






Weekly Influenza News

Week 49: December 3 to December 9, 2017

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Similar	15 local lab-confirmed case reported in week 49 ; 13 cases reported in week 48
 <u>Percent Positive of Flu Specimens[†]</u>	Higher	Simcoe Muskoka: - flu A (18.2%); flu B (2.3%) Ontario: - flu A (6.4%); flu B (1.4%)
 <u>Local Institutional Outbreaks</u>	Similar	One institutional influenza outbreak was declared in week 49. Four influenza outbreaks reported for the season to date.
 <u>Local Emergency Department respiratory visits: week 49</u>	Higher	Percentage of visits higher than previous week; higher than same period in the 2016/17 season
Week 49 Overall Assessment December 3 to December 9, 2017	Similar	Reported Activity Level: Localized 12 cases of Flu A reported in SMDHU. Three case 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 48

Reported Local Influenza Cases

In Simcoe Muskoka, there have been 47 **lab-confirmed influenza cases reported** as of 12 December 2017; 15 (33.3%) of which were reported in week 49 – this was similar when compare to week 48.

Of the 42 reported influenza A cases, only 17 have been subtyped:

- 16/17 (94.1%) are influenza A, H3 strain
- 1/17 (5.9%) 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 49		Season-to-Date	
	N	%	N	%
Influenza A	12	80%	42	89%
Influenza B	3	20%	5	11%
Influenza A & B	0	0%	0	0%
Total	15	100%	47	100%

Notes:

Data source: Communicable Disease Intake Database, extracted on December 12, 2017.

Historical Comparison

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

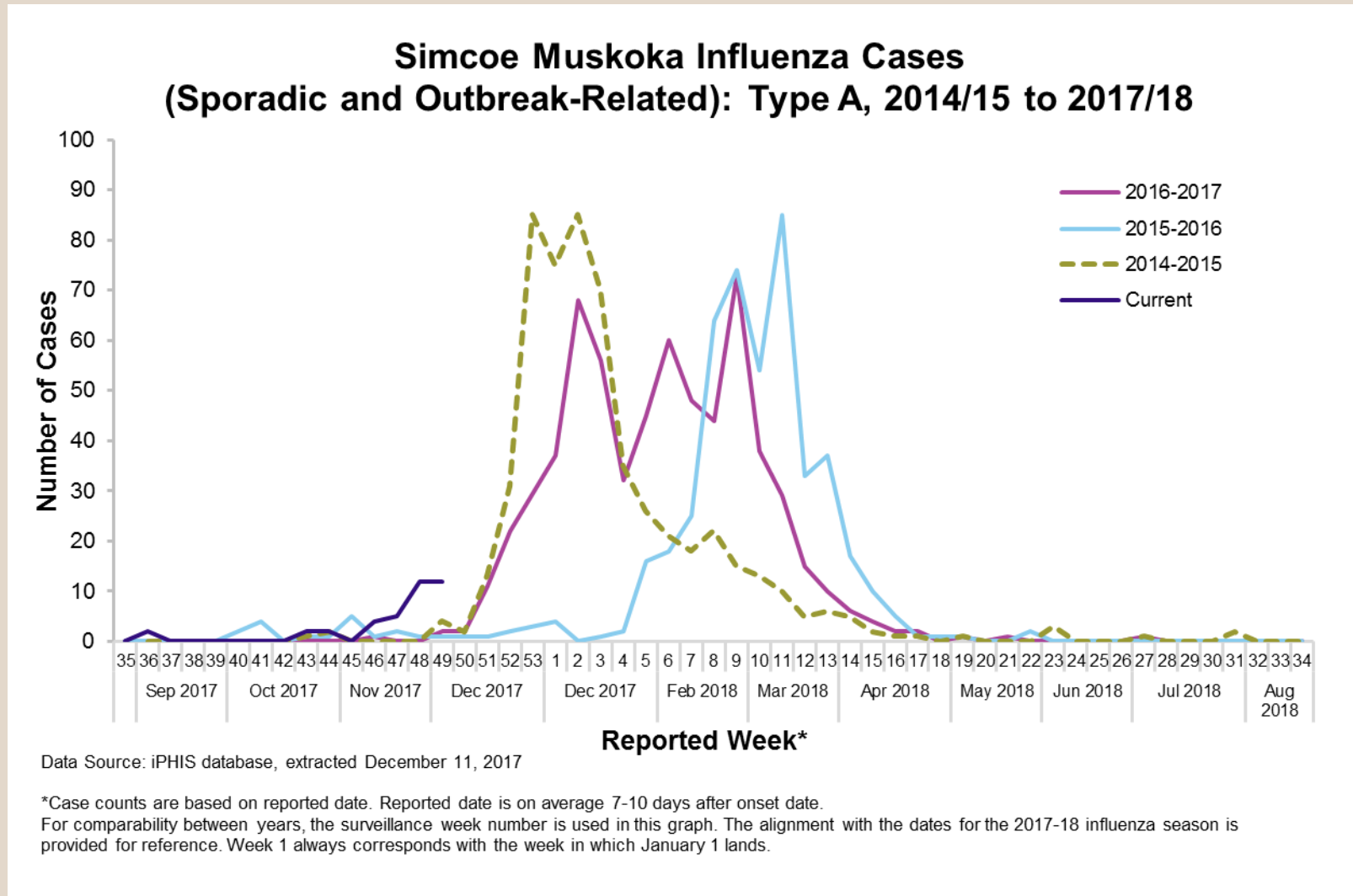
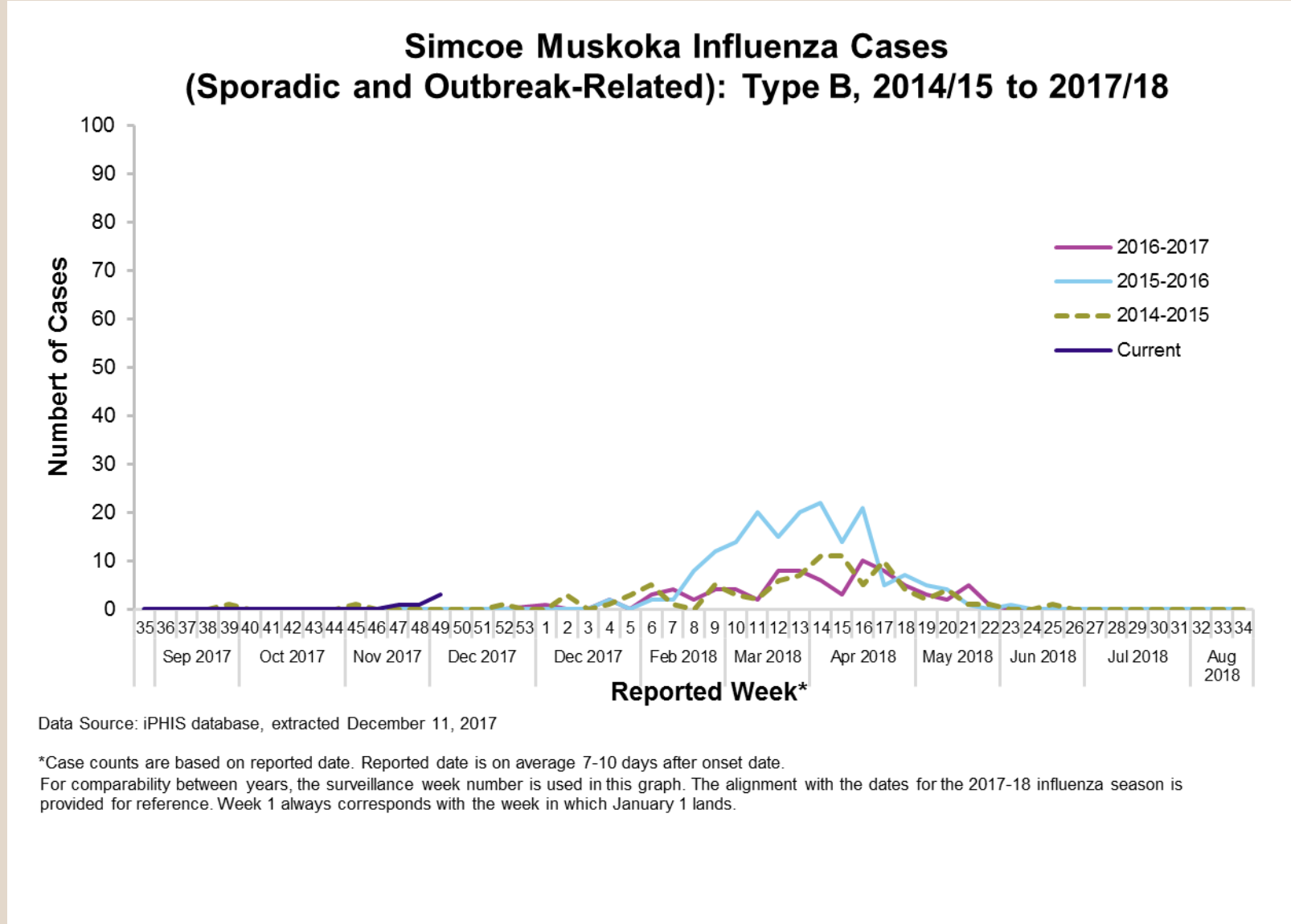


Figure 2: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



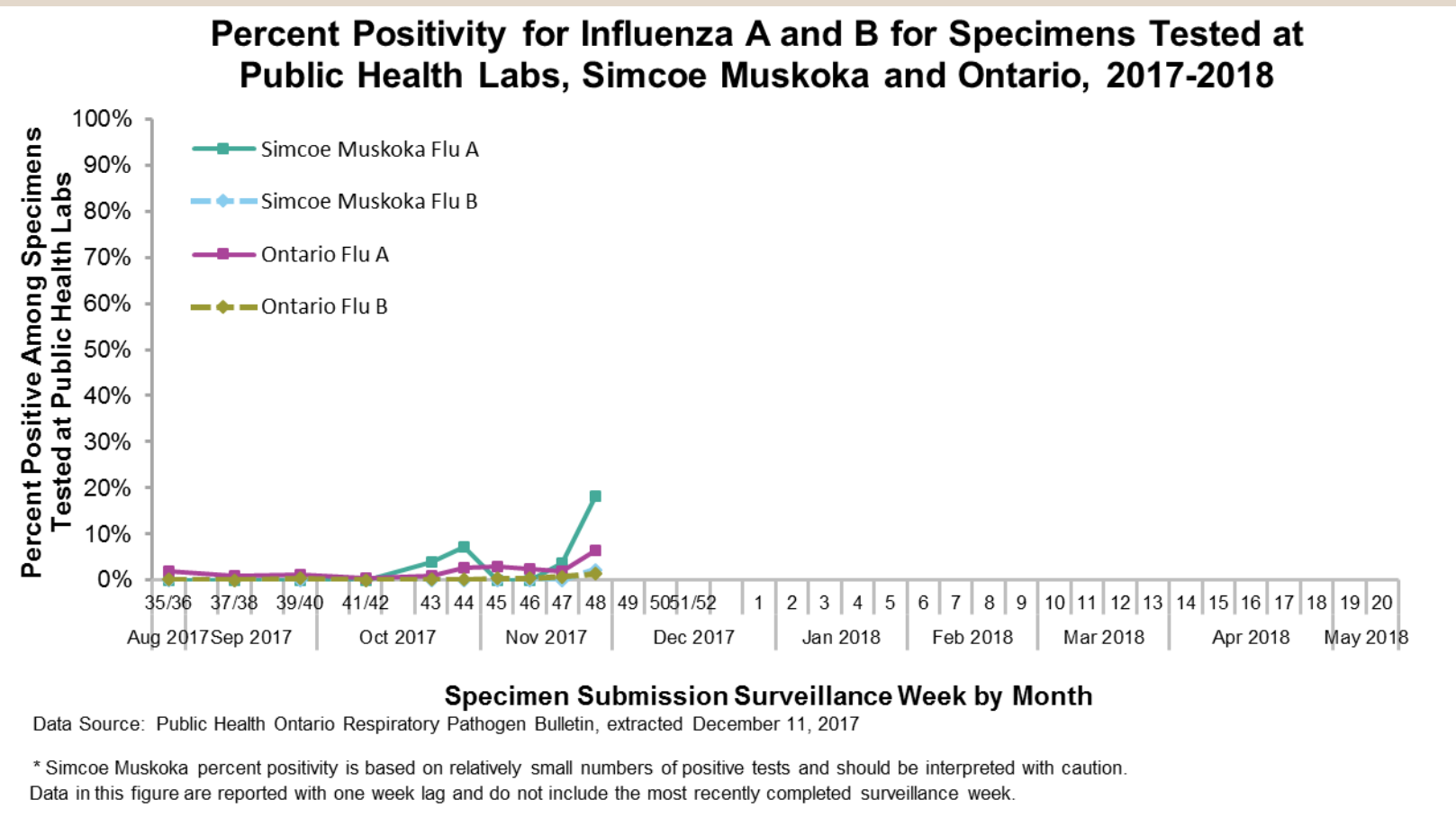
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 49. Percent positivity is reported for week 48.

The percentage of flu specimens that are positive (percent positivity) for Influenza A is increasing. The provincial percent positivity for influenza A in week 48 was reported at 6.4%, which is higher compared to week 47. Influenza B percent positivity was reported at 1.4% for week 48.

Locally for week 48, percent positivity for influenza A was reported at 18.2%, while influenza B was 2.3%.

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

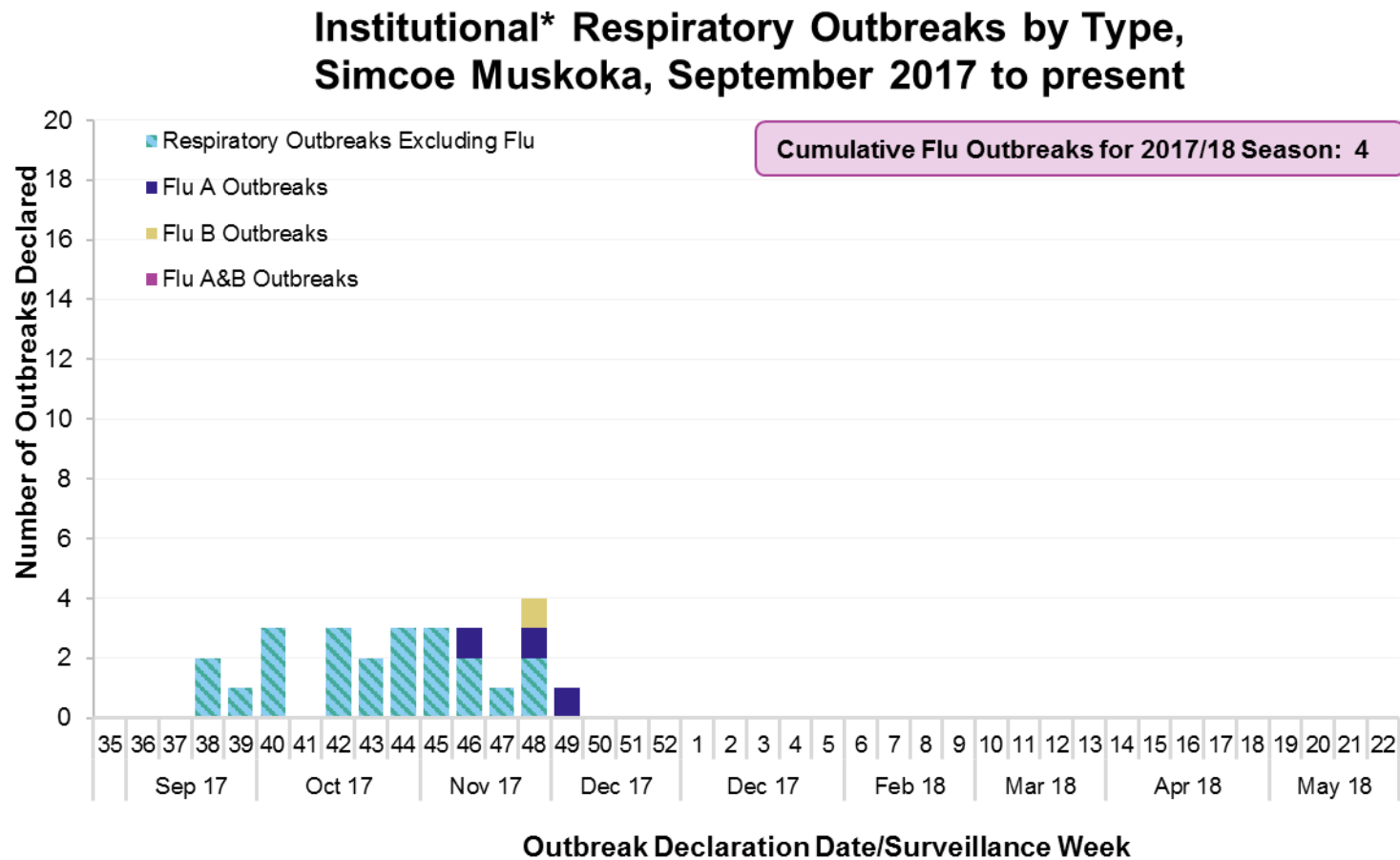


Institutional Respiratory Outbreaks

There have been 4 *lab-confirmed institutional flu outbreak* in Simcoe Muskoka since September 1, 2017:

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

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



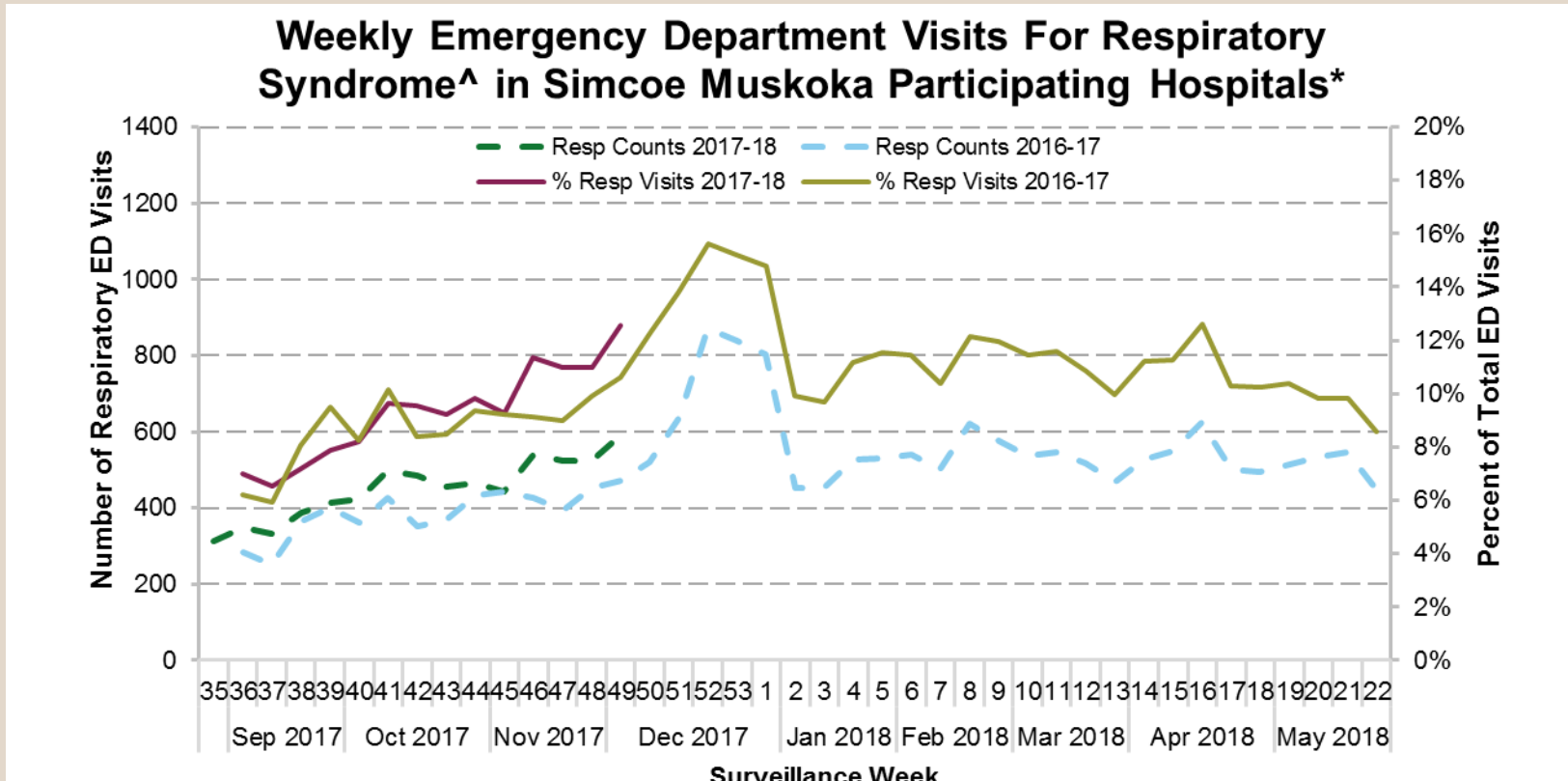
Data Source: SMDHU Outbreak Log, 2017-18, extracted December 11, 2017.

* Confirmed outbreaks. Institutions can include acute care facilities, long term care facilities, retirement homes and child care facilities.

Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 12.6% of visits in week 49. This is higher compared to week 48, 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



Data Source: Acute Care Enhanced Surveillance (ACES) System, extracted December 12, 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	6	18	64%
Influenza A (H1N1) A/Michigan/45/2015-like	9	10	36%
Influenza B Vaccine Strains			
B/Brisbane/60/2008-like	1	4	15%
B/Phuket/3073/13-like (Quad vaccine only)	8	22	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 48, extracted December 12, 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 48, an additional 51 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 48 Provincial Summary: For the 2017-2018 surveillance season to week 48, 305 laboratory-confirmed influenza cases have been reported across Ontario, 74 (24.3%) of which were reported in week 48. Among cumulative cases, 80.3% (245/305) were influenza A. Of the 101 reported influenza A cases with subtype information available, 83.2% (84/101) were H3N2 and 16.8% (17/101) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 48, extracted December 12, 2017)

National

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

International Resources

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