rate of ILI visits to sentinel physicians (19 cases per 1,000 visits during week 51) is within the expected range for this time of the season.

<http://www.phac-aspc.gc.ca/fluwatch/>

National Microbiology Laboratory

Since Sept 1, 20 influenza isolates from provincial and hospital labs have been characterized at the National Microbiology Laboratory (NML):

3 A/Brisbane/59/07(H1N1)-like* from NS and ON,
2 A/Brisbane/10/07(H3N2)-like* from BC and ON,

3 B/Florida/04/06(Yamagata)-like* from AB and ON,
and 12 B/Malaysia/2506/04(Victoria)-like from NS, ON, AB, and BC.

* indicates a strain match to the vaccine component.

Antiviral Resistance

Drug susceptibility testing at the NML showed that all (n=5) H1N1 isolates tested to date were resistant to oseltamivir, while all H3N2 (n=2) and influenza B (n=15) isolates tested were sensitive to oseltamivir. Of those isolates tested for amantadine resistance, all (n=6) H1N1 isolates were found to be sensitive, and all (n=5) H3N2 isolates were found to be resistant. All 18 (1 H1N1, 2 H3N2, and 15 influenza B) isolates that have been tested for zanamivir resistance were sensitive.

INTERNATIONAL

A low level of Influenza activity was reported during week 51 (Dec 14 – 20) in the United States. Localized activity was reported in eight states (none bordering BC), and sporadic activity was reported in most other states. The rate of ILI visits to sentinel physicians remained below national baseline levels. To date this season, US laboratories have typed 846 influenza-positive specimens: 680 (80%) influenza A and 166 (20%) influenza B. Of the influenza A isolates, 303 have been sub-typed, of which 92% were A/H1. Sixty-four of 65 (99%) A/H1 viruses tested were found to be resistant to oseltamivir. For information about influenza surveillance indicators in the United States, please visit:

<http://www.cdc.gov/flu/weekly/>.

Two European countries (Portugal and the UK) reported widespread influenza activity and two (Spain and Switzerland) reported localized activity during week 51. Of the 2026 influenza virus detections in Europe since the start of the season (week 40), 1929 (95%) were influenza A, and of those subtyped, 94% were A/H3. For more information, please visit:

<http://www.eiss.org>.



Avian Influenza

No additional cases of human H5N1 AI have been reported by the WHO in the past two weeks. Since 2003, the WHO has confirmed 391 human AI cases and 247 deaths. 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/download/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

Activity Level Definitions

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

Localized 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.

Contact Us:

Epidemiology Services

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Tel: (604) 660-6061 / Fax: (604) 660-0197
InfluenzaFieldEpi@bccdc.ca

List of Acronyms

AI: Avian Influenza
FHA: Fraser Health Authority
HPAI: Highly Pathogenic Avian Influenza
HSDA: Health Service Delivery Area
IHA: Interior Health Authority
ILI: Influenza-Like Illness
LTCF: Long Term Care Facility
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/>

NACI Statement on Influenza Vaccination for the 2008-09 Season: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08vol34/acs-3/index-eng.php>

Washington State Flu Updates:

<http://www.doh.wa.gov/ehsph/epidemiology/CD/HTML/FluUpdate.htm>

USA Weekly Surveillance reports:

<http://www.cdc.gov/flu/weekly/>

European Influenza Surveillance Scheme:

<http://www.eiss.org/index.cgi>

WHO – Global Influenza Programme:

<http://www.who.int/csr/disease/influenza/mission/>

WHO – Weekly Epidemiological Record:

<http://www.who.int/wer/en/>

Influenza Centre (Australia):

<http://www.influenzacentre.org/>

2. Avian Influenza Web Sites

World Health Organization – Avian Influenza:

http://www.who.int/csr/disease/avian_influenza/en/

World Organization for Animal Health:

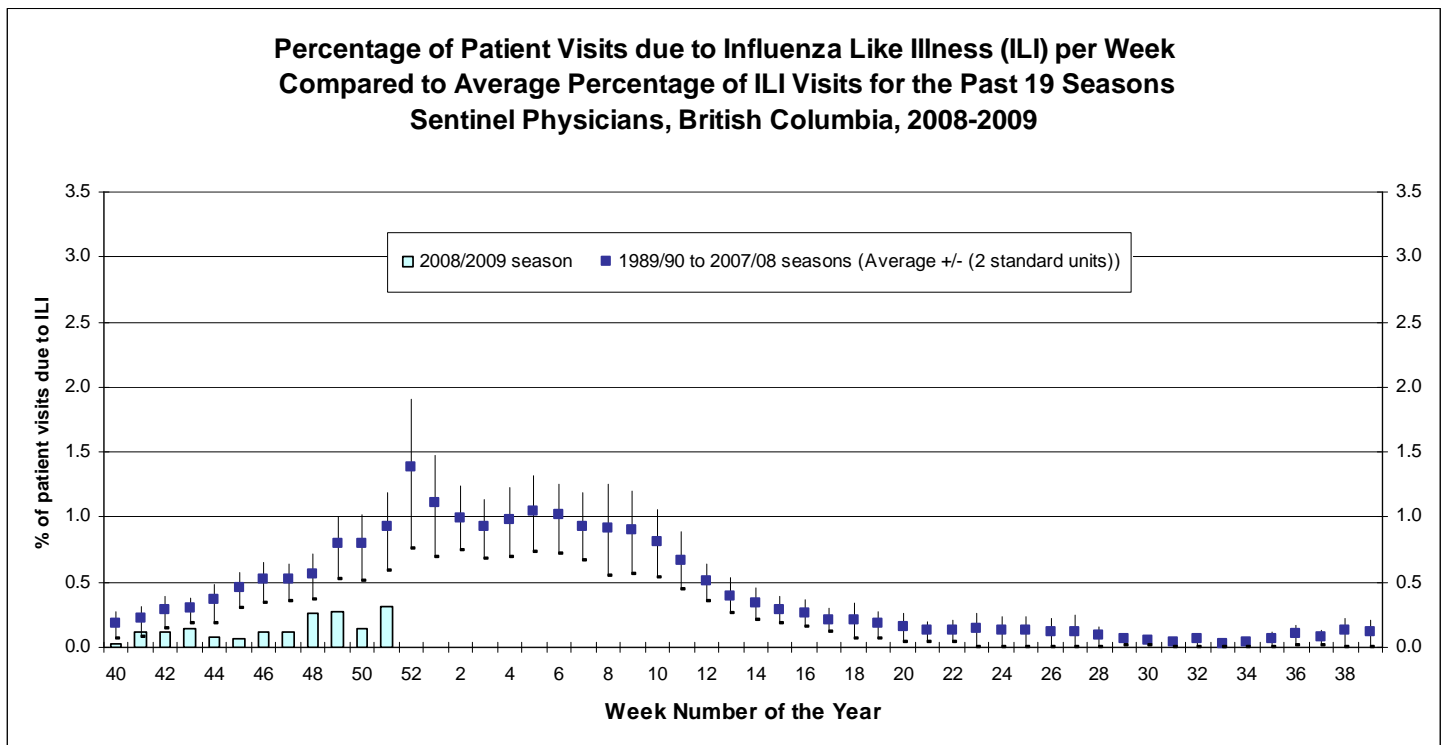
http://www.oie.int/eng/en_index.htm

3. This Report On-line

<http://www.bccdc.org/content.php?item=35>

WEEKLY 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

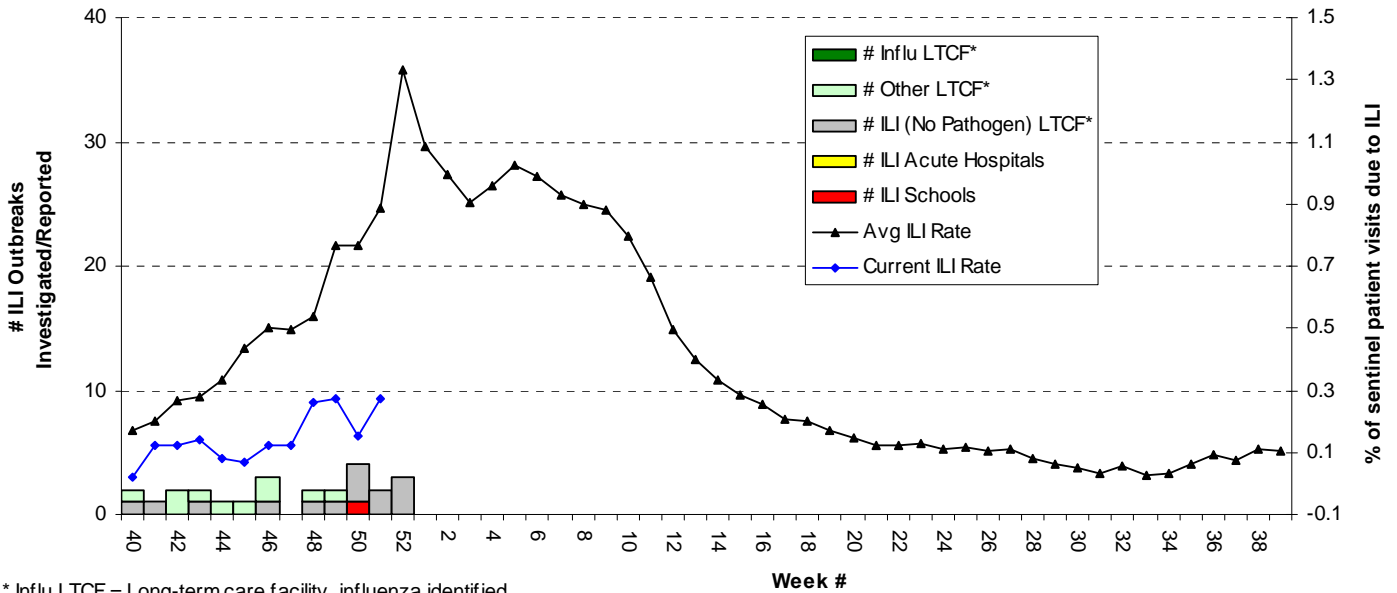


INFLUENZA-LIKE ILLNESS BY HEALTH AUTHORITY

HEALTH AUTHORITY	Week 51 Dec 14 – 20		
	ILI Visits	Total Visits	% ILI
Fraser	1	2,383	0.04%
Interior	6	595	1.01%
Northern	0	278	0.00%
Vancouver Coastal	5	1,526	0.33%
Vancouver Island	2	851	0.24%
BC Total	12	5,633	0.25%

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

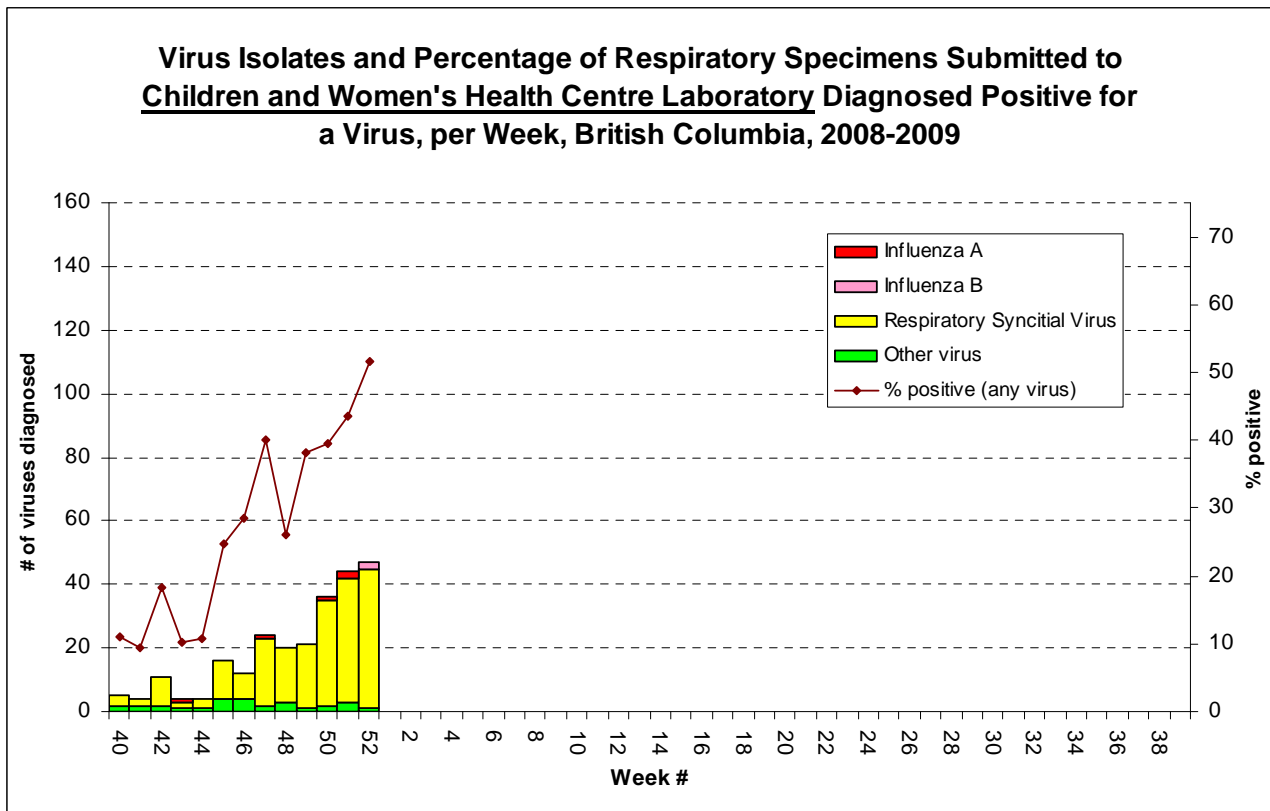
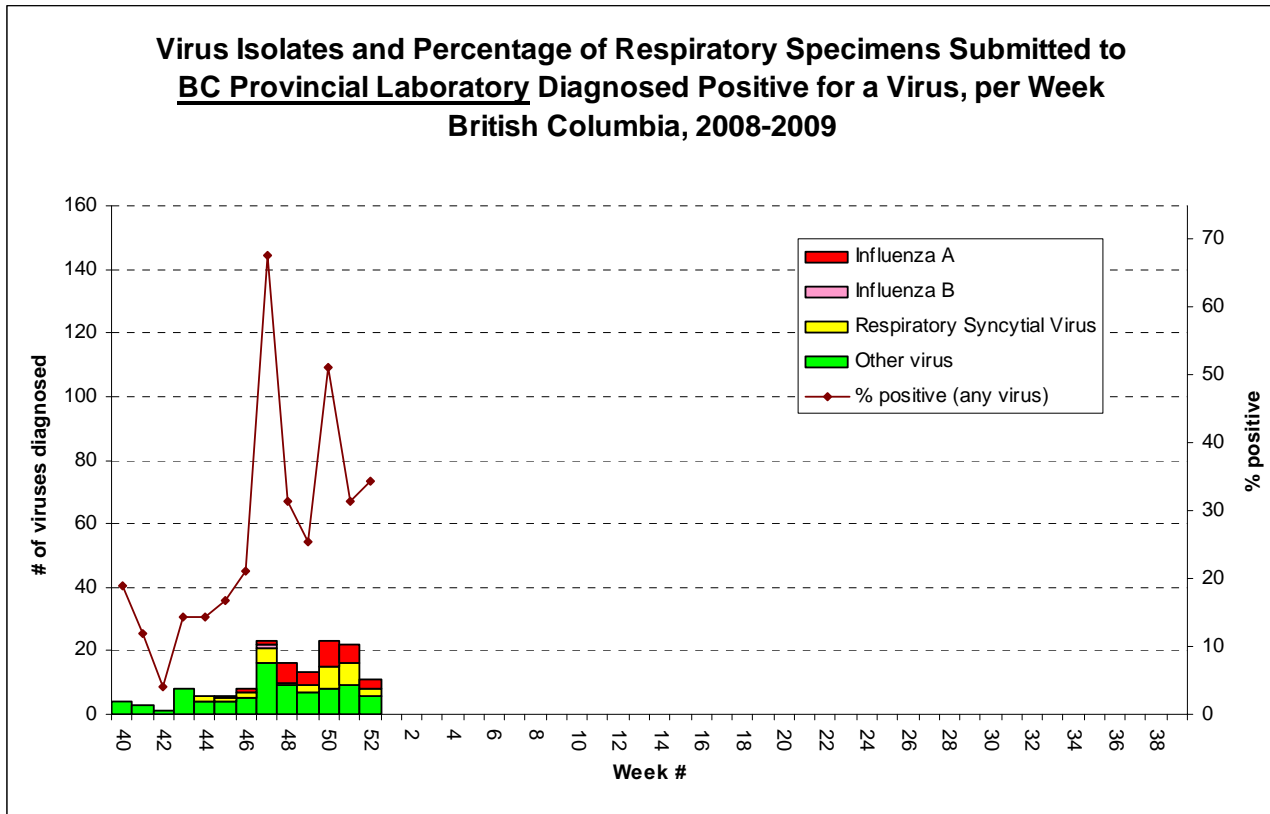


* Influenza LTCF = Long-term care facility, influenza identified

* Other LTCF = Long-term care facility, other pathogen identified (including RSV, parainfluenza, adenovirus, and rhino/enterovirus)

* ILI (No Pathogen) LTCF = Long-term care facility, no pathogen identified

LABORATORY SUMMARY





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: _____ Title: _____

Contact Phone: _____ Email: _____

Health Authority: _____ HSDA: _____

Full Facility Name: _____

- 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): _____ / _____ / _____

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

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): _____ / _____ / _____

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

SECTION D: Laboratory Information

Specimen(s) submitted? Yes (location: _____) No Don't know
If yes, organism identified? Yes (specify: _____) No Don't know