






Weekly Influenza News

Week 47: November 20 to November 26, 2016

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Lower	0 local lab-confirmed case reported in week 47 ; 1 case reported in week 46
 <u>Percent Positive of Flu Specimens[†]</u>	Similar	Simcoe Muskoka: flu A (2%); flu B (0%) Ontario: flu A stable at 2%; flu B (0.1%)
 <u>Local Institutional Outbreaks</u>	Similar	No institutional influenza outbreaks declared in the 2016/17 season
 <u>Influenza Strains</u>	Similar	Predominant strains: Influenza A (H3N2) (70%)
 <u>Local Emergency Department respiratory visits: week 47</u>	Similar	Percentage of visits similar to previous week and similar to same period of 2015/16 season
Week 47 Overall Assessment November 20 to November 26, 2016	Slightly Lower	Reported Activity Level: No Activity No new cases of Flu A in SMDHU. No Flu B activity in SMDHU.

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 46; assessment of indicator based primarily on provincial percent positivity due to low local counts

Reported Local Influenza Cases

In Simcoe Muskoka, there has been 1 **lab-confirmed influenza cases reported**, as of 30 November 2016; no cases were reported in week 47.

- The single reported flu case was influenza A, subtype H3.

Figure 1 and Figure 2 below provide historic comparisons

Table 1: Summary of influenza cases for 2016/17 season

Lab-confirmed Influenza Cases	Week 47		Season-to-Date	
	N	%	N	%
Influenza A	0	0%	1	100%
Influenza B	0	0%	0	0%
Influenza A & B	0	0%	0	0%
Total	0	0%	1	100%
Notes:				
Data source: Communicable Disease Intake Database, extracted on November 21, 2016				

Historical Comparison

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

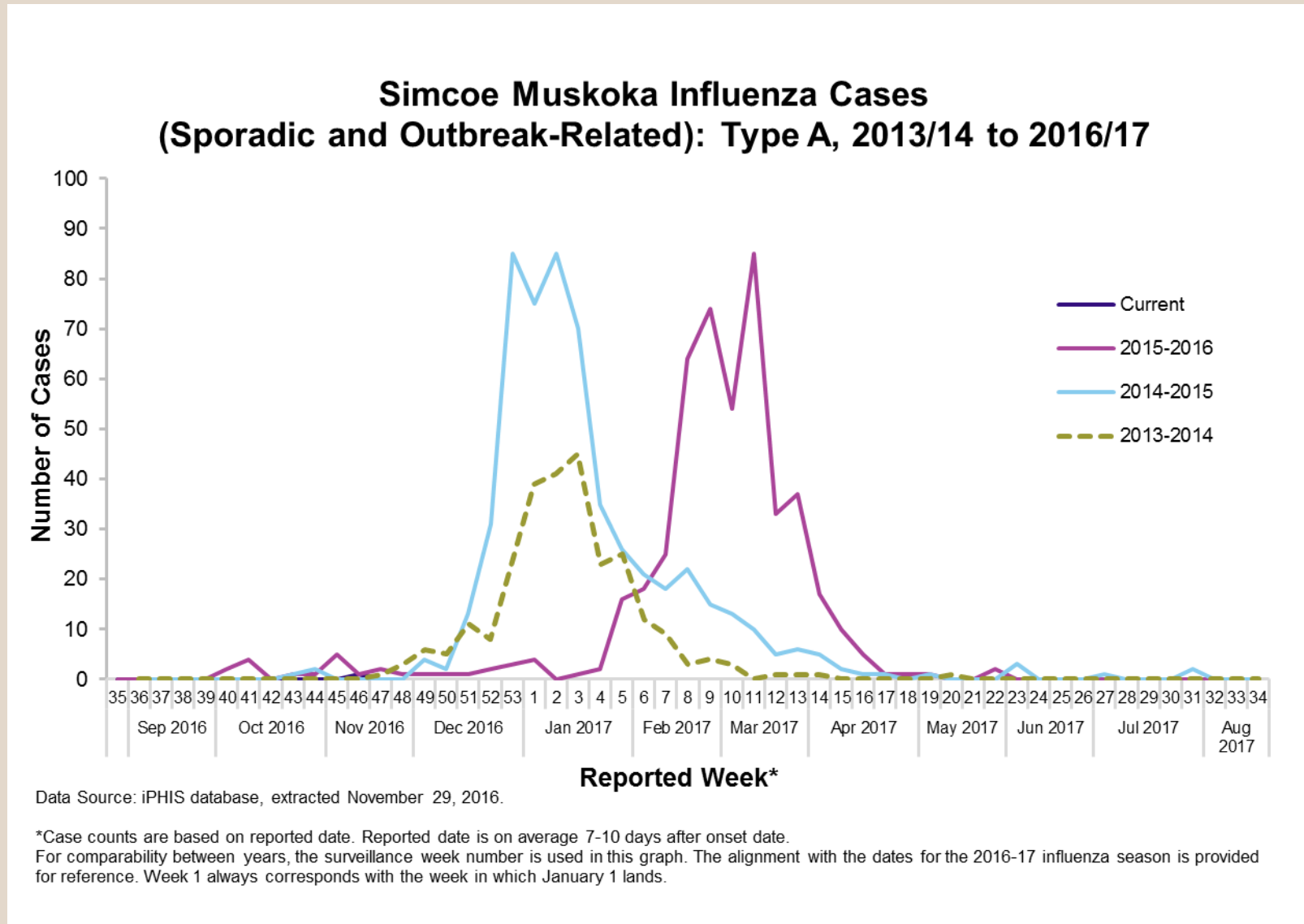
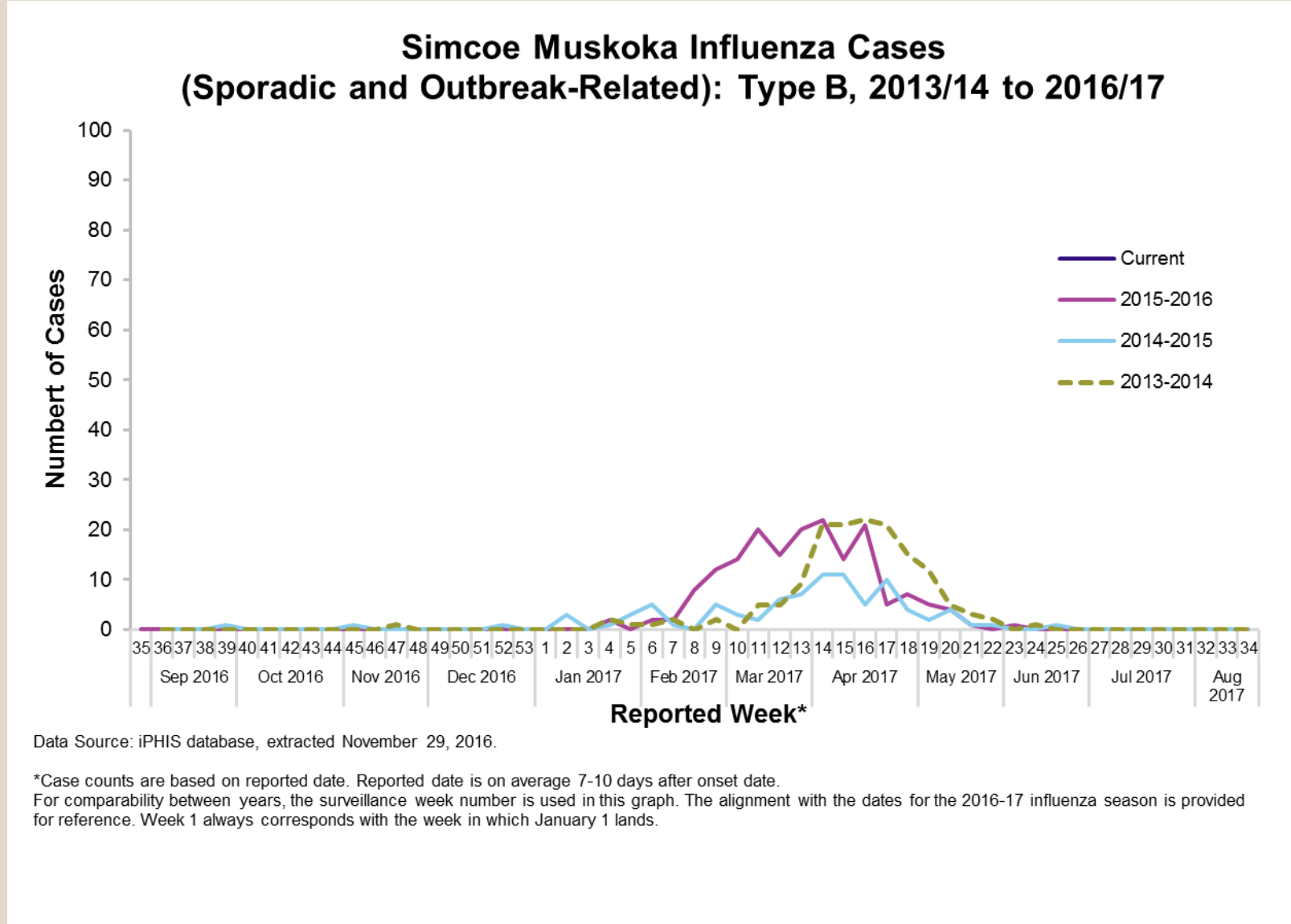


Figure 2: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



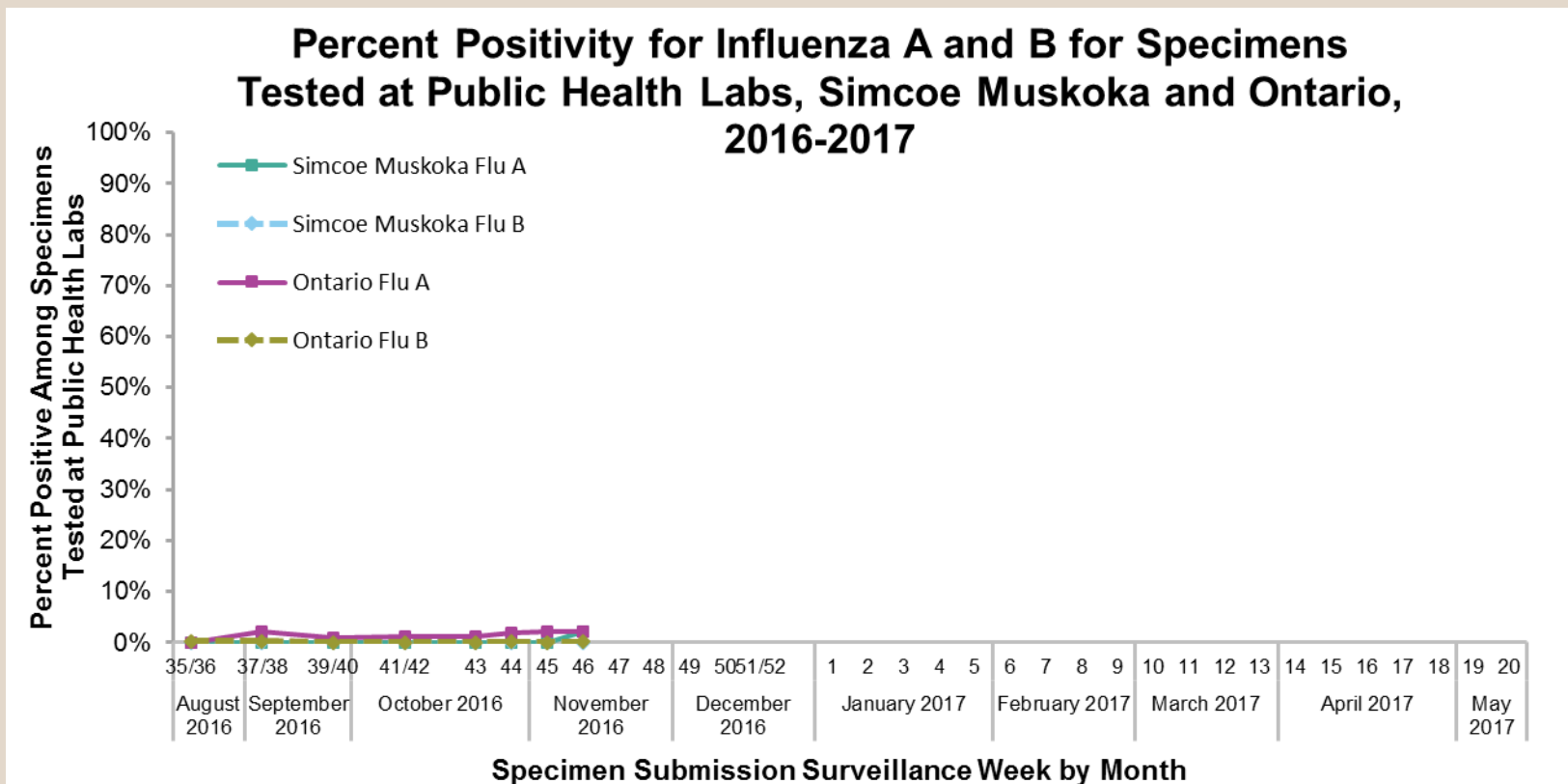
Percent positivity

The percentage of flu specimens that are positive (percent positivity) for Influenza A has remained relatively stable over the past three weeks. The provincial percent positivity for influenza A in week 46 was reported at 2.1%. Influenza B percent positivity was reported at 0.1%.

For week 46, local percent positivity for influenza A was 2.0% with the first flu case of the season reported; influenza B remained at 0.0%.

Note: Percent positivity is reported with one week lag and does not include week 47.

Figure 3: Percent Positivity, Influenza A & B, Simcoe Muskoka & Ontario, 2016/17



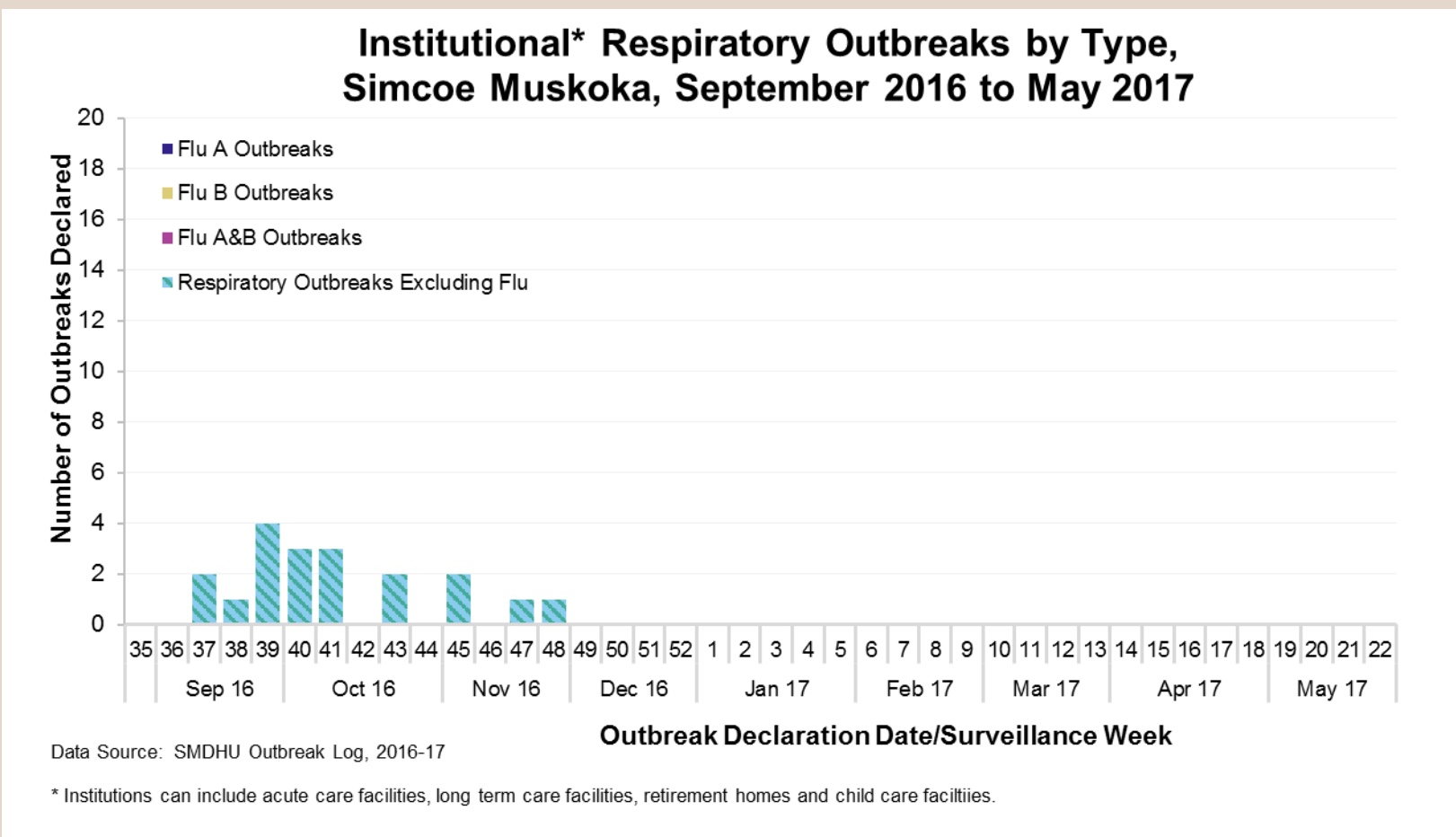
Data Source: Public Health Ontario Respiratory Pathogen Bulletin.

* Simcoe Muskoka percent positivity is based on relatively small numbers of positive tests and should be interpreted with caution. Data in this figure are reported with one week lag and do not include the most recently completed surveillance week.

Institutional Respiratory Outbreaks

There have been zero *lab-confirmed institutional flu outbreaks* in Simcoe Muskoka since September 1, 2016. There have been 19 respiratory outbreaks (where causative agent is not flu) during this time.

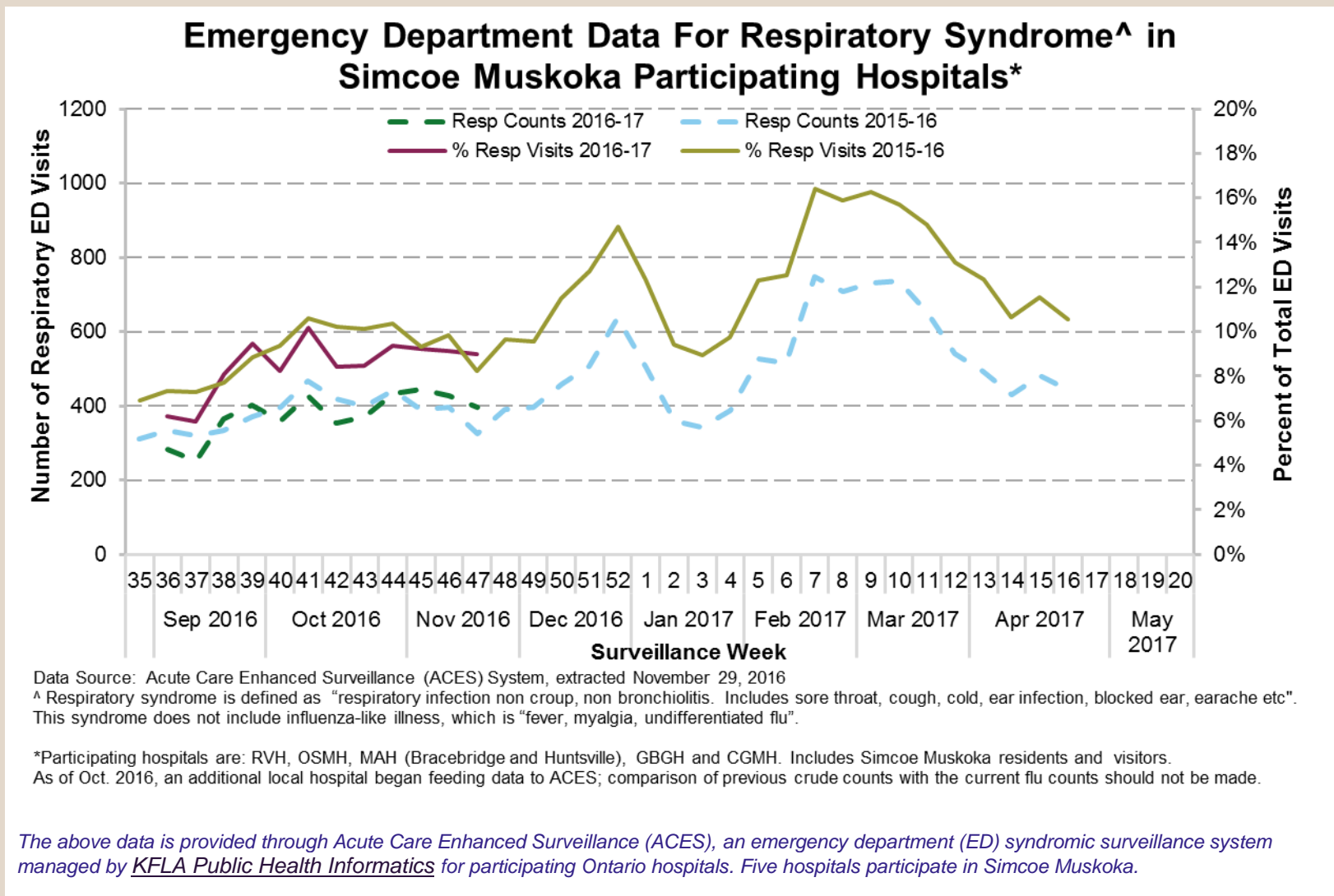
Figure 4: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2016/17



Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 9.0% of visits in week 47. This is similar to week 46.

Figure 5: Emergency Department Visits for Respiratory Syndrome at Participating Simcoe Muskoka Hospital, 2014/15, 2015/16, 2016/17 Seasons



Vaccine Match and Influenza Strains

The trivalent 2016-2017 influenza vaccine contains the following strains:

- A/California/7/2009 (H1N1)pdm09-like virus;
- A/Hong Kong/4801/2014 (H3N2)-like virus;
- B/Brisbane/60/2008-like virus.

Table 2: Local, Provincial and National Matched Flu Specimens and National Match Percent, 2016-17

Influenza Strains	Simcoe Muskoka*	Ontario	Canada	National Match Percent †
Influenza A Vaccine Strains				
Influenza A (H3N2) A/Hong Kong/4801/2014-like	0	18	32	86%
Influenza A (H1N1) A/California/07/09-like	0	2	5	14%
Influenza B Vaccine Strains				
B/Brisbane/60/08-like	0	0	7	78%
B/Phuket/3073/13-like (Quad vaccine only)	0	1	2	22%

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 46; SMDHU Counts: CD Intake Database, extracted November 30, 2016.

*Simcoe Muskoka counts are current to the most recently completed surveillance week (week 46). 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 46, an additional 45 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 46 Provincial Summary: For the 2016-2017 surveillance season to week 46, 166 laboratory-confirmed influenza cases have been reported across Ontario, 36 (21.7%) of which were reported in week 46. Among cumulative cases, 88.6% (147/166) were influenza A. Of the 90 reported influenza A cases with subtype information available, 97.8% (88/90) were H3N2 and 2.2% (2/90) were (H1N1)pdm09. Influenza A activity in week 46 was low and within expected levels for this time of year.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 46, extracted November 30, 2016)

National

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

International Resources

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