

Section 1: Summary

During Week 50, influenza activity increased in parts of Alberta.

- North** Localized. One outbreak (influenza A) in a school. Five (5) H3 confirmed in adults.
- Edmonton** Sporadic. Four (4) H3 confirmed in adults; one in a child.
- Central** Sporadic. One influenza A confirmed in an adult.
- Calgary** No activity.
- South** No activity.



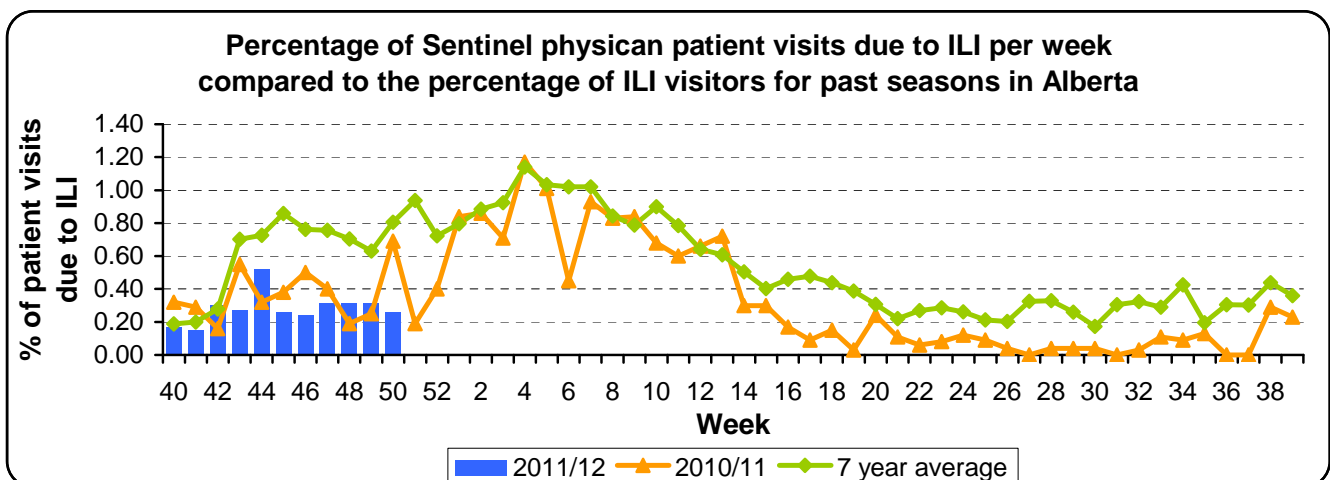
**Isolates reported above only include those found in Alberta residents.*

Section 2: Influenza-Like Illness – TARRANT

Sentinel physicians reported in all health zones during Week 50, and saw 3,104 patients. These 42 physicians diagnosed influenza-like-illness (ILI) or lower respiratory tract illness (LRTI) in **1.13%** of the patients seen, which is lower than the previous week (1.07%). The ILI rate for Week 50 (0.34%) is less than the average from previous seasons (0.19%).

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	73	0	0.00	0	0.00	0	0.00
Edmonton	10	6	776	4	0.52	14	1.80	18	2.32
Central	16	10	507	0	0.00	15	2.96	15	2.96
Calgary	32	18	1,417	6	0.42	3	0.21	9	0.64
South	8	2	148	0	0.00	0	0.00	0	0.00
Alberta	73	37	2,921	10	0.34	32	1.10	42	1.44

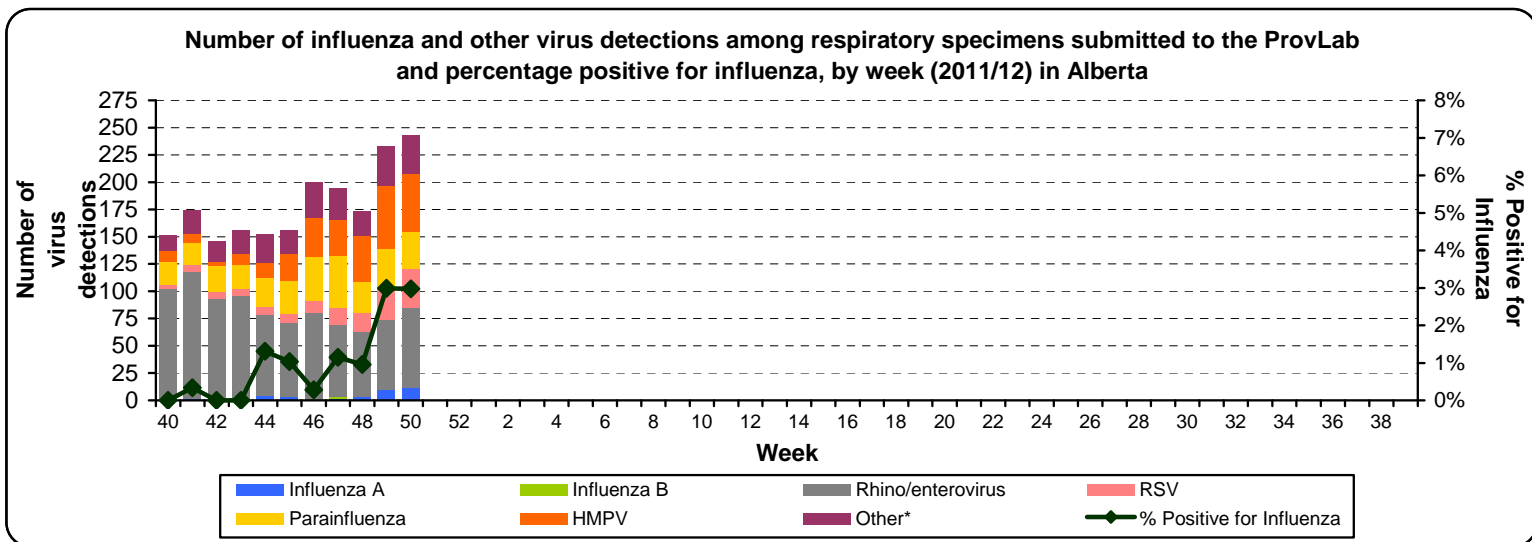
Source: TARRANT. For more information, please go to the website: www.tarrantviralwatch.ca. ILI= Influenza-Like Illness; LRTI = Lower Respiratory Tract Infection



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 50, the Provincial Laboratory for Public Health (ProvLab) tested 370 specimens. ProvLab confirmed 11 influenza A isolate in three zone, and no influenza B isolates. The percentage positive rate for influenza was 0.3%, which is the same as the previous week (0.3%). Rhino/enterovirus made up the largest number of virus detections for Week 50.

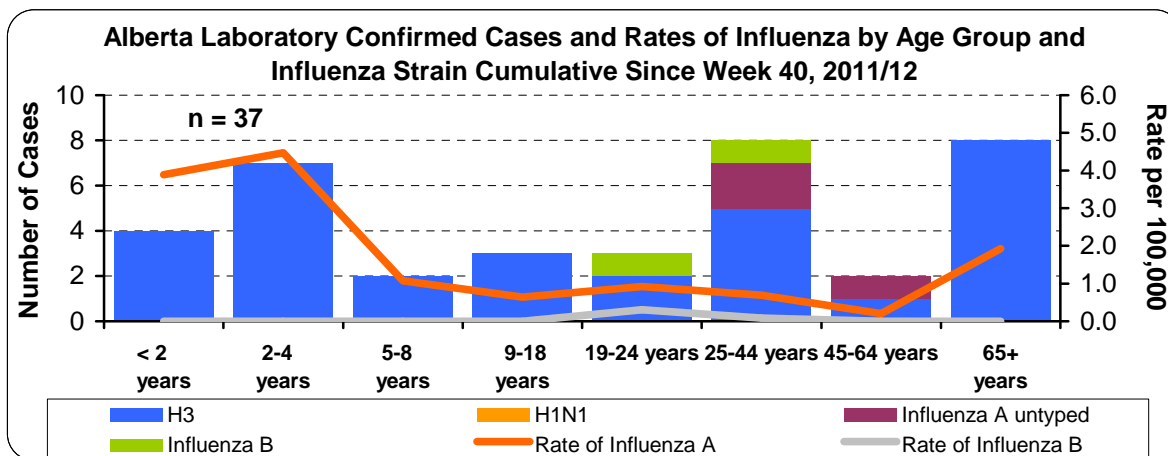


Sources: ProvLab, Dial System; Other* refers to Adenovirus, Coronavirus human Metapneumovirus (HMPV), Parainfluenza and Mixed infections. Human respiratory syncytial virus (RSV); Isolates for cases which seek treatment within Alberta, but are out-of-provinces residents have been excluded.

Influenza Isolates (A&B) Reported by ProvLab				
AHS Health Zone	Week 50 Influenza A	Week 50 Influenza B	YTD (A) 2011/12*	YTD (B) 2011/12*
South	0	0	2	0
Calgary	0	0	4	2
Central	1	0	5	0
Edmonton	5	0	12	0
North	5	0	12	0
Alberta	11	0	35	2

The graph below shows the 37 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. Persons under two years of age have the highest rate of disease (3.89 cases per 100,000).

*Season begins Week 40 (October 2, 2011)
Source: ProvLab – Note: Isolates reported by week subtyped



Source: ProvLab

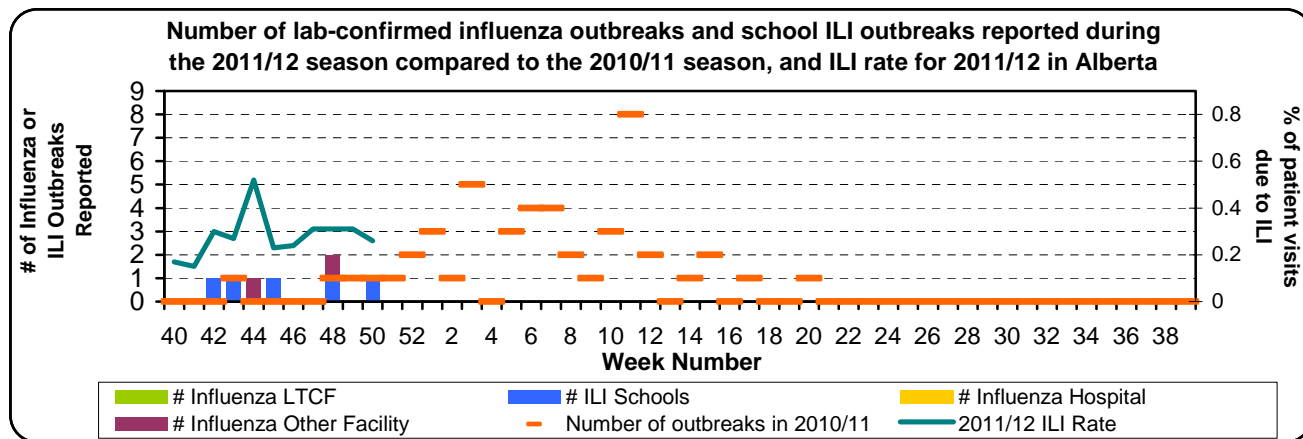
Section 4: Outbreaks

During Week 50 there was one influenza outbreak in a school (North zone) reported to AHW.

Confirmed <u>New</u> Influenza or ILI Outbreaks Reported by Zones		
AHS Health Zone	Week 50	YTD 2011/12*
South	0	0
Calgary	0	1
Central	0	0
Edmonton	0	3
North	1	3
Alberta	1	7

Source: AHW outbreak database

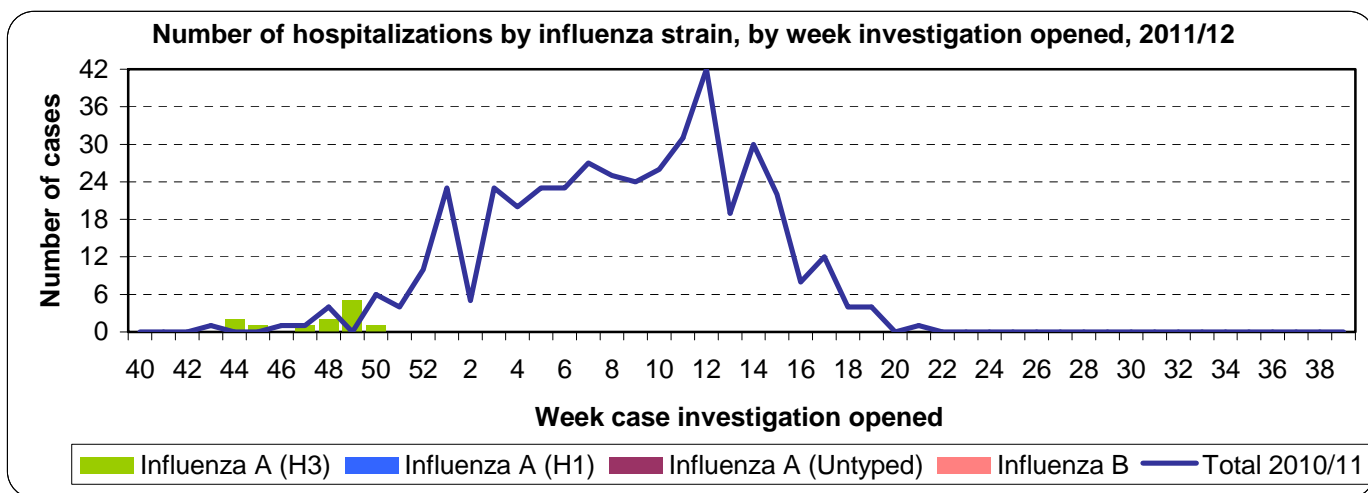
Each week Alberta Health and Wellness (AHW) receives reports of respiratory outbreaks. To be considered a **Long-Term Care facility (LTCF), Hospital or other facility** influenza outbreak, two or more cases of ILI within a seven-day period including at least one laboratory confirmed case, must occur. 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: ProvLab, 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

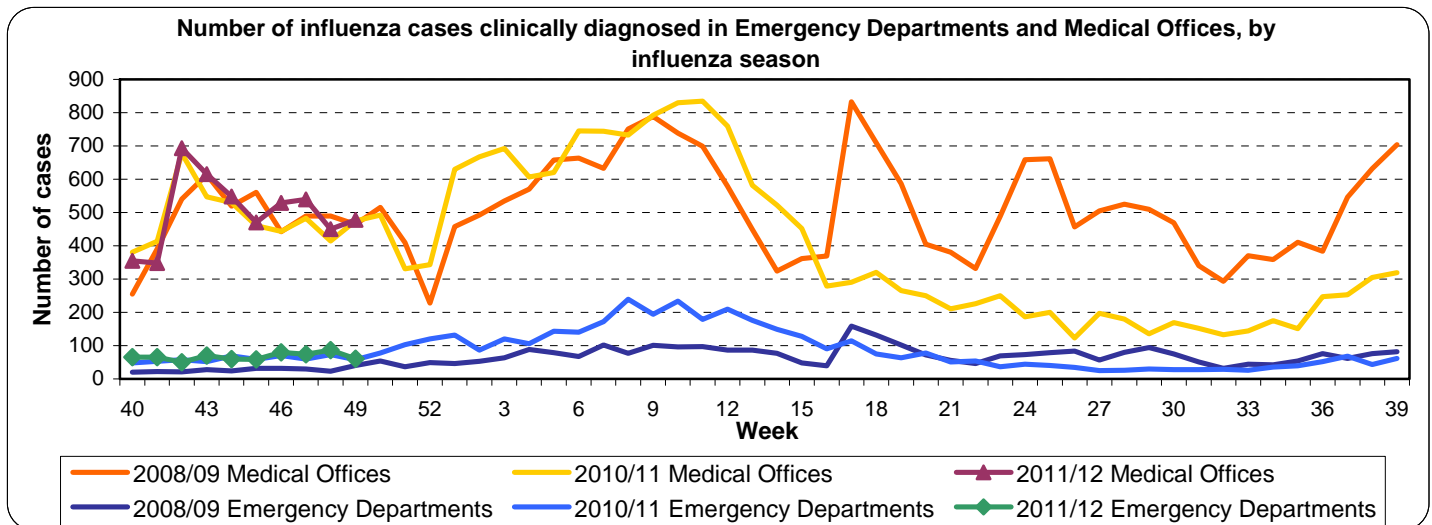
During Week 50 there was 1 hospitalization reported for influenza, which is less than what was reported the previous week (5 hospitalizations).



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

Section 6: Clinically Diagnosed Influenza

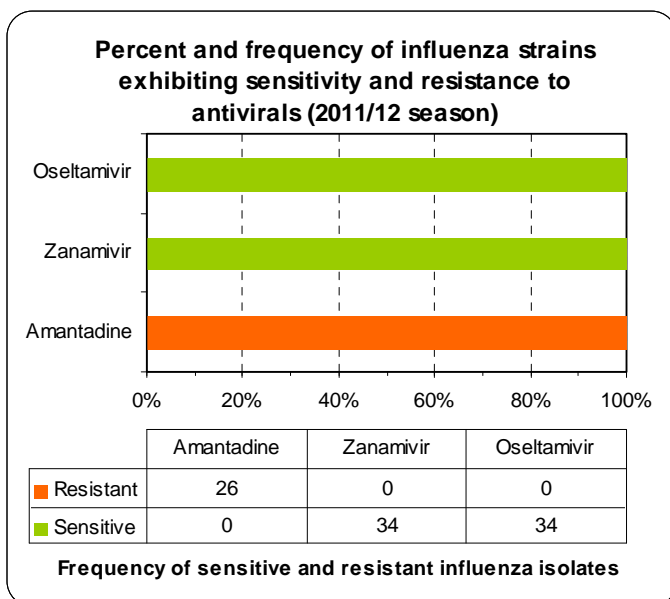
This graph is based on physician claims and hospitalization data and presents the number of influenza cases clinically diagnosed in Alberta’s emergency departments and general practitioner offices. Data for the 2011/2012 season, as well as 2008/09 and 2010/11 are shown. Please note that this data captures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

Influenza cases diagnosed by emergency departments and medical offices were similar to previous seasons.

Section 7: Antigenic Characterization and Antiviral Resistance



To date for the 2011/12 season, 34 influenza isolates have been tested for antigenic characterization by the National Microbiology Laboratory (NML):

- 19 influenza A H3N2 (A/Perth/16/2009);
- 5 influenza A H1N1 (A/California/7/2009);
- 6 influenza B (B/Wisconsin/01/2010, Yamagata lineage); and
- 4 influenza B (B/Brisbane/60/2008, Victoria lineage).

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). The H3N2 isolates, H1N1 isolate and Victoria lineage B isolates characterized by NML are covered by this season’s vaccine. However, the two Yamagata lineage B isolates characterized by NML are not covered.

All influenza isolates tested by NML were sensitive to zanamivir and oseltamivir. Nineteen H3N2 isolates were

tested for amantadine resistance, and all were found to be resistant (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.

Source: National Microbiology Laboratory

Section 8: Canadian and International Influenza Activity

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
- Quebec www.msss.gouv.qc.ca/sujets/prob_sante/influenza/index.php?accueil
- New Brunswick www.gnb.ca/0053/influenza/index-e.asp
- Nova Scotia www.gov.ns.ca/hpp/ocmoh/flu.htm
- World Health Organization www.who.int/topics/influenza/en/
- USA – CDC www.cdc.gov/flu/weekly/
- European Centre for
Disease Prevention & Control www.ecdc.europa.eu/en/Health_Topics/influenza/news_archive.aspx
- Avian Flu in Poultry www.thepoultrysite.com/bird-flu