






Weekly Influenza News

Week 51: December 17 to December 23, 2017

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Higher	28 local lab-confirmed case reported in week 51 ; 16 cases reported in week 50
 <u>Percent Positive of Flu Specimens</u> [†]	Higher	Simcoe Muskoka: - flu A (7.4%); flu B (7.4%) Ontario: - flu A (8.1%); flu B (2.6%)
 <u>Local Institutional Outbreaks</u>	Higher	Four institutional influenza outbreaks were declared in week 51. Eleven influenza outbreaks reported for the season to date.
 <u>Local Emergency Department respiratory visits: week 51</u>	Higher	Percentage of visits is higher compared to previous week; similar to same period in the 2016/17 season
Week 51 Overall Assessment December 17 to December 23, 2017	Higher	Reported Activity Level: Localized 19 cases of Flu A reported in SMDHU. Nine cases of Flu B reported in SMDHU.
 <u>Predominant Influenza Strains:</u> Influenza A (H3)		

Notes: Reported activity level is based on the weekly submission of [Appendix C](#) to Public Health Ontario. Definition available [here](#).

*Compared to previous [surveillance week](#)

† Reported for week 50

Reported Local Influenza Cases

In Simcoe Muskoka, there have been 116 **lab-confirmed influenza cases reported** as of 27 December 2017; 28 (24.1%) of which were reported in week 51 – this was higher when compared to week 50.

Of the 93 reported influenza A cases, only 24 have been subtyped:

- 22/24 (91.7%) are influenza A, H3 strain
- 2/24 (8.3%) is influenza A, H1N1 pdm09

🔗 Figure 1 and Figure 2 below provide historic comparisons

Table 1: Summary of influenza cases for 2017/18 season

Lab-confirmed Influenza Cases	Week 51		Season-to-Date	
	N	%	N	%
Influenza A	19	68%	93	80%
Influenza B	9	32%	23	20%
Influenza A & B	0	0%	0	0%
Total	28	100%	116	100%

Notes:

Data source: Communicable Disease Intake Database, extracted on December 27, 2017.

Historical Comparison

Figure 1: Reported Influenza Cases, Type A, Current Influenza Season with Historical Comparison, Simcoe Muskoka

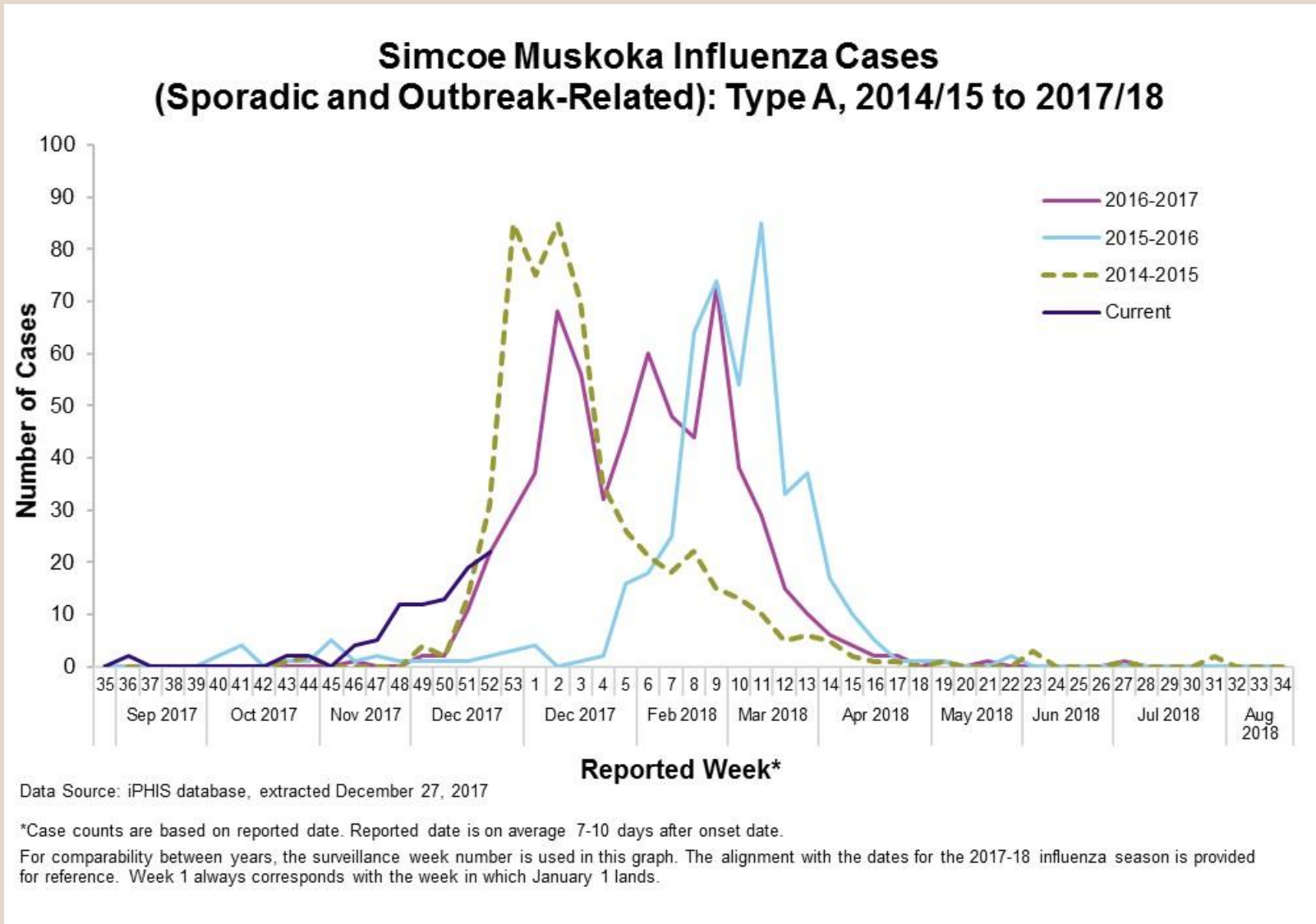
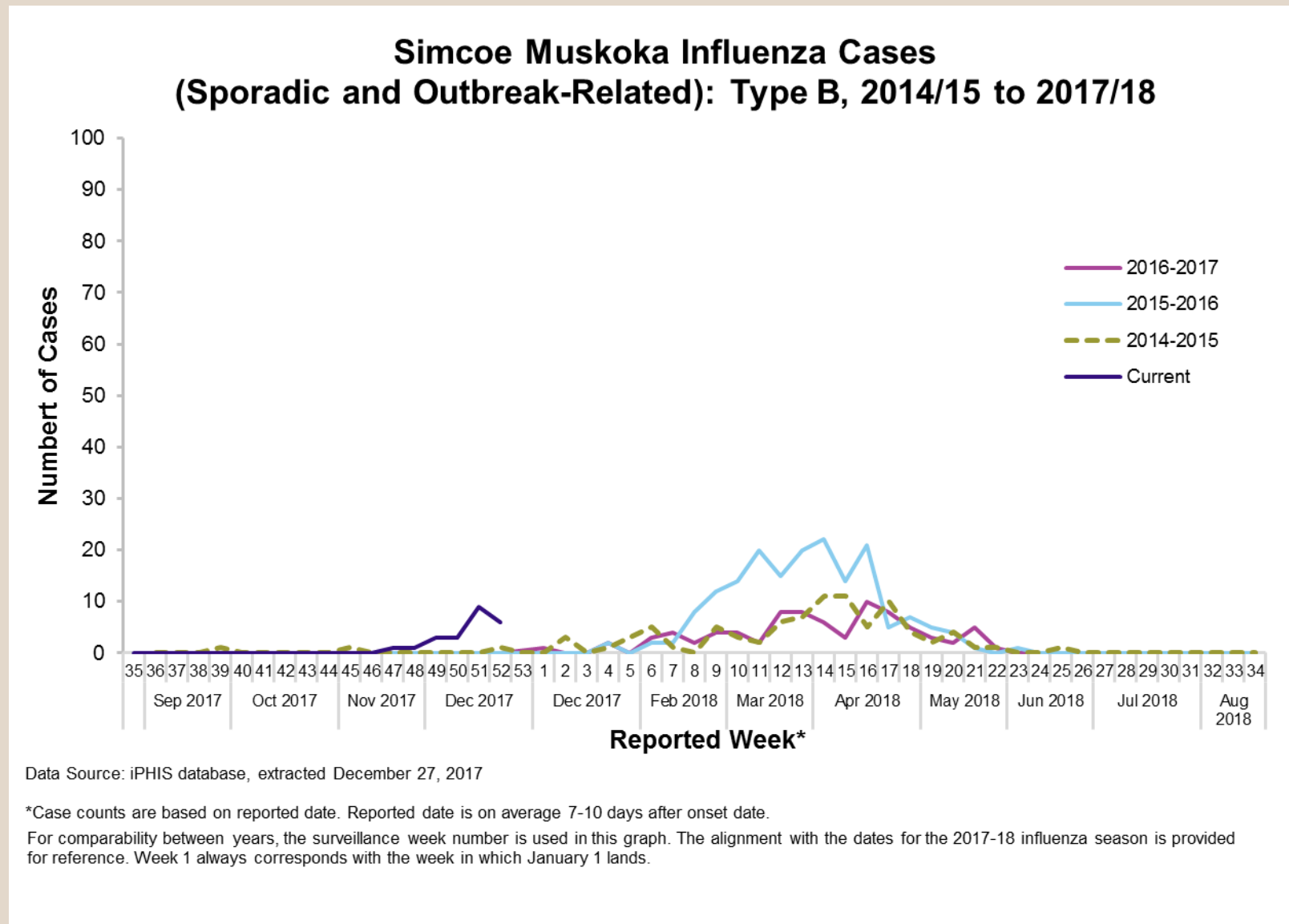


Figure 2: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



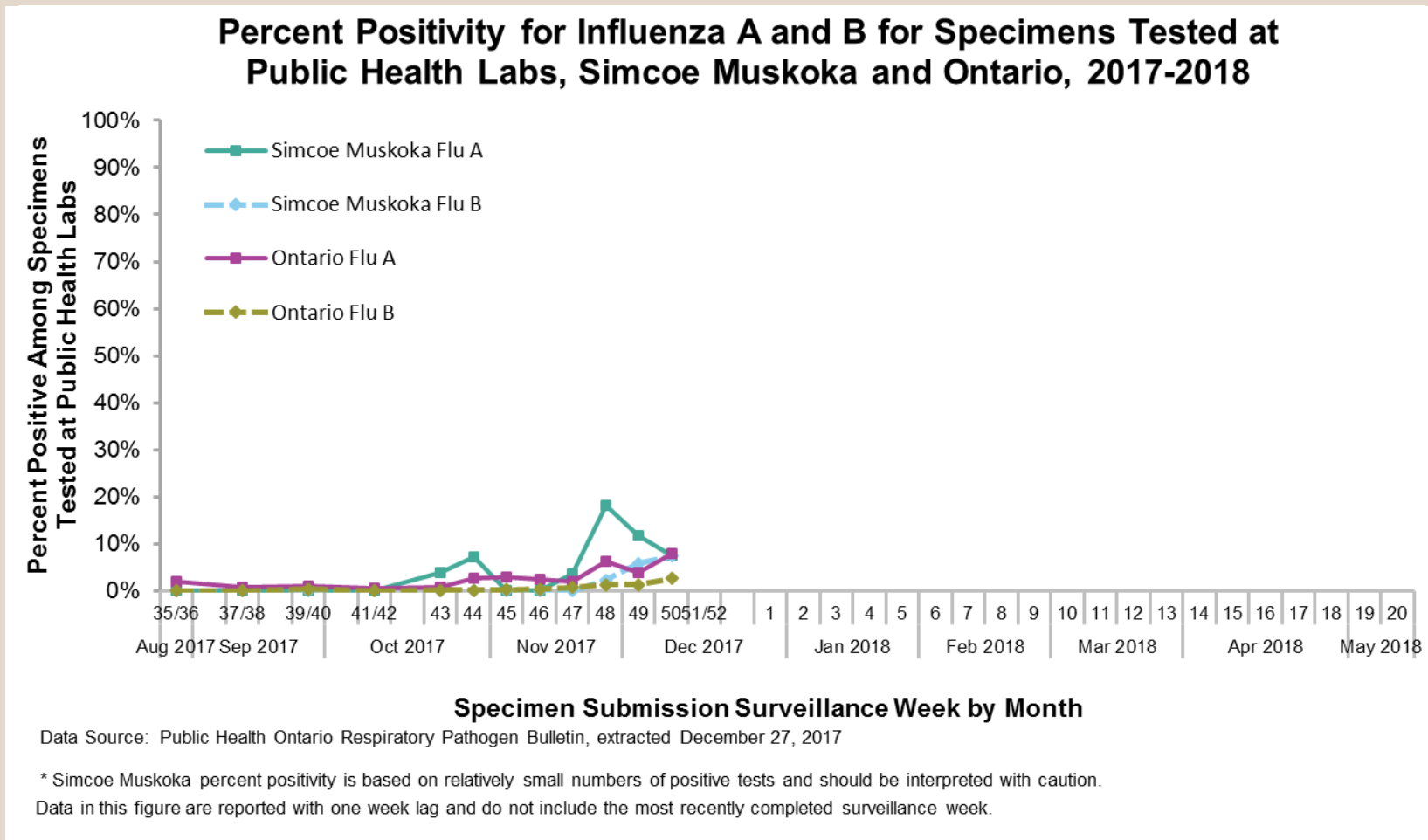
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 51. Percent positivity is reported for week 50.

The percentage of flu specimens that are positive (percent positivity) for Influenza A is increasing for the season. The provincial percent positivity for influenza A in week 50 was reported at 8.1%, which is higher compared to week 49. Influenza B percent positivity was reported at 2.6% for week 50.

Locally for week 50, percent positivity for influenza A was reported at 7.4%, while influenza B was also 7.4%.

Figure 3: Percent Positivity, Influenza A & B, Simcoe Muskoka & Ontario, 2017/18

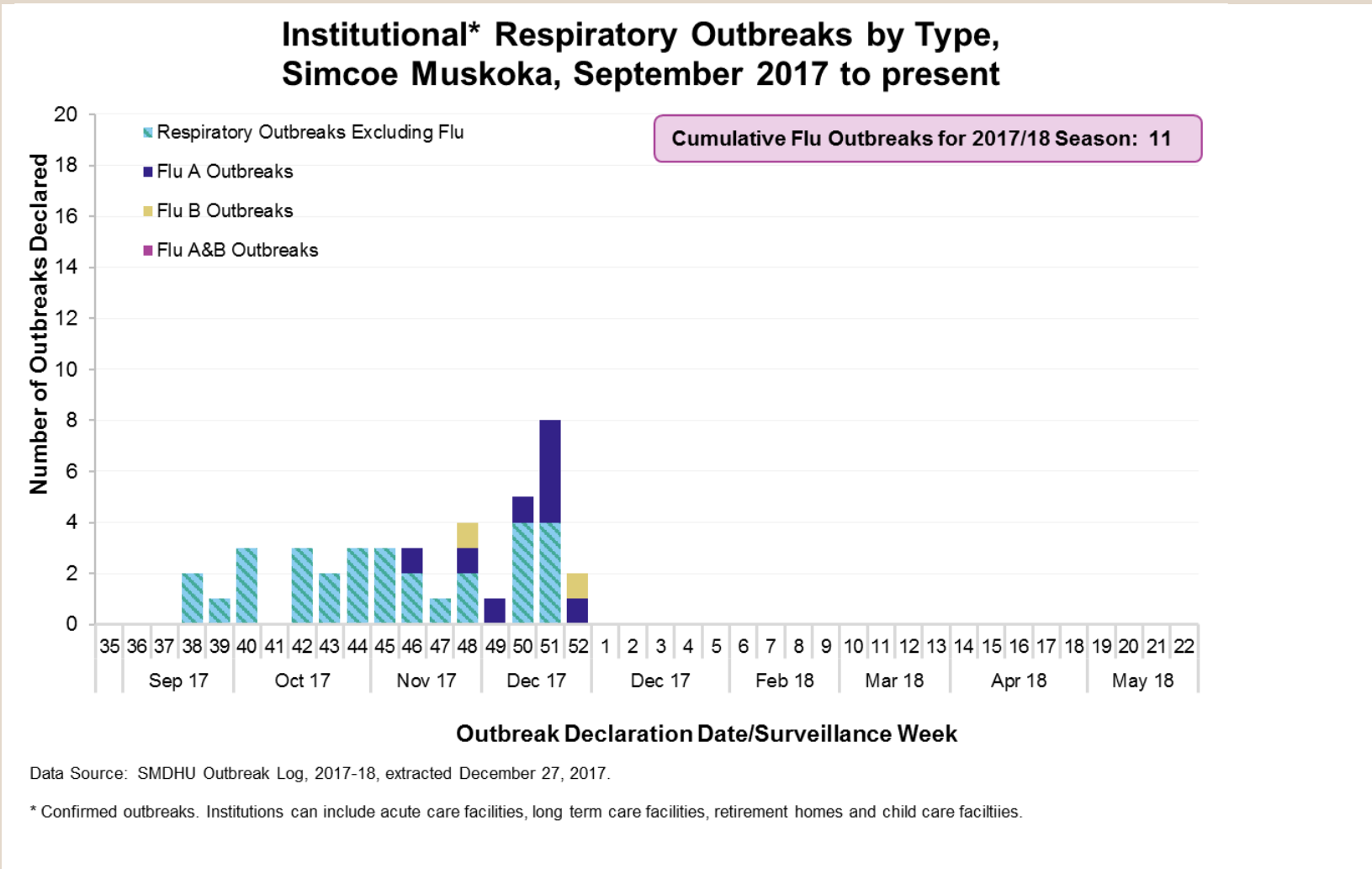


Institutional Respiratory Outbreaks

There have been eleven *lab-confirmed institutional flu outbreak* in Simcoe Muskoka since September 1, 2017:

- Influenza A: nine outbreaks
- Influenza B: two outbreaks

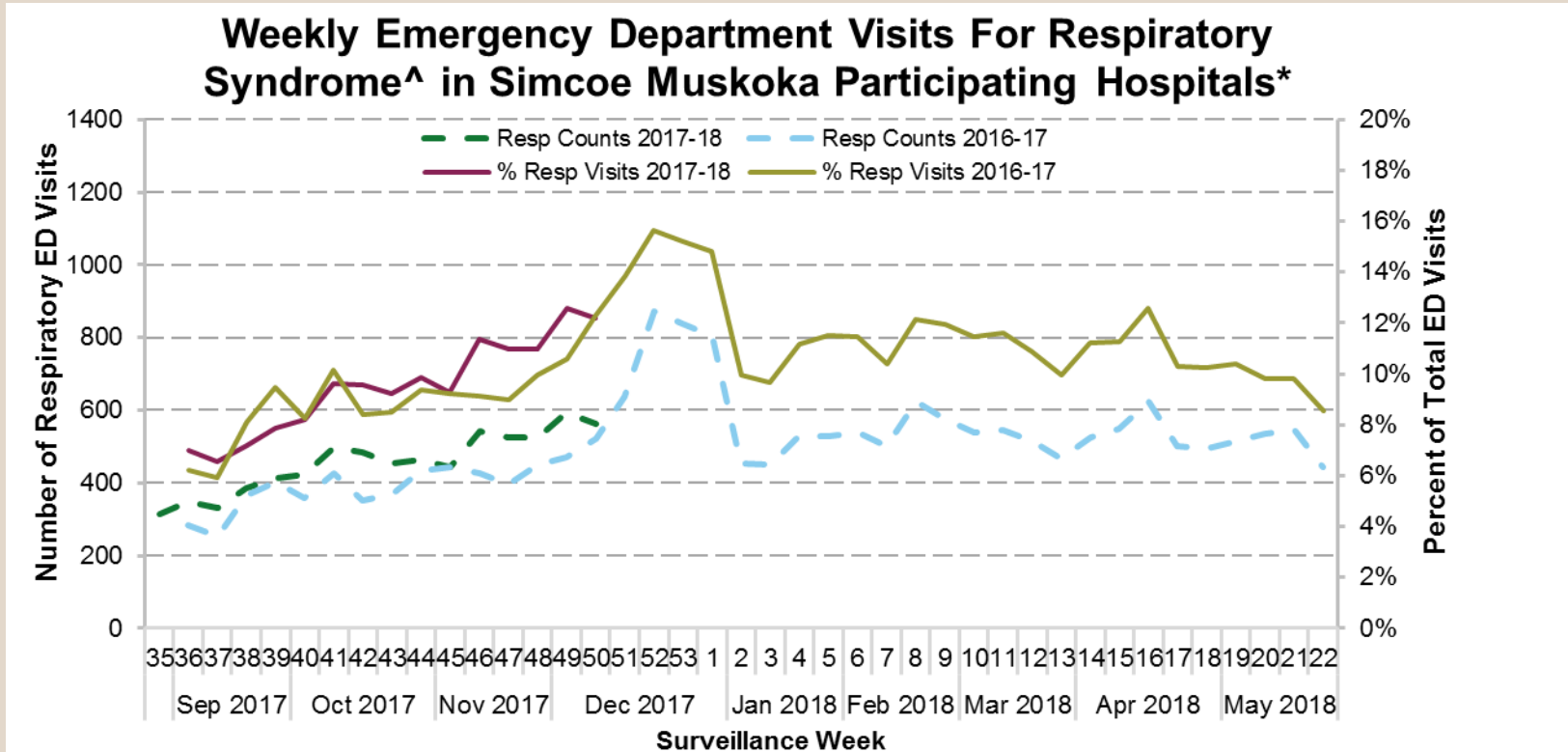
Figure 4: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2017/18



Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 14.7% of visits in week 51. This is higher compared to week 50, and similar compared to the same point in the 2016/17 season.

Figure 5: Emergency Department Visits for Respiratory Syndrome at Participating Simcoe Muskoka Hospital, 2016/17, 2017/18 Seasons



Data Source: Acute Care Enhanced Surveillance (ACES) System, extracted December 27, 2017.
 ^ Respiratory syndrome is defined as "respiratory infection non croup, non bronchiolitis. Includes sore throat, cough, cold, ear infection, blocked ear, earache etc". This syndrome does not include influenza-like illness, which is "fever, myalgia, undifferentiated flu".
 *Participating hospitals are: RVH, OSMH, MAH (Bracebridge and Huntsville), GBGH and CGMH. Includes Simcoe Muskoka residents and visitors. As of Oct. 2016, an additional local hospital began feeding data to ACES; comparison of previous crude counts with the current counts should not be made.

The above data is provided through Acute Care Enhanced Surveillance (ACES), an emergency department (ED) syndromic surveillance system managed by KFLA Public Health Informatics for participating Ontario hospitals. Six hospitals participate in Simcoe Muskoka.

Vaccine Match and Influenza Strains

The trivalent 2017-2018 influenza vaccine contains the following strains:

- A/Michigan/45/2015 (H1N1)pdm09-like virus;
- A/Hong Kong/4801/2014 (H3N2)-like virus; and
- B/Brisbane/60/2008-like virus.

Table 2: Local, Provincial and National Matched and Mismatched Flu Specimens and National Match Percent, 2017-18

Influenza Strains	Number of Specimens with Strain Characterization Results		National Match Percent [†]
	Ontario	Canada	
Influenza A Vaccine Strains			
Influenza A (H3N2) A/Hong Kong/4801/2014-like	15	32	74%
Influenza A (H1N1) A/Michigan/45/2015-like	9	11	26%
Influenza B Vaccine Strains			
B/Brisbane/60/2008-like	1	4	9%
B/Phuket/3073/13-like (Quad vaccine only)	14	39	91%

Data Source: Ontario and Canada Counts: Public Health Ontario Respiratory Pathogen Report, Table 7: Strain characterization completed on influenza isolates at the National Microbiology Laboratory Surveillance week 50, extracted December 27, 2017.

Provincial and national counts are reported with one week lag and do not include the most recently completed surveillance week. Surveillance weeks can be found [here](#).

[†] Non-vaccine match strains are not reported. Percent match is based on antigenically similar strains. As of week 50, an additional 100 specimens did not grow to sufficient hemagglutination titers for antigenic characterization, but were found to be of the same genetic group as A/Hong Kong/4801/2014-like virus through sequence analysis.

Technical Notes

Definitions

Percentage positivity: the number of positive flu cases divided by the number of specimens tested at Public Health Ontario Labs

Reported activity level: the level of influenza activity that is reported to Public Health Ontario by Simcoe Muskoka, based on influenza cases and outbreaks. Definitions available [here](#).

Surveillance week: The week number corresponding to the week of year, running Sunday to Saturday, inclusive, for reporting influenza activity. January 1 always falls within week 1. A list of the current season's surveillance weeks can be found [here](#).

Limitations

Timeliness:

The provincial data are from one week previous because that is the most recent data available.

The hospital data, local counts of influenza, and outbreaks are current to date.

The number of cases listed in a given surveillance week may change as more information becomes available

Case-Follow-up and iPHIS Data Entry:

While Public Health Ontario only requires detailed information on every fifth case of influenza reported to SMDHU, the health unit investigates all hospitalized influenza cases in order to ensure accurate adverse outcomes and subtyping data is available.

Case Reporting:

Sporadic cases do not accurately describe all cases of influenza as those cases reported are skewed towards individuals more likely to seek medical care and be tested (e.g. young, elderly and immunocompromised).

Additional Resources

Simcoe Muskoka

- [Influenza Fact Sheet](#)
- [Influenza HealthSTATS page](#)

Provincial

- [Ontario Respiratory Pathogen Bulletin](#)
- [Public Health Ontario Laboratory Respiratory Pathogen Surveillance Reports](#)
- [ILI Mapper](#)

Week 50 Provincial Summary: For the 2017-2018 surveillance season to week 50, 566 laboratory-confirmed influenza cases have been reported across Ontario, 147 (26%) of which were reported in week 50. Among cumulative cases, 76.0% (430/566) were influenza A. Of the 165 reported influenza A cases with subtype information available, 87.3% (144/165) were H3N2 and 12.7% (21/165) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 50, extracted December 27, 2017)

National

- [Public Health Agency of Canada FluWatch](#)

International Resources

- [WHO Global Influenza Surveillance and Response System](#)