






Weekly Influenza News

Week 50: December 10 to December 16, 2017

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Similar	15 local lab-confirmed case reported in week 50 ; 15 cases reported in week 49
 <u>Percent Positive of Flu Specimens[†]</u>	Lower	Simcoe Muskoka: - flu A (11.8%); flu B (5.9%) Ontario: - flu A (3.9%); flu B (1.3%)
 <u>Local Institutional Outbreaks</u>	Similar	One institutional influenza outbreak was declared in week 50. Five influenza outbreaks reported for the season to date.
 <u>Local Emergency Department respiratory visits: week 50</u>	Similar	Percentage of visits similar to previous week; similar to same period in the 2016/17 season
Week 50 Overall Assessment December 10 to December 16, 2017	Similar	Reported Activity Level: Localized
		12 cases of Flu A reported in SMDHU. Three 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 49

Reported Local Influenza Cases

In Simcoe Muskoka, there have been 66 **lab-confirmed influenza cases reported** as of 20 December 2017; 15 (22.7%) of which were reported in week 50 – this was similar when compare to week 49.

Of the 55 reported influenza A cases, only 19 have been subtyped:

- 17/19 (89.5%) are influenza A, H3 strain
- 2/19 (10.5%) 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 50		Season-to-Date	
	N	%	N	%
Influenza A	12	80%	55	83%
Influenza B	3	20%	11	17%
Influenza A & B	0	0%	0	0%
Total	15	100%	66	100%

Notes:

Data source: Communicable Disease Intake Database, extracted on December 20, 2017.

Historical Comparison

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

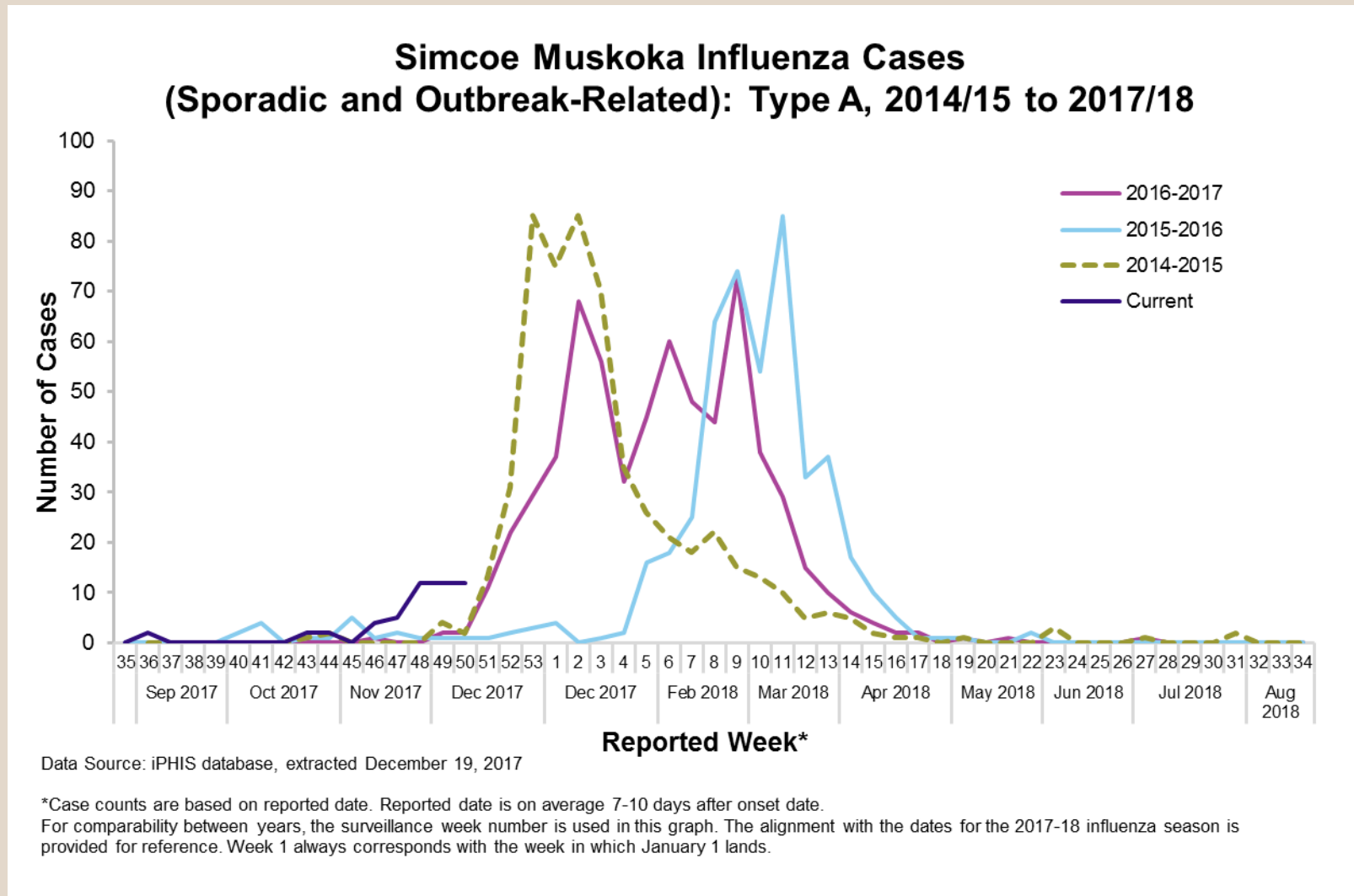
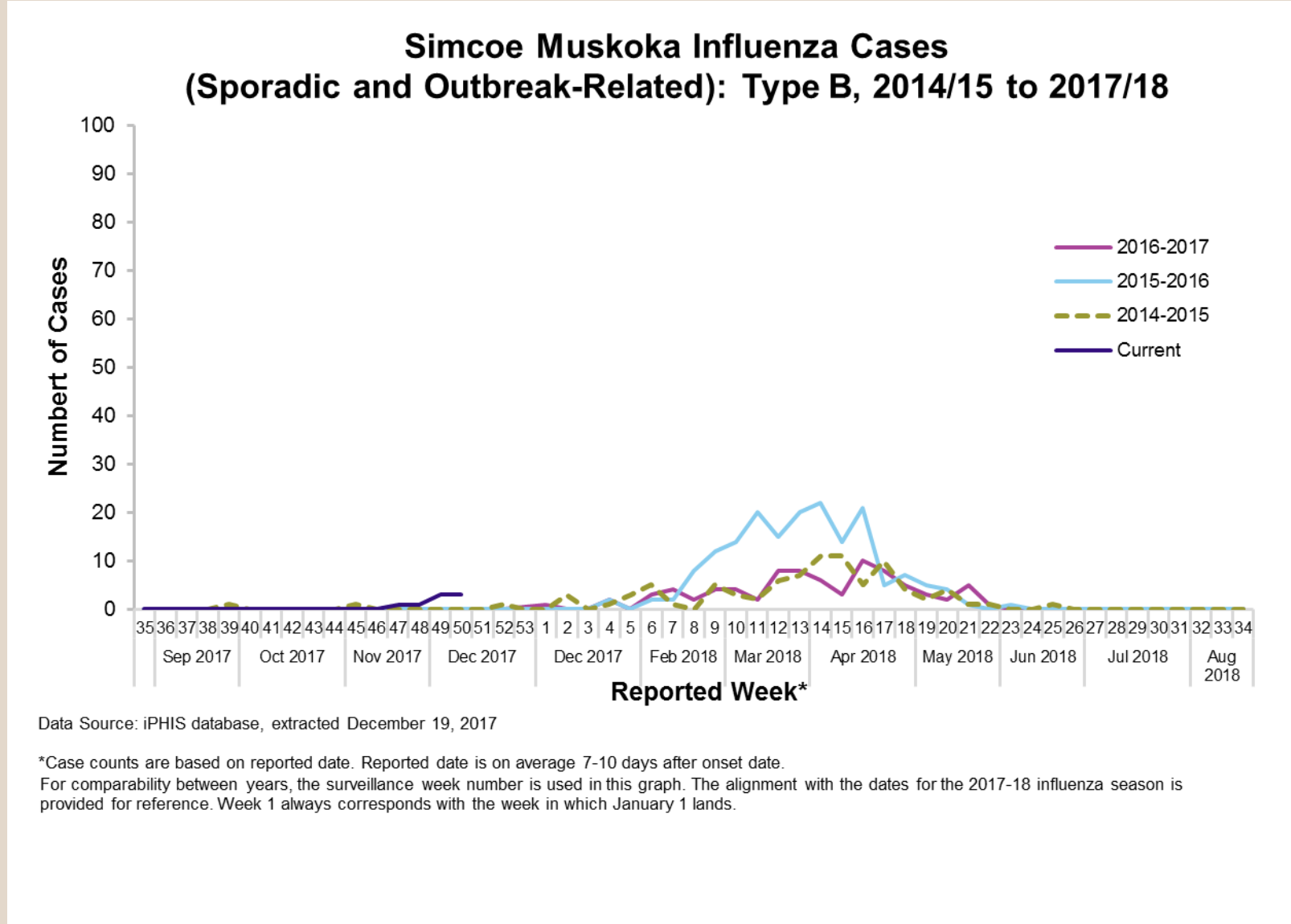


Figure 2: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



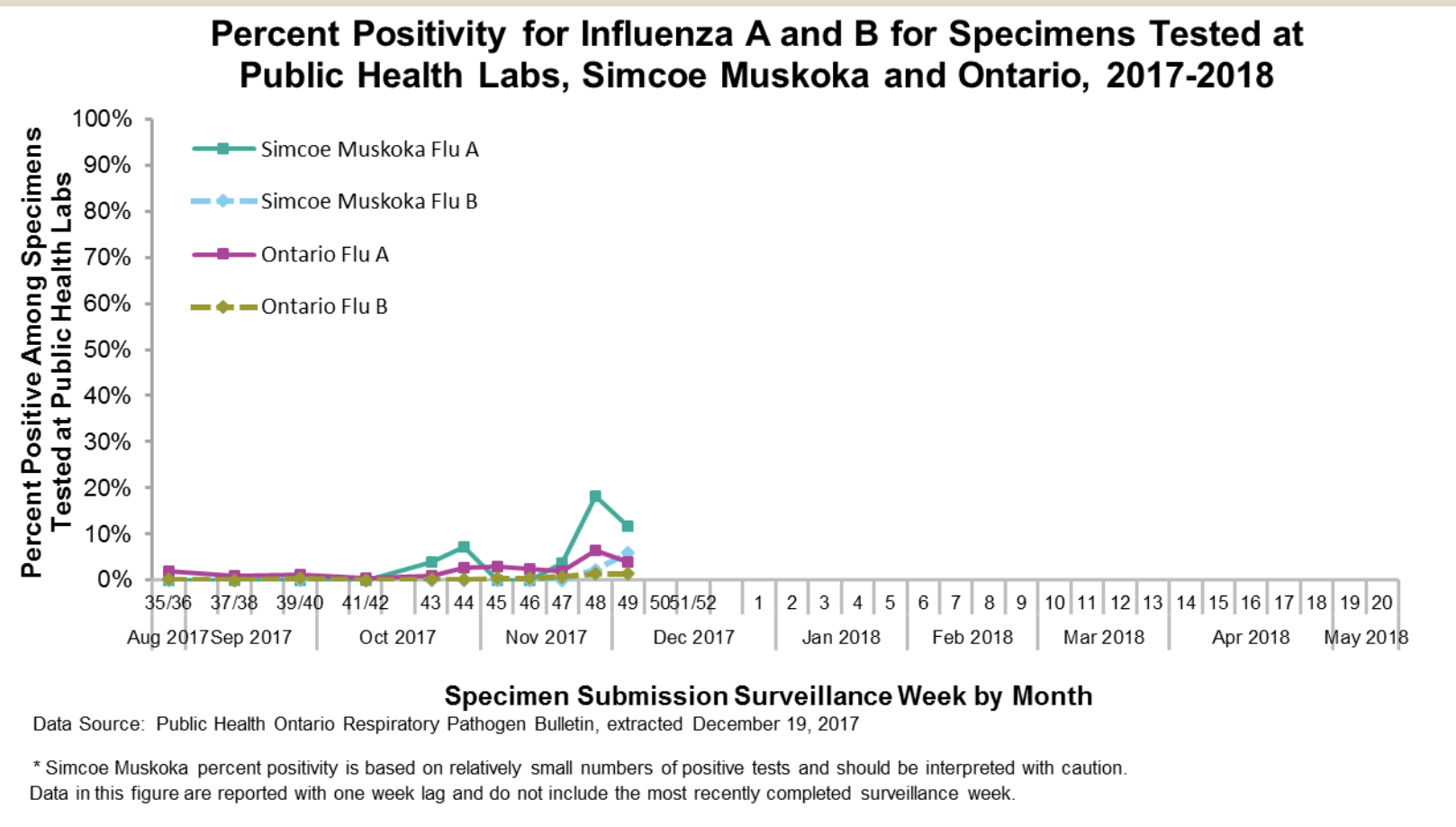
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 50. Percent positivity is reported for week 49.

The percentage of flu specimens that are positive (percent positivity) for Influenza A is increasing for the season. However, the provincial percent positivity for influenza A in week 49 was reported at 3.9%, which is lower compared to week 48. Influenza B percent positivity was reported at 1.3% for week 49.

Locally for week 49, percent positivity for influenza A was reported at 11.8%, while influenza B was 5.9%.

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

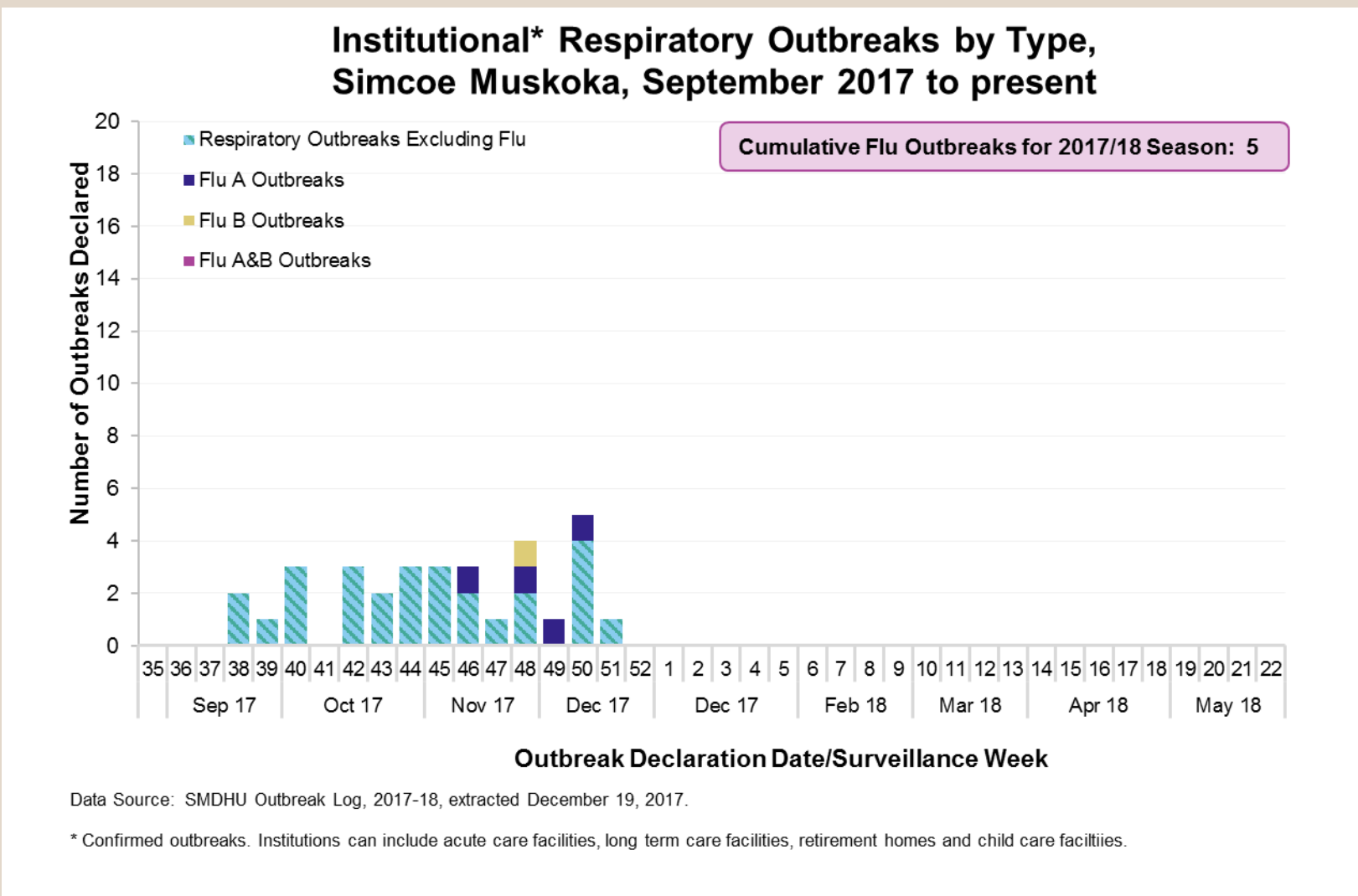


Institutional Respiratory Outbreaks

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

- Influenza A: four outbreaks
- Influenza B: one outbreak

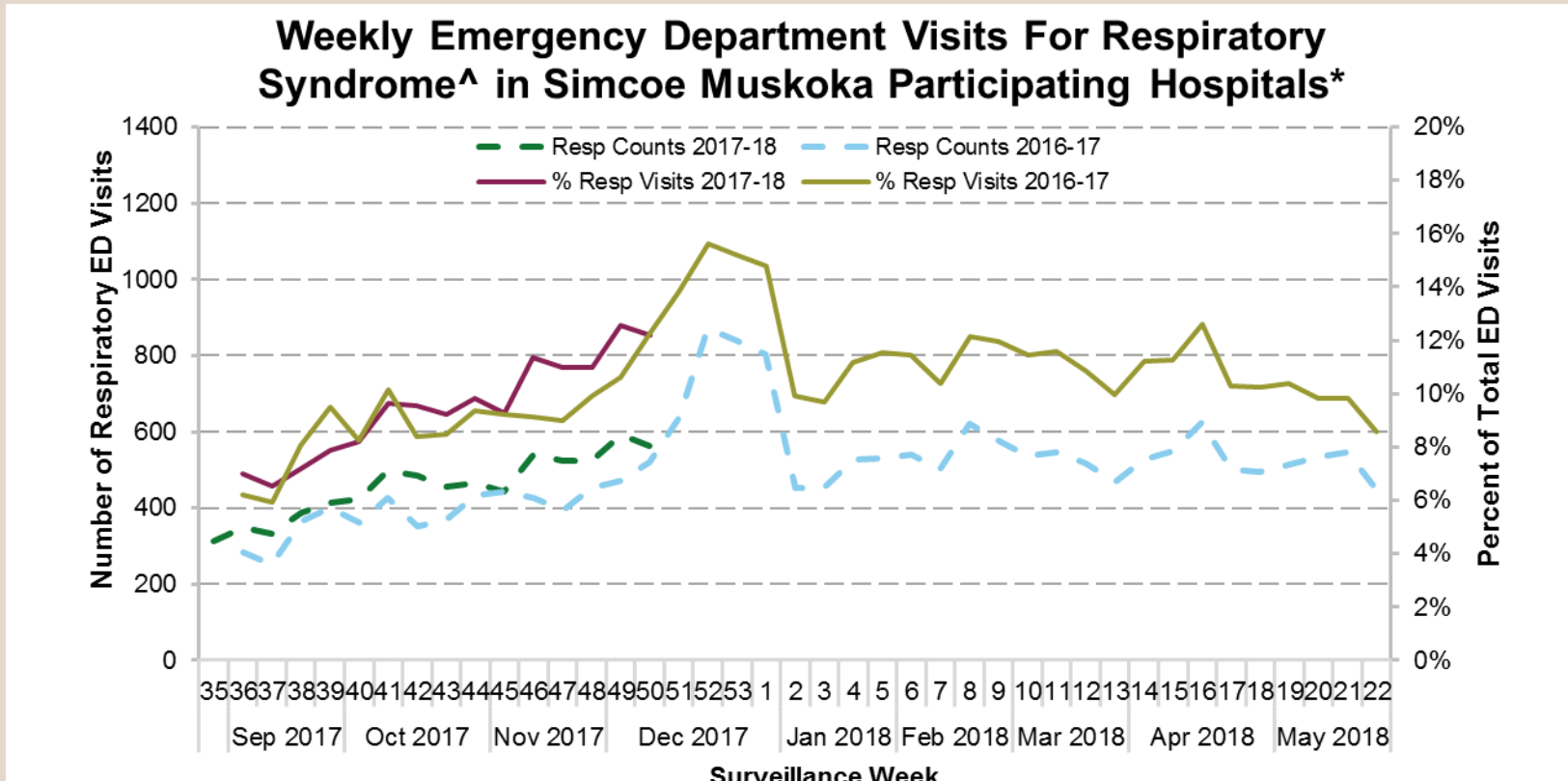
Figure 4: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2017/18



Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 12.2% of visits in week 50. This is similar compared to week 49, 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 19, 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	14	31	76%
Influenza A (H1N1) A/Michigan/45/2015-like	9	10	24%
Influenza B Vaccine Strains			
B/Brisbane/60/2008-like	1	4	15%
B/Phuket/3073/13-like (Quad vaccine only)	9	23	85%

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 49, extracted December 20, 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 49, 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 49 Provincial Summary: For the 2017-2018 surveillance season to week 49, 414 laboratory-confirmed influenza cases have been reported across Ontario, 100 (24.2%) of which were reported in week 49. Among cumulative cases, 76.6% (317/414) were influenza A. Of the 135 reported influenza A cases with subtype information available, 85.9% (116/135) were H3N2 and 14.1% (19/135) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 49, extracted December 20, 2017)

National

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

International Resources

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