

**Section 1: Summary**

During Week 52, influenza activity was sporadic in parts of Alberta.

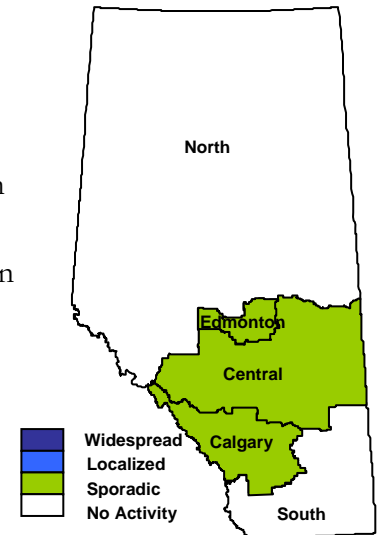
**North** No activity.

**Edmonton** Sporadic. 1 confirmed influenza A (H3) isolate in child. 3 confirmed influenza B isolates – 1 in an infant, 1 in a child, and 1 in an adult.

**Central** Sporadic. 5 confirmed influenza A (H3) isolates – 1 in an infant, 2 in children, and 2 in adults.

**Calgary** Sporadic. 3 confirmed influenza A (H3) isolates - 2 in children and 1 in an adult.

**South** No activity.



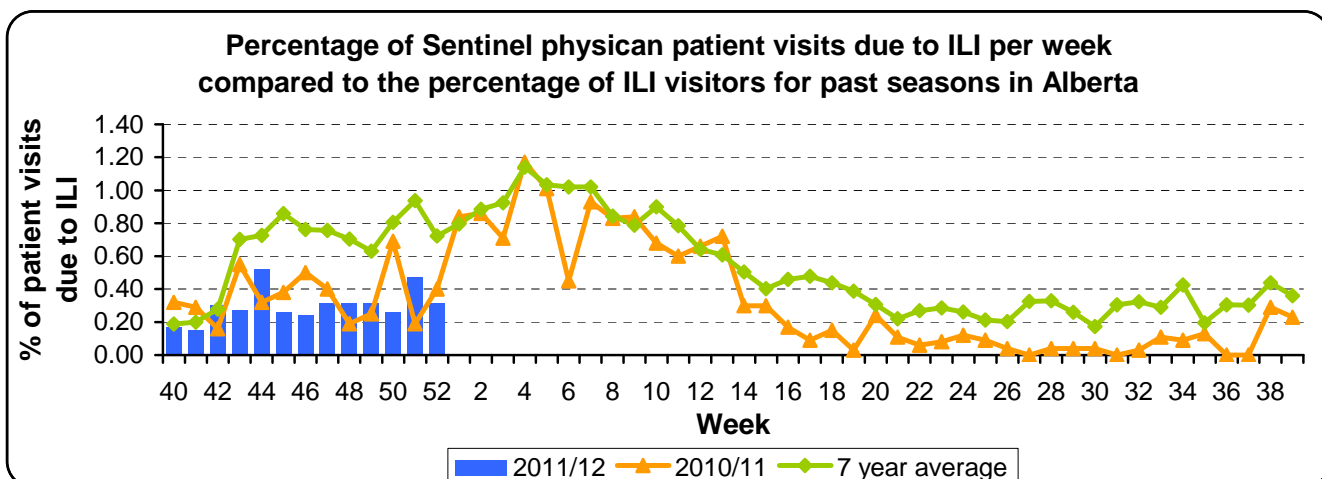
*\*Isolates reported above only include those found in Alberta residents.*

**Section 2: Influenza-Like Illness – TARRANT**

Sentinel physicians reported in all health zones but the South Zone during Week 52, and saw 1,284 patients. These 34 physicians diagnosed influenza-like-illness (ILI) or lower respiratory tract illness (LRTI) in **1.17%** of the patients seen, which is higher than the previous week (1.10%). The ILI rate for Week 52 (0.31%) is less than Week 51 (0.47%) and less than the average from previous seasons (0.72%).

Zone	Sentinel Doctors (#)	Sentinel Recorders (#)	Patients Seen (#)	ILI Cases (#)	Patients with ILI (%)	LRTI Cases (#)	Patients with LRTI (%)	Total ILI & LRTI Cases (#)	Patients with either ILI or LRTI (%)
North	7	1	60	0	0.00	0	0.00	0	0.00
Edmonton	10	3	121	3	2.48	0	0.00	3	2.48
Central	16	11	609	1	0.16	7	1.15	8	1.31
Calgary	32	18	494	0	0.00	4	0.81	4	0.81
South	8	1	0	0	0.00	0	0.00	0	0.00
<b>Alberta</b>	<b>73</b>	<b>34</b>	<b>1,284</b>	<b>4</b>	<b>0.31</b>	<b>11</b>	<b>0.86</b>	<b>15</b>	<b>1.17</b>

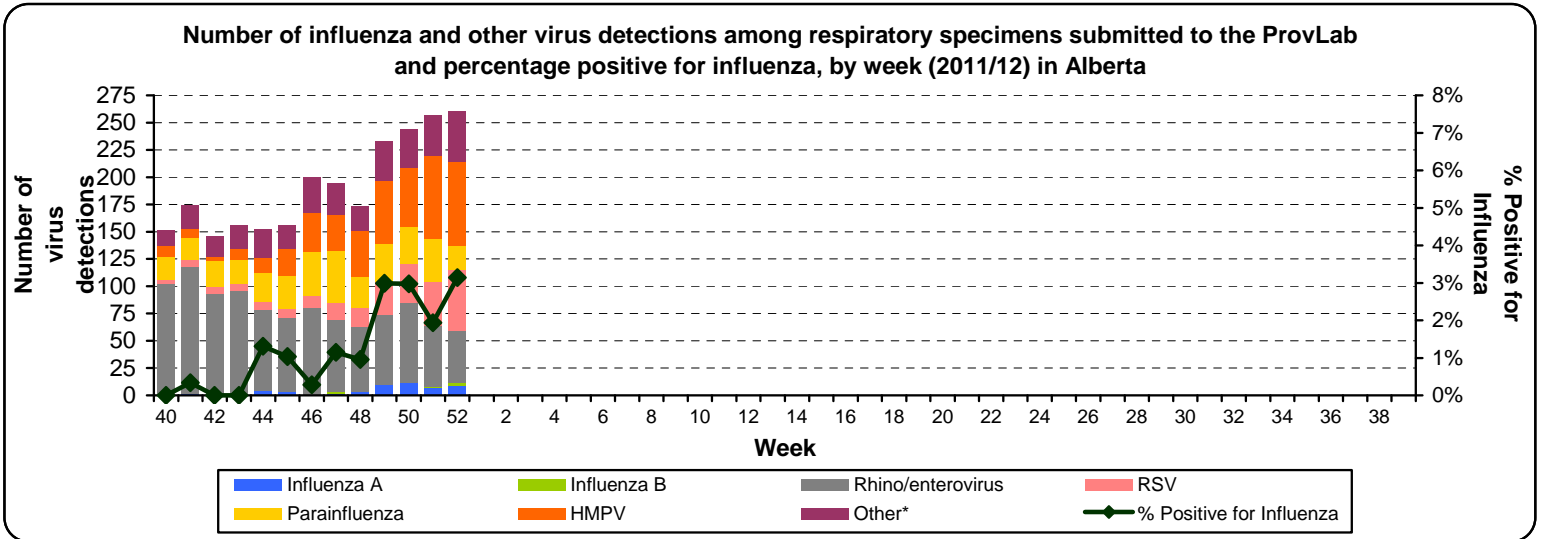
Source: TARRANT. For more information, please go to the website: [www.tarrantviralwatch.ca](http://www.tarrantviralwatch.ca). ILI= Influenza-Like Illness; LRTI = Lower Respiratory Tract Infection



Source: TARRANT; Of note: 7 year average is 2003/04 to 2010/11, excluding 2009/10 due to pandemic H1N1.

**Section 3: Influenza Isolates**

In Week 52, the Provincial Laboratory for Public Health (ProvLab) tested 382 specimens. ProvLab confirmed 9 influenza A isolates: Calgary Zone (3), Central Zone (5) and Edmonton Zone (1). There were also 3 confirmed influenza B isolates in Edmonton Zone. The percentage positive rate for influenza was 3.1%, which is higher than the previous week (1.9%). Human Metapneumovirus (HMPV) made up the largest number of virus detections for Weeks 51 and 52.



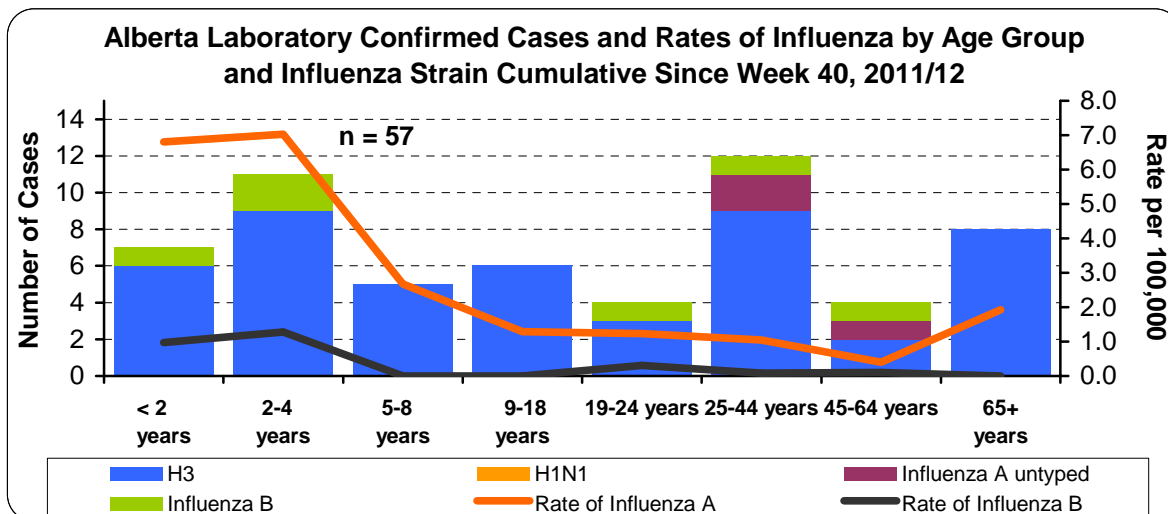
Sources: ProvLab, Dial System; Other\* refers to Adenovirus, Coronavirus human Metapneumovirus (HMPV), Parainfluenza and Mixed infections. Human respiratory syncytial virus (RSV); Isolates for cases which seek treatment within Alberta, but are out-of-provinces residents have been excluded.

Influenza Isolates (A&B) Reported by ProvLab				
AHS Health Zone	Week 52 Influenza A	Week 52 Influenza B	YTD (A) 2011/12*	YTD (B) 2011/12*
South	0	0	2	0
Calgary	3	0	7	2
Central	5	0	11	0
Edmonton	1	3	15	4
North	0	0	16	0
Alberta	9	3	51	6

The graph below shows the 57 lab-confirmed cases of influenza seen since October 2, 2011 by age group and influenza isolate, as well as the rate of influenza (both A & B) by age group. Children age 2 to 4 years had the highest rate of disease (7.03 cases per 100,000), followed by children under two years of age (6.80 cases per 100,000).

\*Season begins Week 40 (October 2, 2011)

Source: ProvLab – Note: Isolates reported by week subtyped



Source: ProvLab

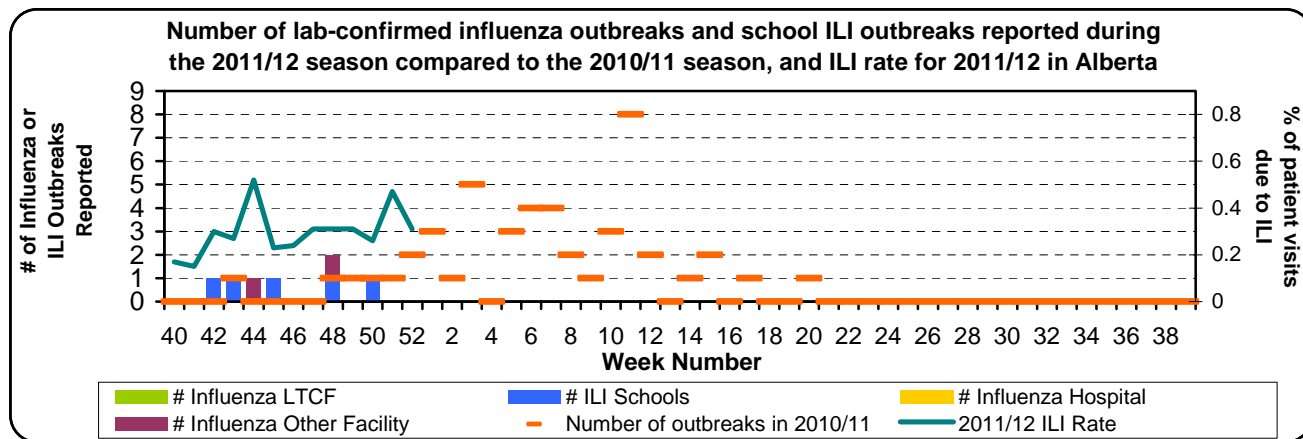
**Section 4: Outbreaks**

During Week 51 and 52 there were no influenza outbreaks reported to AHW.

Confirmed <u>New</u> Influenza or ILI Outbreaks Reported by Zones		
AHS Health Zone	Week 52	YTD 2011/12*
South	0	0
Calgary	0	1
Central	0	0
Edmonton	0	3
North	0	3
<b>Alberta</b>	<b>0</b>	<b>7</b>

Source: AHW outbreak database

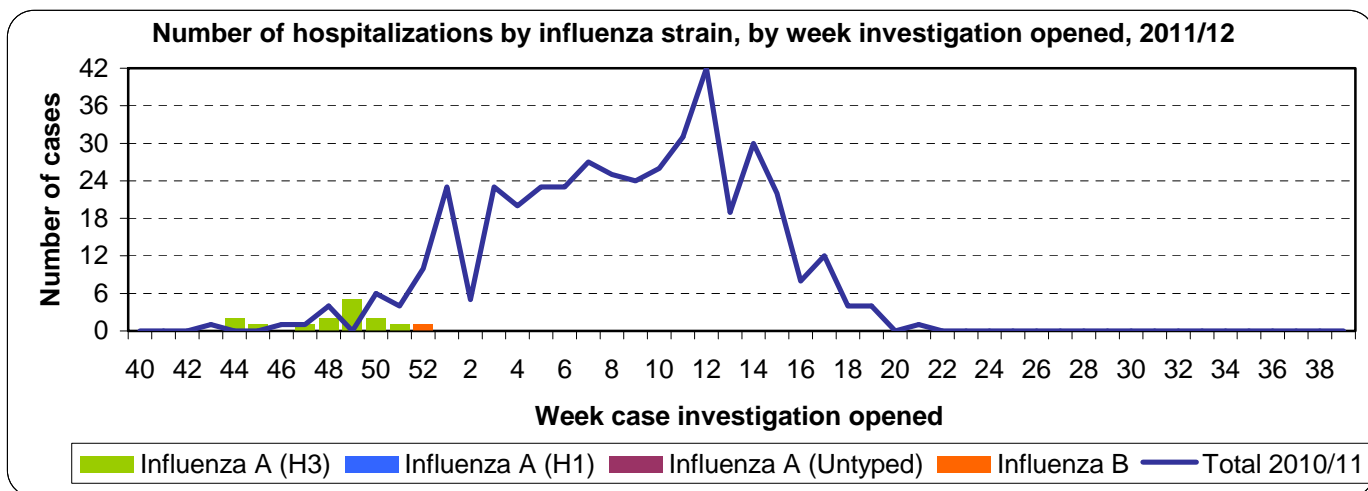
Each week Alberta Health and Wellness (AHW) receives reports of respiratory outbreaks. To be considered a **Long-Term Care facility (LTCF), Hospital or other facility** influenza outbreak, two or more cases of ILI within a seven-day period including at least one laboratory confirmed case, must occur. Of note, outbreaks (OBs) where the isolated agent is respiratory syncytial virus (RSV), parainfluenza, human metapneumovirus, or Rhino/enterovirus are also reported to AHW. Finally, **school outbreaks** are reported when greater than 10% of a school population are absent on any given day, most likely due to ILI. Outbreaks are reported by date investigation of outbreak is opened.



Sources: ProxLab, TARRANT, and AHW outbreak database; Of note, week 44 had the highest average number of outbreaks reported (44 outbreaks) for the previous four seasons.

**Section 5: Hospitalizations**

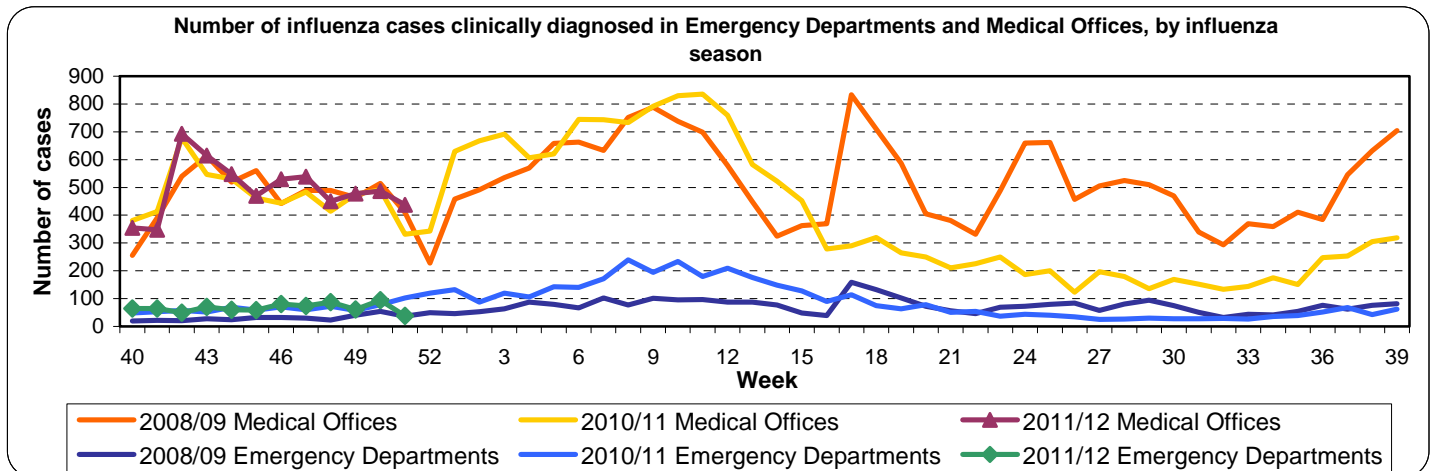
There was 1 hospitalization reported for influenza in Week 51, and 1 in Week 52. To date, 8 out of the 15 influenza hospitalizations have been children. Over the last 3 weeks, the numbers of hospitalizations have been below the number of hospitalizations seen in the same weeks during the 2010/11 season. All but one hospitalization (influenza B) were confirmed influenza A (H3).



Source: AHW 2011/12 Influenza/ Severe Respiratory Infection (SRI) reporting database.

## Section 6: Clinically Diagnosed Influenza

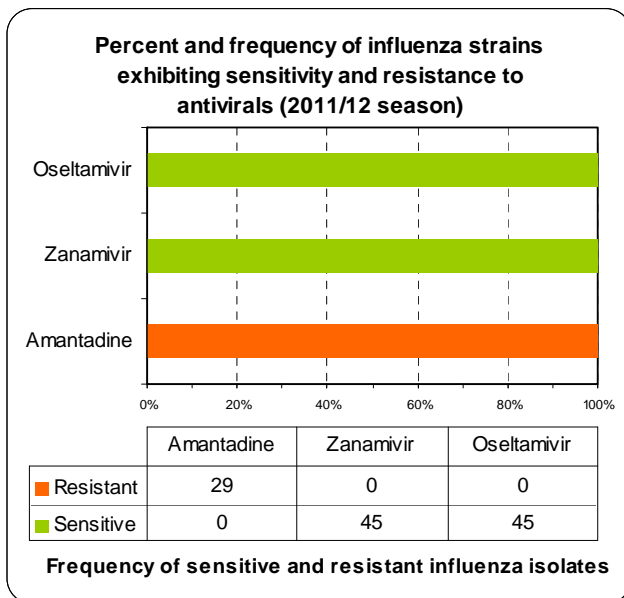
This graph is based on physician claims and hospitalization data and presents the number of influenza cases clinically diagnosed in Alberta’s emergency departments and general practitioner offices. Data for the 2011/2012 season, as well as 2008/09 and 2010/11 are shown. Please note that this data captures the majority of claims within two weeks of reporting and will be updated on a weekly basis.



Source: Morbidity and Ambulatory Care Reporting (MACAR) system, Supplemental Enhanced Service Event (SESE) database. **Note: 2009/10 data excluded due to the pandemic.** Sudden increase around Week 16 in 2008/09 season for both Emergency Department visits and Medical Office visits coincides with the emergency of pH1N1.

The number of influenza cases diagnosed by medical offices has been similar to previous seasons. The number of influenza cases diagnosed by emergency departments during Week 51 was similar to the 2008/09 season, but lower than the 2010/11 season.

## Section 7: Antigenic Characterization and Antiviral Resistance



The influenza strains covered by the 2011/12 Northern Hemisphere influenza vaccine are H3N2 (A/Perth/16/2009), H1N1 (A/California/7/2009), and influenza B (B/Brisbane/60/2008, Victoria lineage).

To date for the 2011/12 season, 47 influenza isolates have been tested for antigenic characterization by the National Microbiology Laboratory (NML):

- 26 influenza A H3N2 (A/Perth/16/2009)
  - Covered by the 2011/12 vaccine;
- 6 influenza A H1N1 (A/California/7/2009)
  - Covered by the 2011/12 vaccine;
- 7 influenza B (B/Brisbane/60/2008, Victoria lineage)
  - Covered by the 2011/12 vaccine; and
- 8 influenza B (B/Wisconsin/01/2010, Yamagata lineage)
  - Not covered by the 2011/12 vaccine.

Source: National Microbiology Laboratory

All influenza isolates tested by NML were sensitive to zanamivir and oseltamivir. All influenza isolates tested were resistant to amantadine (see graph). Last season, almost all influenza isolates tested by NML were sensitive to zanamivir. Almost all influenza isolates were sensitive to oseltamivir. Almost all influenza isolates were resistant to amantadine.

## Section 8: Canadian and International Influenza Activity

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The following links provide access to other Canadian and international websites related to influenza and ILI.

- Canada – FluWATCH      <http://www.phac-aspc.gc.ca/fluwatch/index-eng.php>
- British Columbia    <http://www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm>
- Alberta                <http://www.health.alberta.ca/professionals/influenza-evidence.html>
- Ontario                [www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu\\_06/flubul\\_mn.html](http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_06/flubul_mn.html)
- Quebec                [www.msss.gouv.qc.ca/sujets/prob\\_sante/influenza/index.php?accueil](http://www.msss.gouv.qc.ca/sujets/prob_sante/influenza/index.php?accueil)
- New Brunswick      [www.gnb.ca/0053/influenza/index-e.asp](http://www.gnb.ca/0053/influenza/index-e.asp)
- Nova Scotia          [www.gov.ns.ca/hpp/ocmoh/flu.htm](http://www.gov.ns.ca/hpp/ocmoh/flu.htm)
- World Health Organization    [www.who.int/topics/influenza/en/](http://www.who.int/topics/influenza/en/)
- USA – CDC            [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/)
- European Centre for  
Disease Prevention & Control    [www.ecdc.europa.eu/en/Health\\_Topics/influenza/news\\_archive.aspx](http://www.ecdc.europa.eu/en/Health_Topics/influenza/news_archive.aspx)
- Avian Flu in Poultry      [www.thepoultrysite.com/bird-flu](http://www.thepoultrysite.com/bird-flu)