






Weekly Influenza News

Week 46: November 12 to November 18, 2017

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Higher	4 local lab-confirmed case reported in week 46 ; 0 cases reported in week 45
 <u>Percent Positive of Flu Specimens[†]</u>	Similar	Simcoe Muskoka: - flu A (0.0%); flu B (0.0%) Ontario: - flu A (3.0%); flu B (0.3%)
 <u>Local Institutional Outbreaks</u>	Higher	One institutional influenza outbreak was declared in week 46. One influenza outbreak reported for the season to date.
 <u>Local Emergency Department respiratory visits: week 46</u>	Higher	Percentage of visits higher than previous week and for same period in the 2016/17 season
Week 46 Overall Assessment November 12 to November 18, 2017	Higher	Reported Activity Level: Localized
		Four cases of Flu A reported in SMDHU this week. Flu B activity is low in SMDHU.
 <u>Predominant Influenza Strains:</u> Influenza A		

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 45

Reported Local Influenza Cases

In Simcoe Muskoka, there have been 14 **lab-confirmed influenza cases reported** as of 21 November 2017; 4 (28.6%) of which were reported in week 46 – this was higher when compare to week 45.

Of the 14 reported cases, only four (29%) have been subtyped:

- 4/4 (100%) were influenza A, subtype H3

🔗 Figure 1 and Figure 2 below provide historic comparisons

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

Lab-confirmed Influenza Cases	Week 46		Season-to-Date	
	N	%	N	%
Influenza A	4	100%	13	93%
Influenza B	0	0%	1	7%
Influenza A & B	0	0%	0	0%
Total	4	100%	14	100%

Notes:
Data source: Communicable Disease Intake Database, extracted on November 21, 2017.

Historical Comparison

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

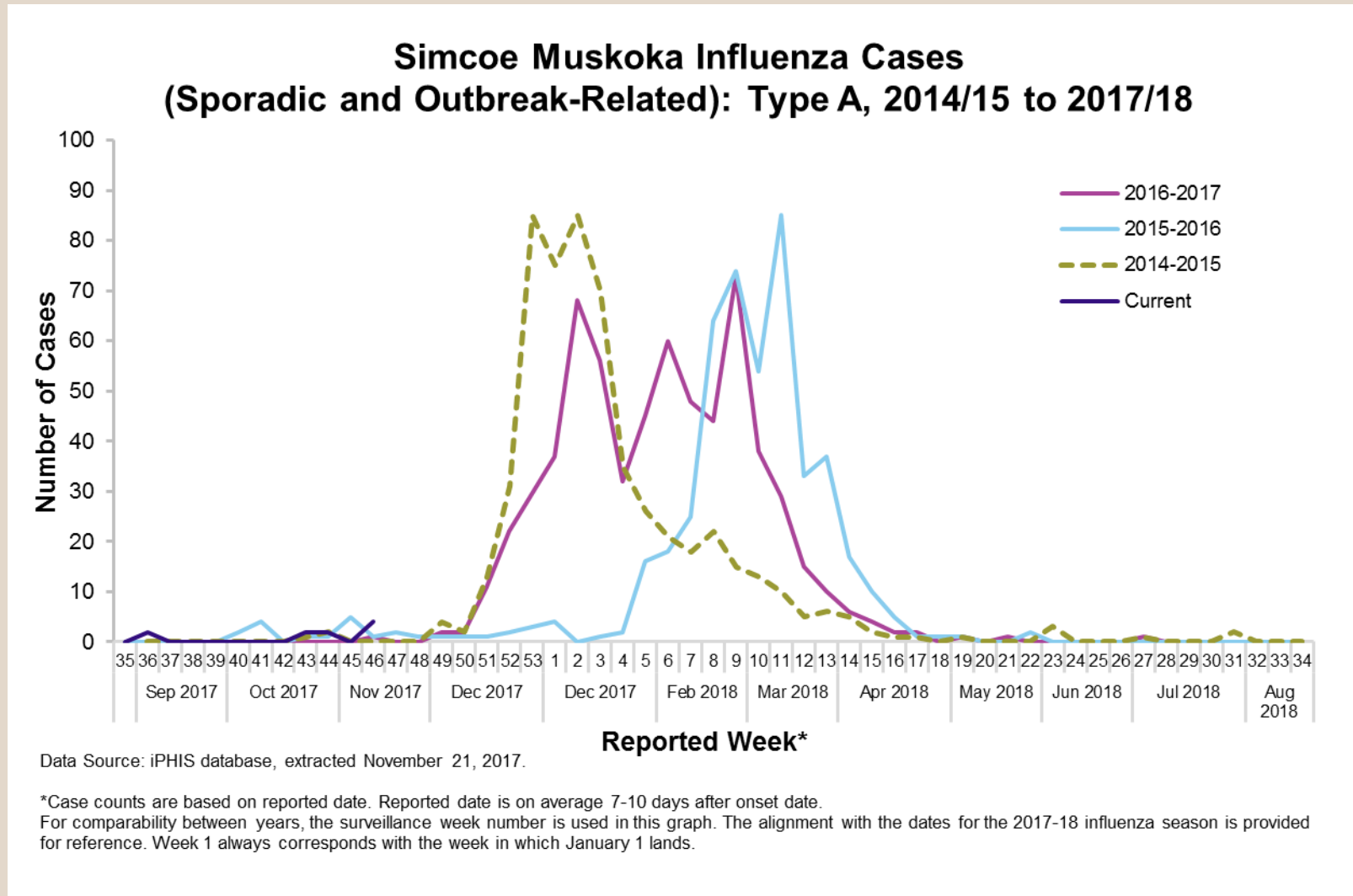
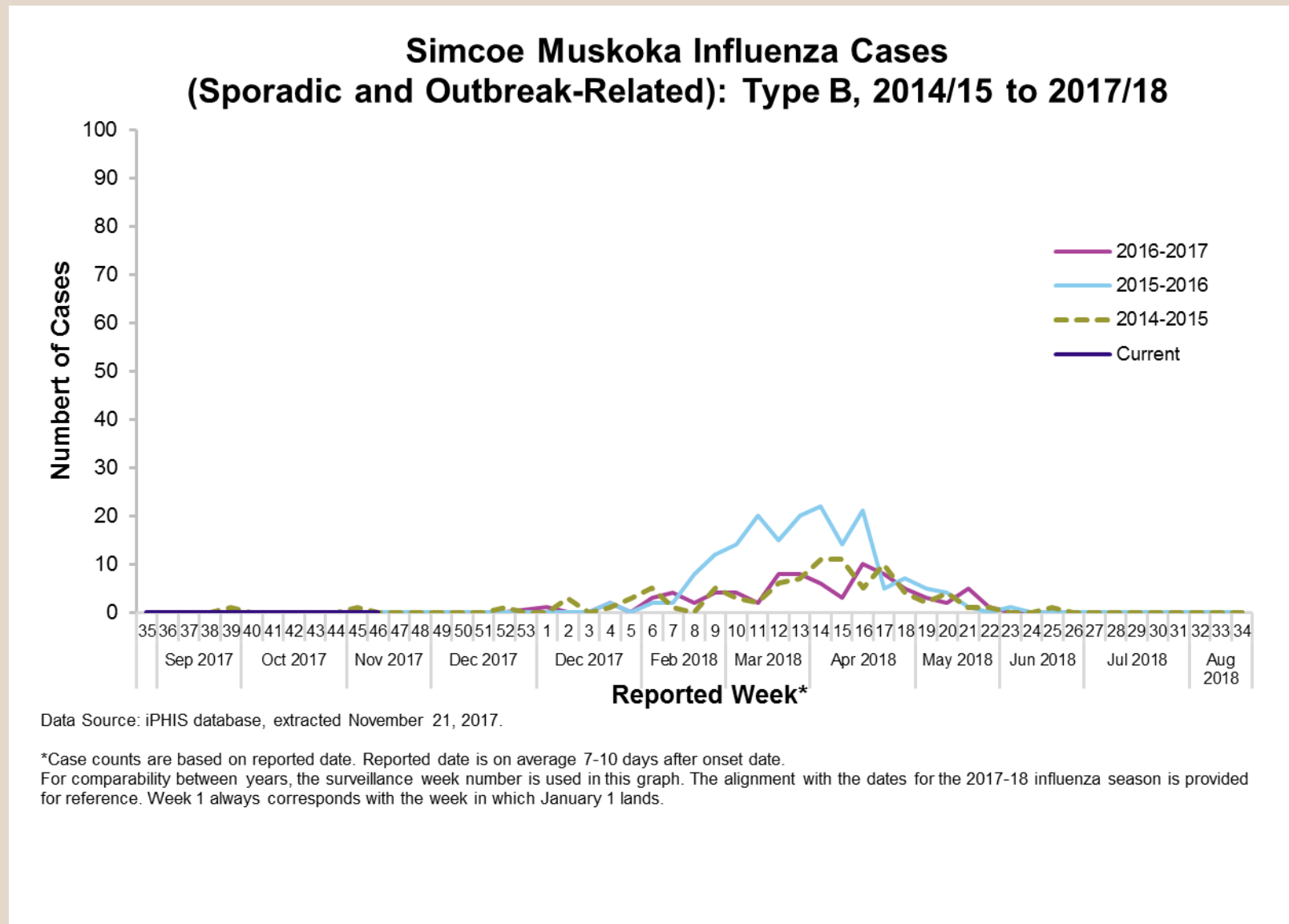


Figure 2: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



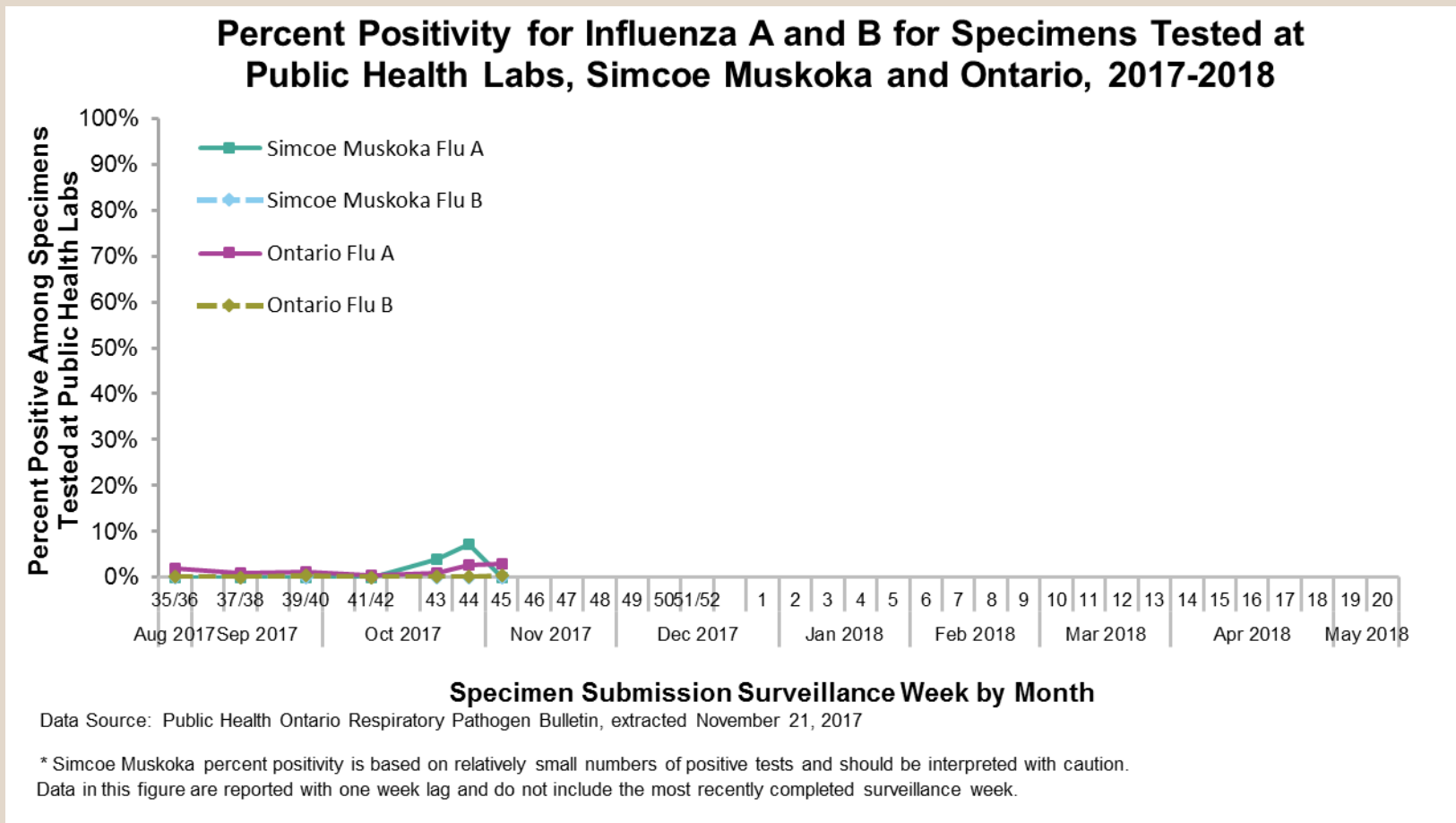
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 46. Percent positivity is reported for week 45.

The percentage of flu specimens that are positive (percent positivity) for Influenza A remains low. The provincial percent positivity for influenza A in week 45 was reported at 3.0%, which is similar compared to week 44. Influenza B percent positivity was reported at 0.3% for week 45.

Locally for week 45, percent positivity for influenza A was reported at 0.0%, while influenza B was 0.0%.

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

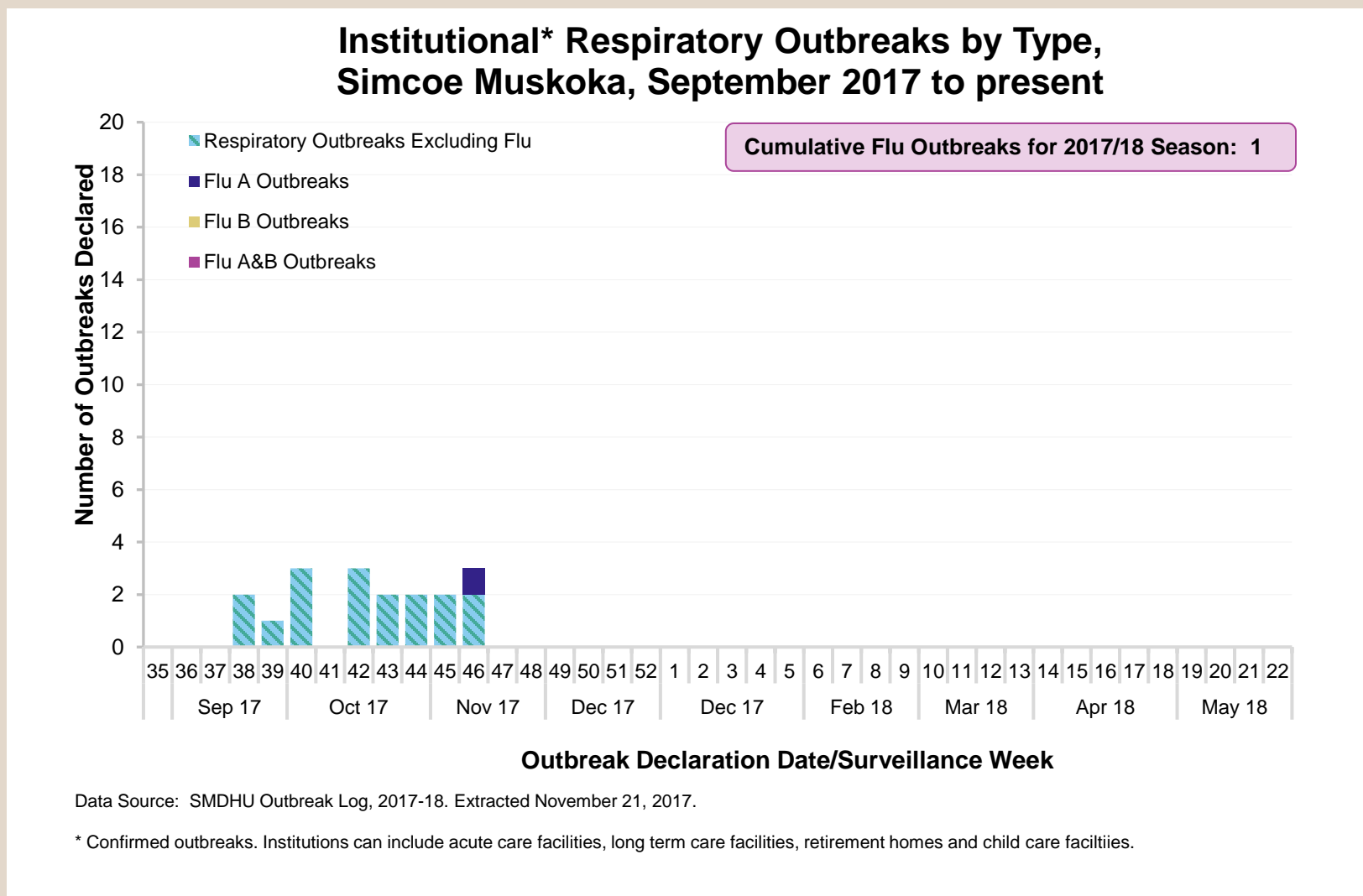


Institutional Respiratory Outbreaks

There has been 1 *lab-confirmed institutional flu outbreak* in Simcoe Muskoka since September 1, 2017.

The causative agent for the outbreak is influenza A.

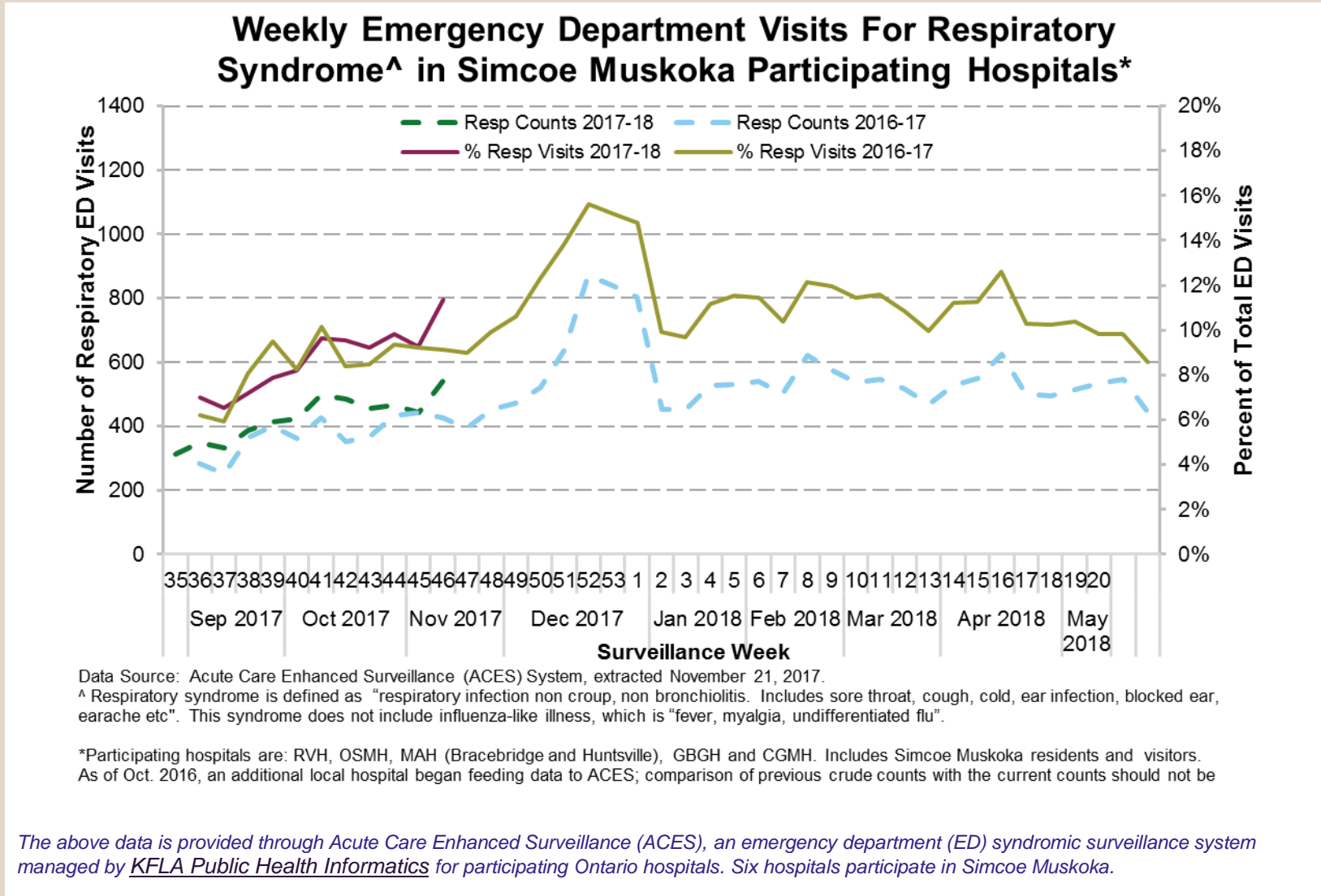
Figure 4: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2017/18



Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 11.3% of visits in week 46. This is higher than week 45, and higher 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



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	2	8	57%
Influenza A (H1N1) A/Michigan/45/2015-like	6	6	43%
Influenza B Vaccine Strains			
B/Brisbane/60/2008-like	1	2	18%
B/Phuket/3073/13-like (Quad vaccine only)	4	9	82%

Data Source: Ontario and Canada Counts: Public Health Ontario Respiratory Pathogen Report, Table 8: Strain characterization completed on influenza isolates at the National Microbiology Laboratory Surveillance week 45, extracted November 21, 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 45, an additional 24 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 45 Provincial Summary: For the 2017-2018 surveillance season to week 45, 125 laboratory-confirmed influenza cases have been reported across Ontario, 29 (23%) of which were reported in week 45. Among cumulative cases, 88.0% (110/125) were influenza A. Of the 52 reported influenza A cases with subtype information available, 80.8% (42/52) were H3N2 and 19.2% (10/52) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 45, extracted November 21, 2017)

National

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

International Resources

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