






# Weekly Influenza News

## Week 1: December 31 to January 6, 2018

### Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Similar	50 local lab-confirmed case reported in <b>week 1</b> ; 45 cases reported in week 52
 <u>Percent Positive of Flu Specimens<sup>†</sup></u>	Higher	<b>Simcoe Muskoka:</b> - flu A (27.5%); flu B (2.5%) <b>Ontario:</b> - flu A (16.5%); flu B (9.1%)
 <u>Local Institutional Outbreaks</u>	Similar	Four institutional influenza outbreaks were declared in week 1. Sixteen influenza outbreaks reported for the season to date.
 <u>Local Emergency Department respiratory visits: week 1</u>	Lower	Percentage of visits is lower compared to previous week and higher than same period in the 2016/17 season
<b>Week 1 Overall Assessment December 31 to January 6, 2018</b>	<b>Similar</b>	<b>Reported Activity Level: Localized</b> 42 cases of Flu A reported in SMDHU. 8 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 52

## Reported Local Influenza Cases

In Simcoe Muskoka, there have been 198 **lab-confirmed influenza cases reported** as of 9 January 2018; 50 (25.3%) of which were reported in week 1 – this was similar when compared to week 52.

Of the 156 reported influenza A cases, only 39 have been subtyped:

- 36/39 (92%) are influenza A, H3 strain
- 3/39 (8%) are 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 1		Season-to-Date	
	N	%	N	%
<b>Influenza A</b>	42	84%	156	79%
<b>Influenza B</b>	8	16%	42	21%
<b>Influenza A &amp; B</b>	0	0%	0	0%
<b>Total</b>	<b>50</b>	<b>100%</b>	<b>198</b>	<b>100%</b>

Notes:

Data source: Communicable Disease Intake Database, extracted on January 09, 2018.

## Historical Comparison

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

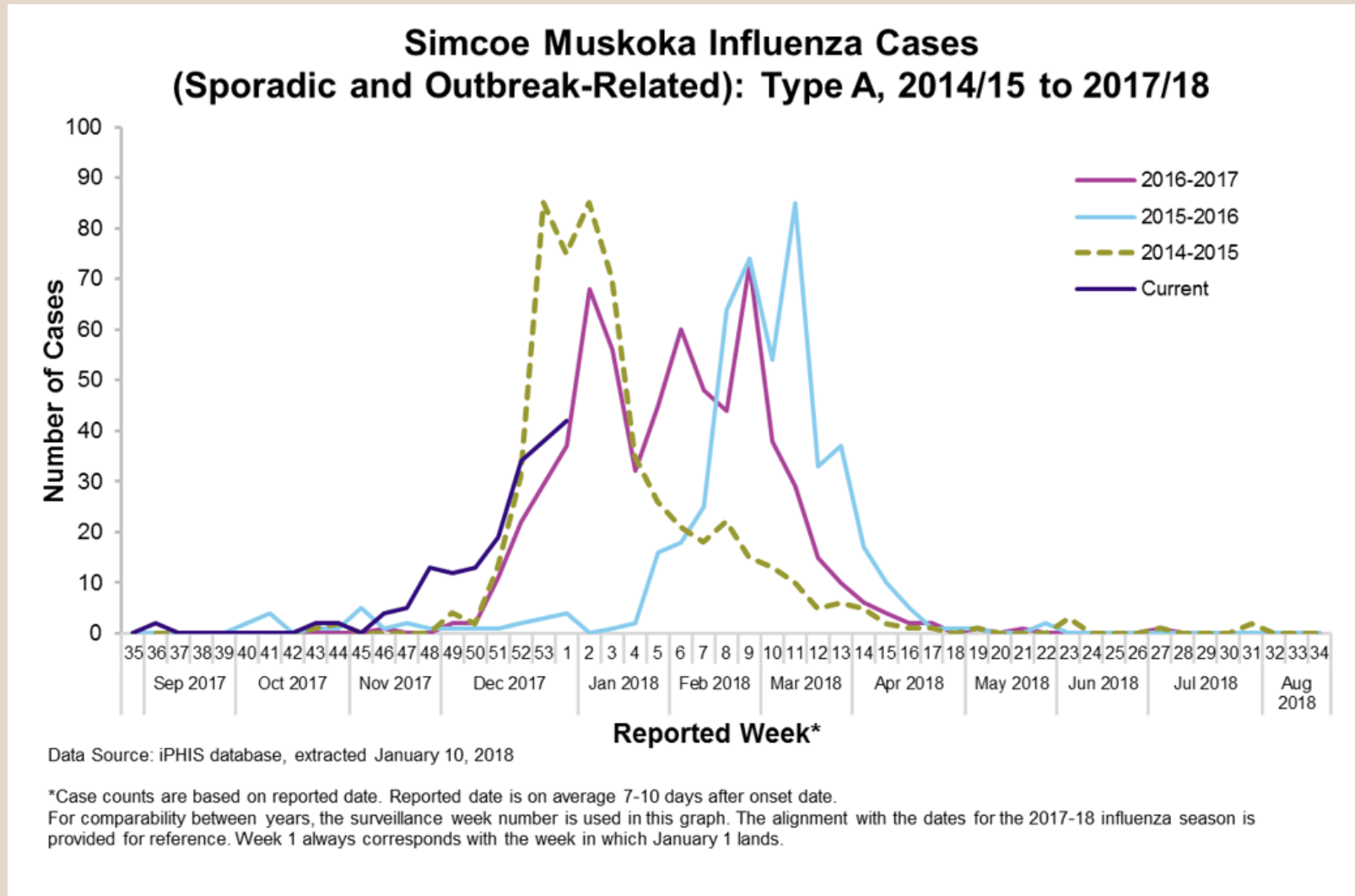
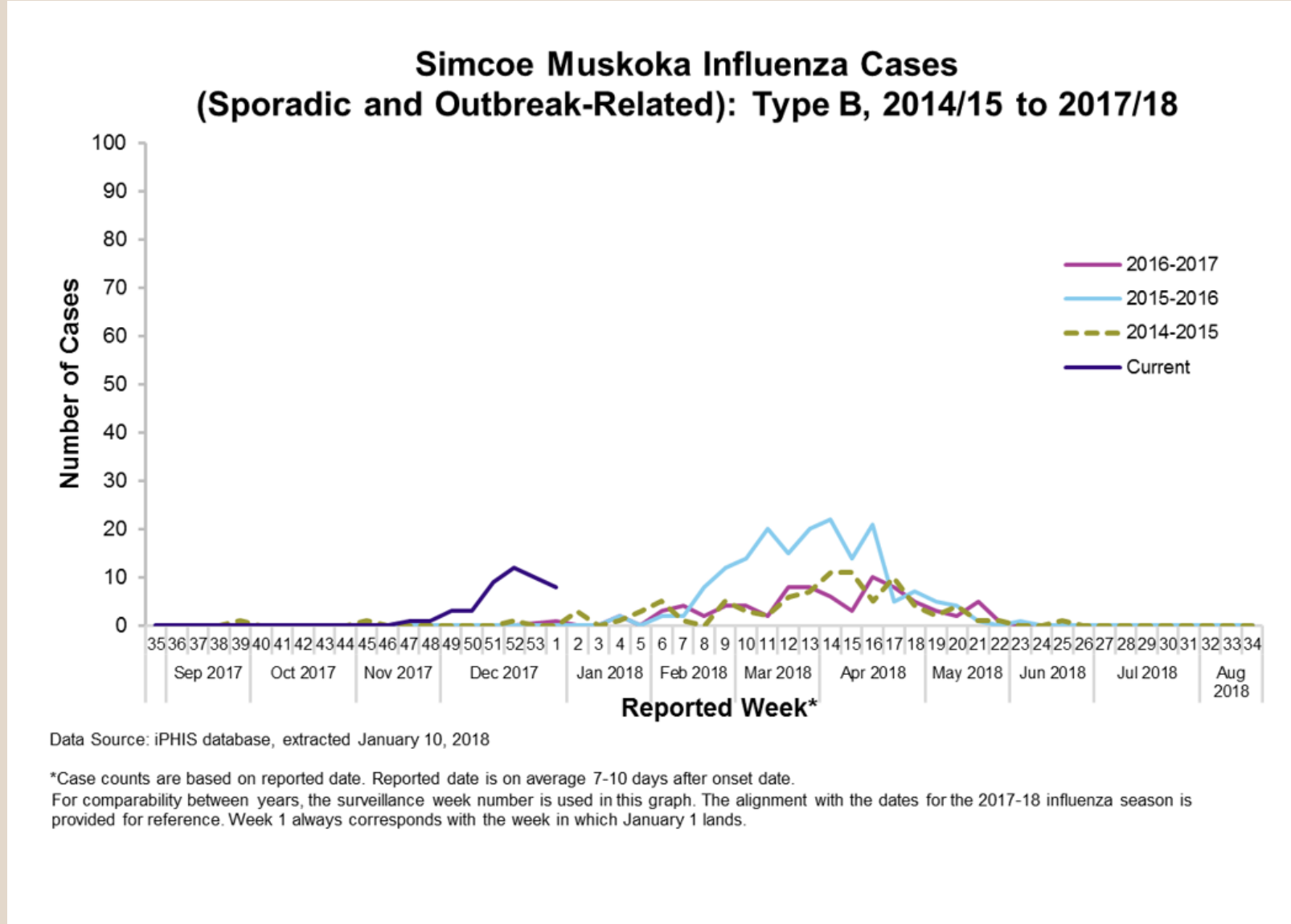


Figure 2: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



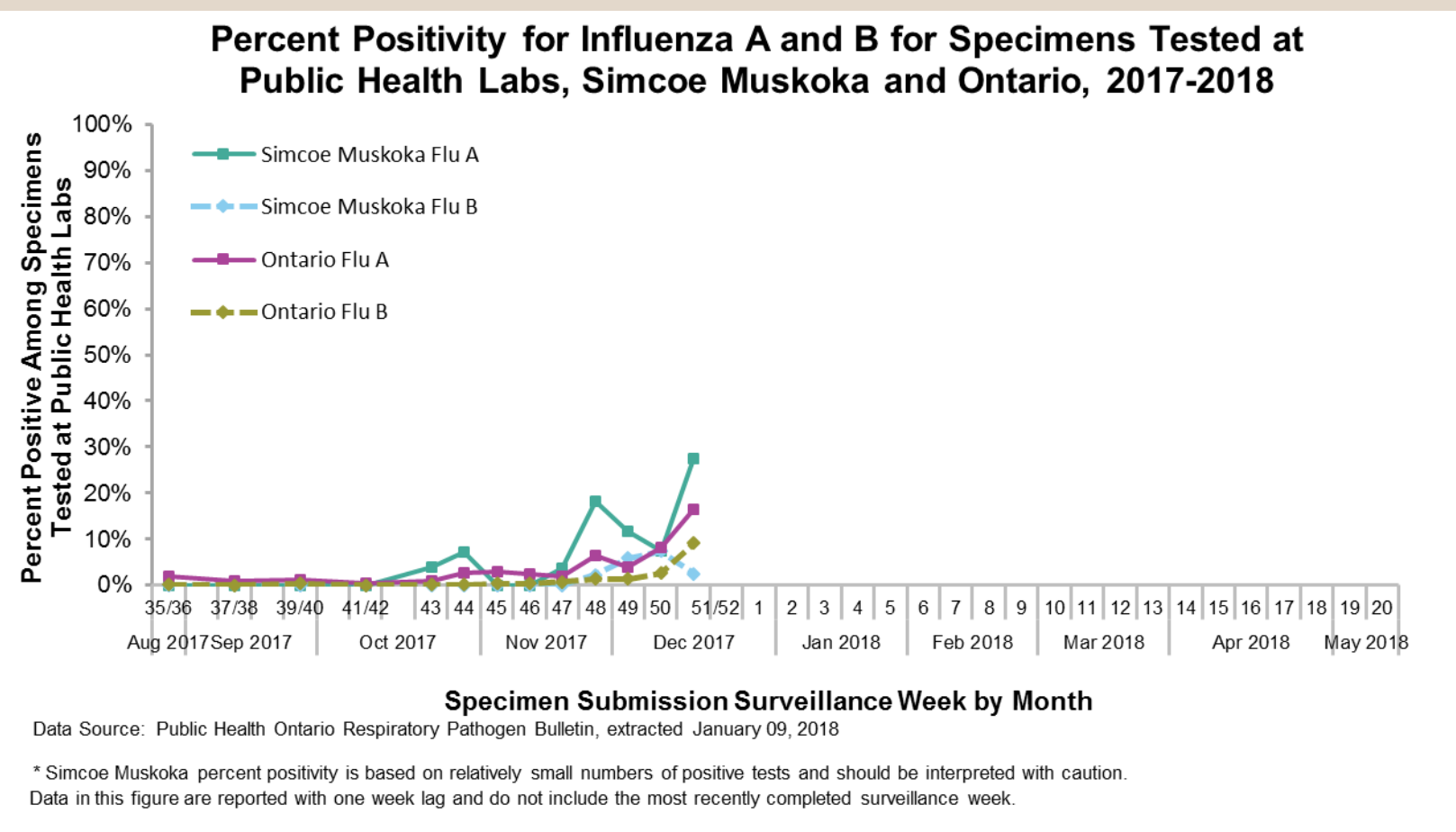
## Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 1. Percent positivity is reported for week 52.

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 52 was reported at 16.5%, which is higher compared to week 50. Influenza B percent positivity was reported at 9.1% for week 52.

Locally for week 52, percent positivity for influenza A was reported at 27.5%, while influenza B was 2.5%.

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

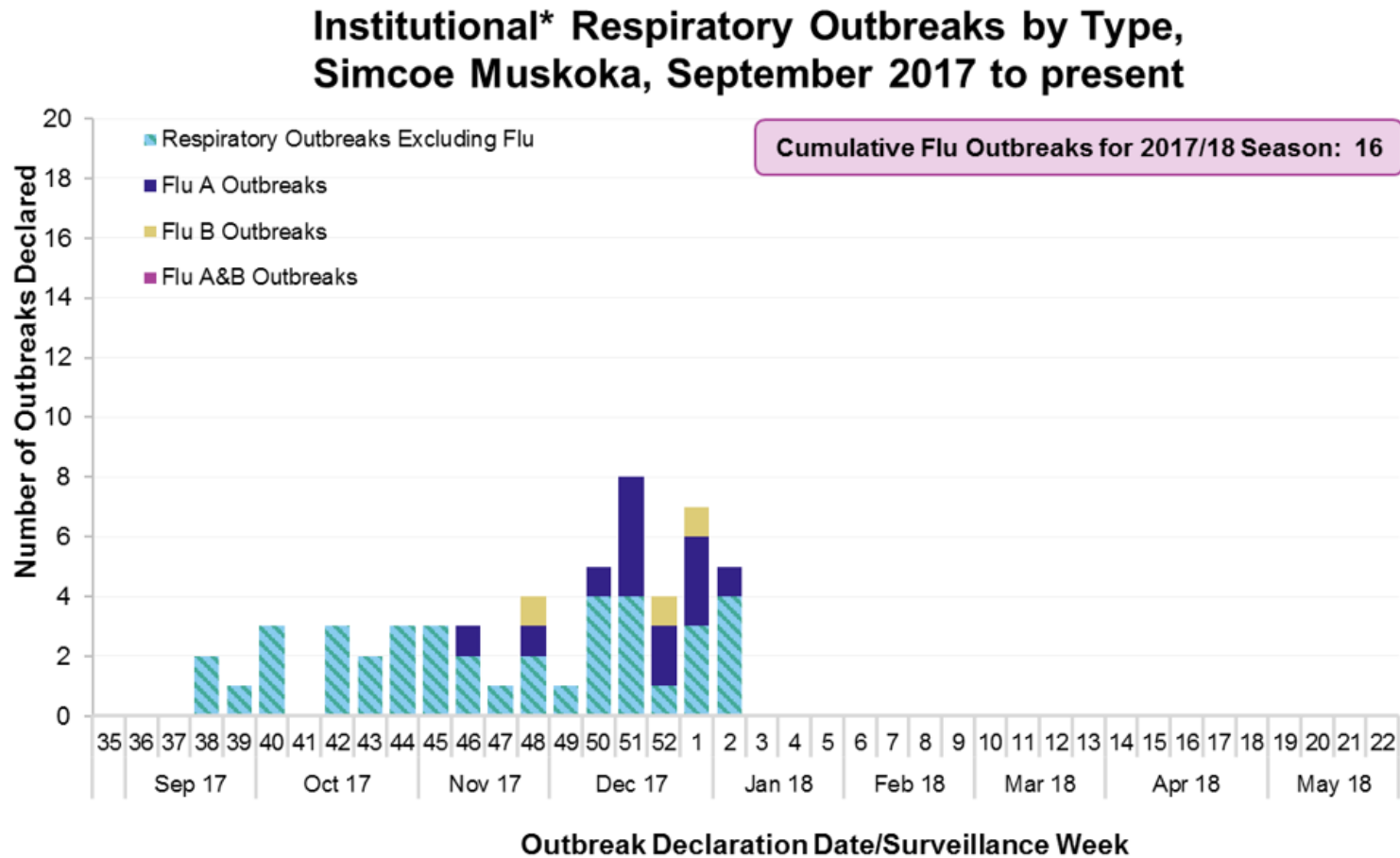


## Institutional Respiratory Outbreaks

There have been 16 *lab-confirmed institutional flu outbreaks* in Simcoe Muskoka since September 1, 2017:

- Influenza A: 13 outbreaks
- Influenza B: three outbreaks

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



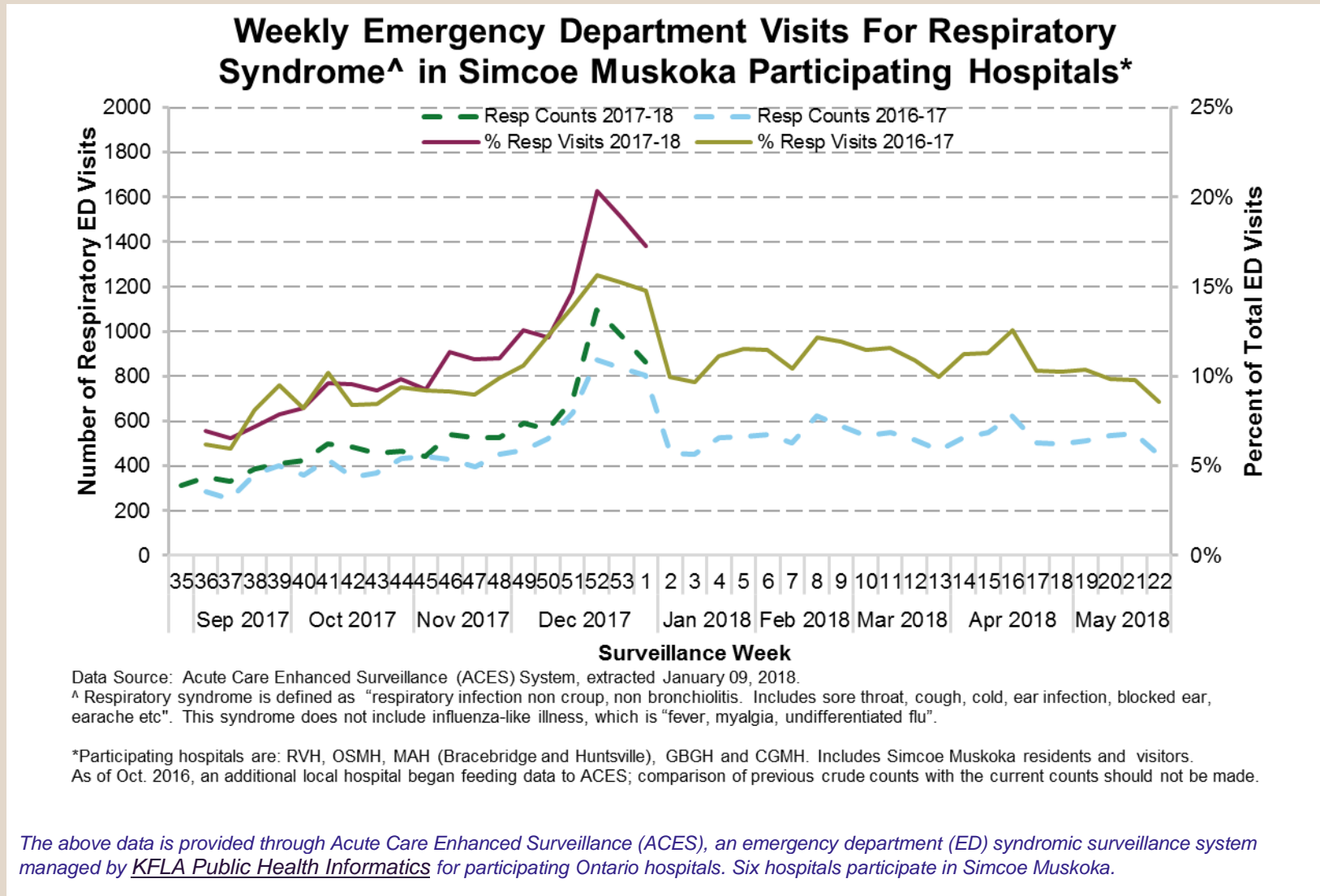
Data Source: SMDHU Outbreak Log, 2017-18, extracted January 10, 2018.

\* 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 17.3% of visits in week 1. This is lower compared to week 52, 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 <sup>†</sup>
	Ontario	Canada	
<b>Influenza A Vaccine Strains</b>			
<b>Influenza A (H3N2) A/Hong Kong/4801/2014-like</b>	20	52	72%
<b>Influenza A (H1N1) A/Michigan/45/2015-like</b>	16	20	28%
<b>Influenza B Vaccine Strains</b>			
<b>B/Brisbane/60/2008-like</b>	1	6	10%
<b>B/Phuket/3073/13-like</b> (Quad vaccine only)	23	57	90%

**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 52, extracted January 9, 2018.

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](#).

<sup>†</sup> Non-vaccine match strains are not reported. Percent match is based on antigenically similar strains. As of week **52**, an additional 138 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 52 Provincial Summary:** For the 2017-2018 surveillance season to week 52, 1247 laboratory-confirmed influenza cases have been reported across Ontario, 357 (26.2%) of which were reported in week 52. Among cumulative cases, 70.0% (873/1247) were influenza A. Of the 265 reported influenza A cases with subtype information available, 90.2% (239/265) were H3N2 and 9.8% (26/265) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 52, extracted January 9, 2018)

### National

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

### International Resources

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