

Weekly Influenza News

Week 12: March 18 to March 24, 2018

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
<u>Reported cases</u>	Similar	29 local lab-confirmed case reported in week 12 ; 35 cases reported in week 11
<u>Percent Positive of Flu Specimens[†]</u>	Similar	Simcoe Muskoka: - flu A (13.5%); flu B (7.7%) Ontario: - flu A (12.3%); flu B (12.5%)
<u>Local Institutional Outbreaks</u>	Similar	Three institutional influenza outbreaks were declared in week 12. Fifty-nine influenza outbreaks reported for the season to date.
<u>Local Emergency Department respiratory visits: week 12</u>	Similar	Percentage of visits is similar compared to previous week and similar compared to same period in the 2016/17 season
Week 12 Overall Assessment March 18 to March 24, 2018	Similar	Reported Activity Level: Localized 11 new cases of Flu A reported 18 new cases of Flu B reported
<u>Predominant Influenza Strains:</u> Influenza A (H3N2), Influenza B\Phuket (Yamagata lineage)		

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 11

Reported Local Influenza Cases

In Simcoe Muskoka, there have been **838 lab-confirmed influenza cases reported** as of 27 March 2018; 29 (3%) of which were reported in week 12 – this was similar when compared to week 11.

Of the 499 reported influenza A cases, only 172 have been subtyped:

- 160/172 (93%) are influenza A, H3 strain
- 12/172 (7%) are influenza A, H1N1 pdm09

🔗 Figure 2 and Figure 3 below provide historic comparisons

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

Lab-confirmed Influenza Cases	Week 12		Season-to-Date	
	N	%	N	%
Influenza A	11	38%	499	60%
Influenza B	18	62%	339	40%
Influenza A & B	0	0%	0	0%
Total	29	100%	838	100%

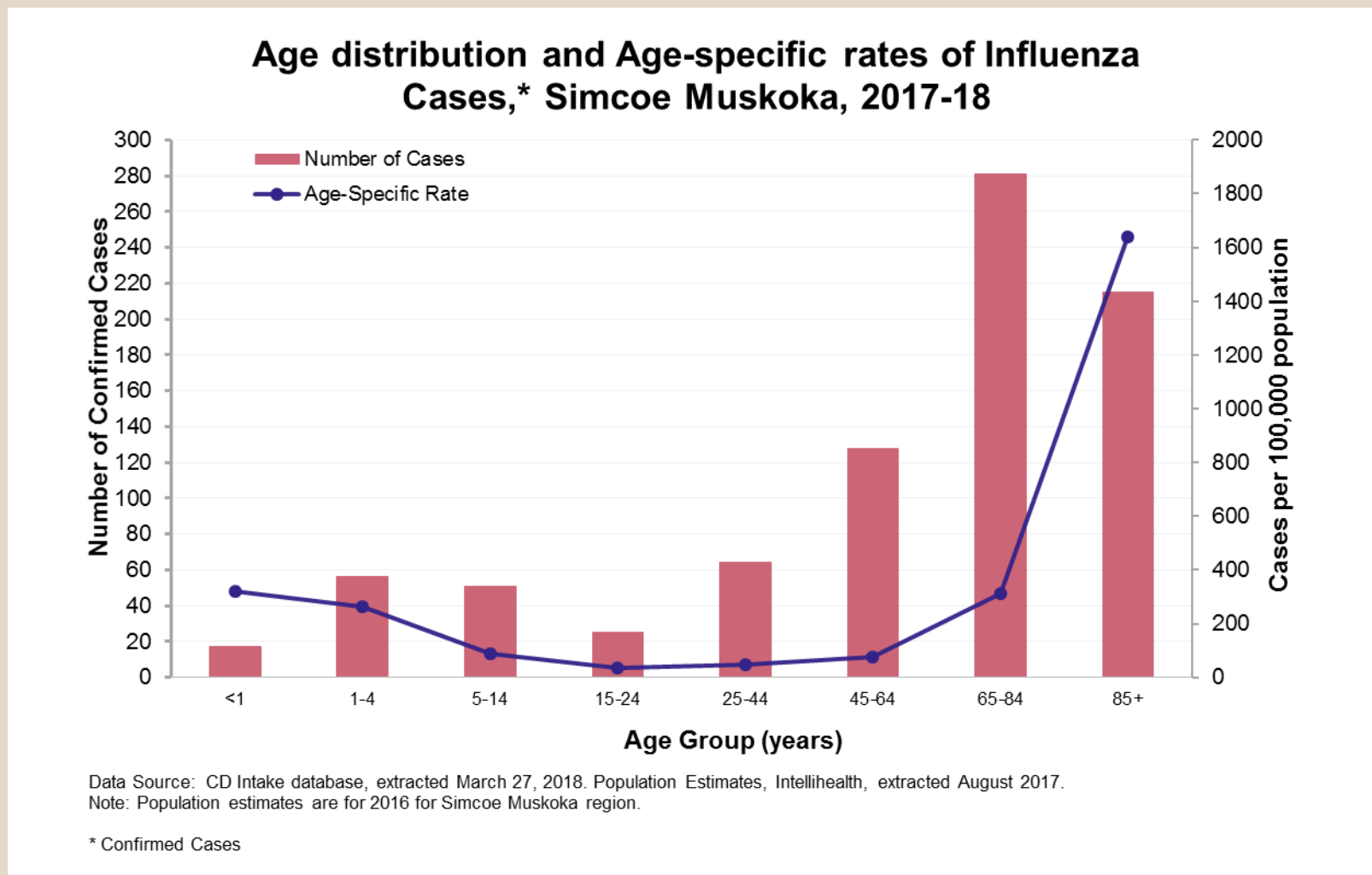
Notes:
Data source: Communicable Disease Intake Database, extracted on March 27, 2018.

Age Distribution

For the season-to-date, 59.2% of cases have been reported in individuals aged 65 and older. The corresponding age-specific rates are 312.7 cases per 100,000 population (65-84 years) and 1639.5 cases per 100,000 population (85+ years), respectively. While only 2% of cases were reported in the <1 years of age group, the age-specific rates is 318.4 cases per 100,000 population.

Median age of reported flu cases: **70 years**

Figure 1: Number and Age-specific Rate of Influenza Cases by Age Group, Simcoe Muskoka, September 2017 to present



Historical Comparison

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

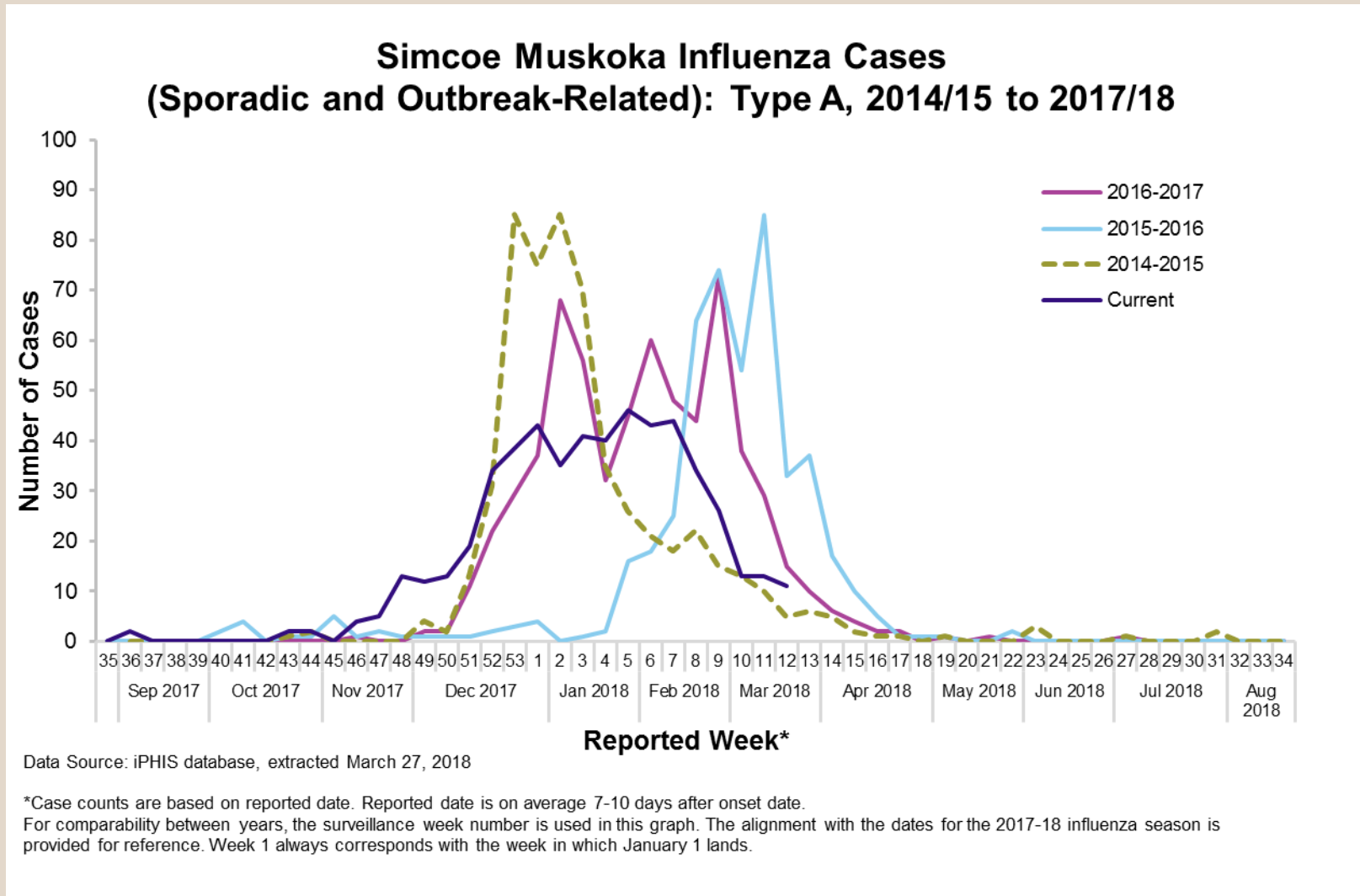
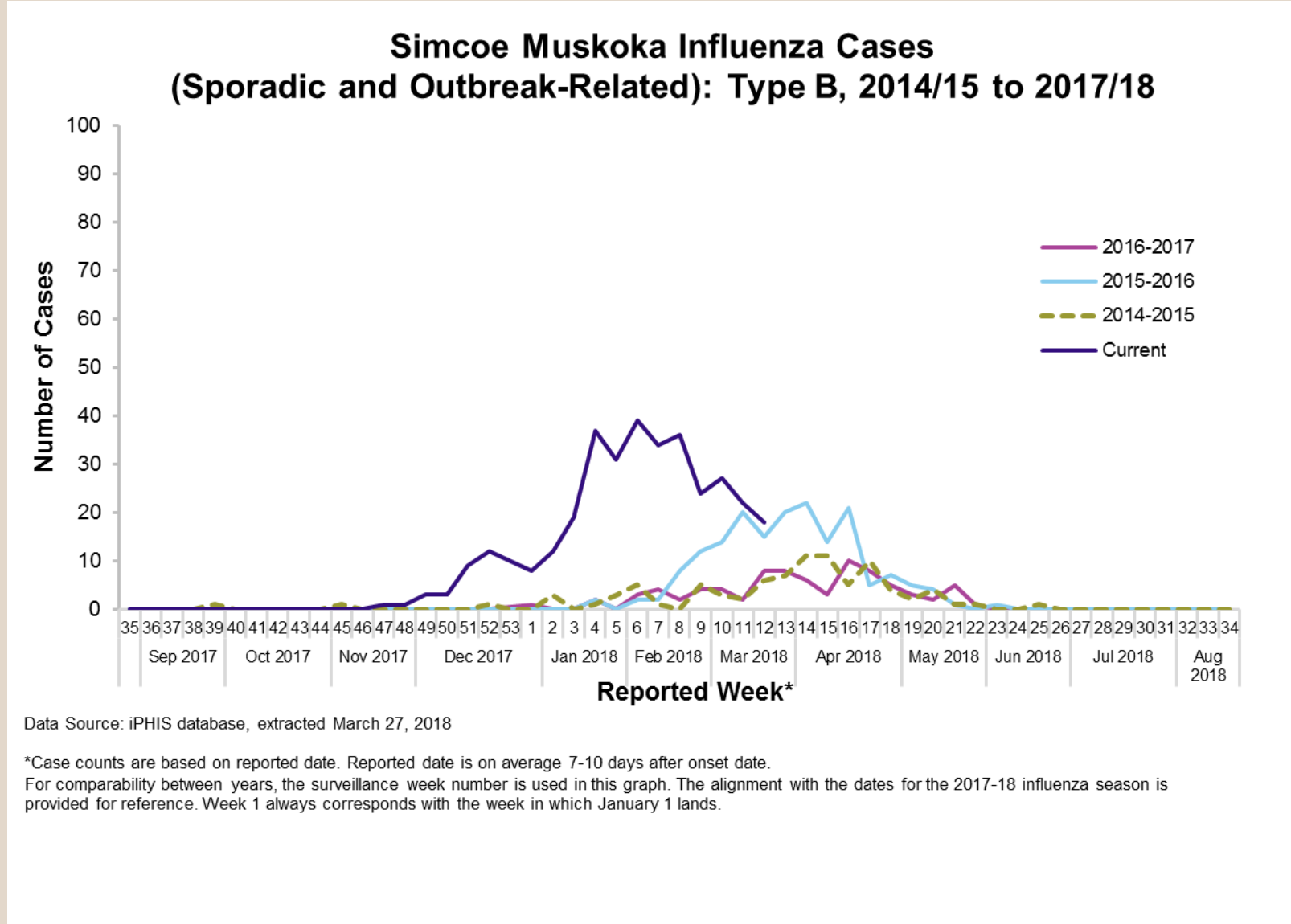


Figure 3: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



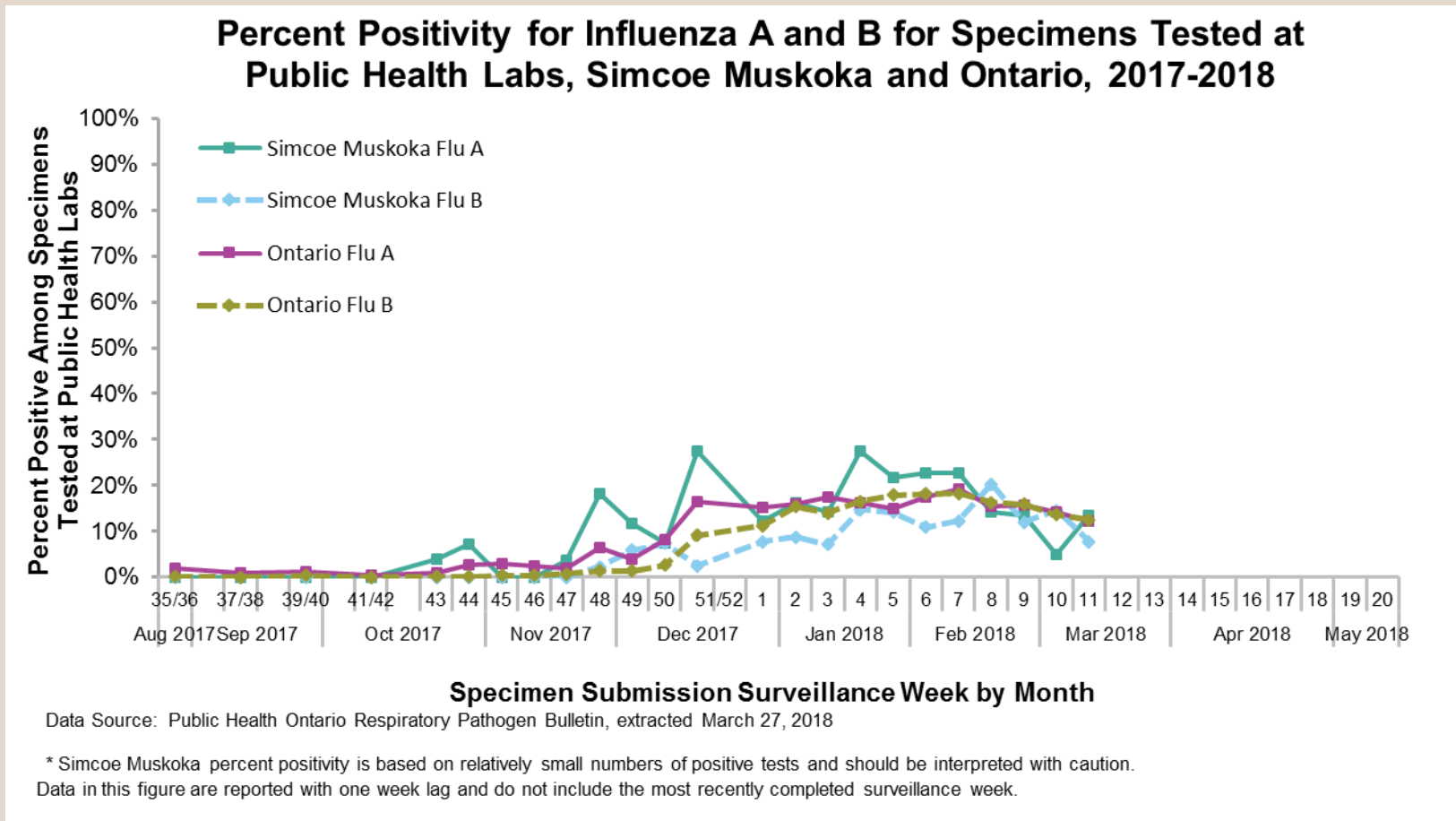
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 12.

The percentage of flu specimens that are positive (percent positivity) for Influenza A and Influenza B has peaked for the season. The provincial percent positivity for influenza A in week 11 was reported at 12.3%, which is similar compared to week 10. Influenza B percent positivity was reported at 12.5% for week 11.

Locally for week 11, percent positivity for influenza A was reported at 13.5%, while influenza B was 7.7%.

Figure 4: Percent Positivity, Influenza A & B, Simcoe Muskoka & Ontario, 2017/18

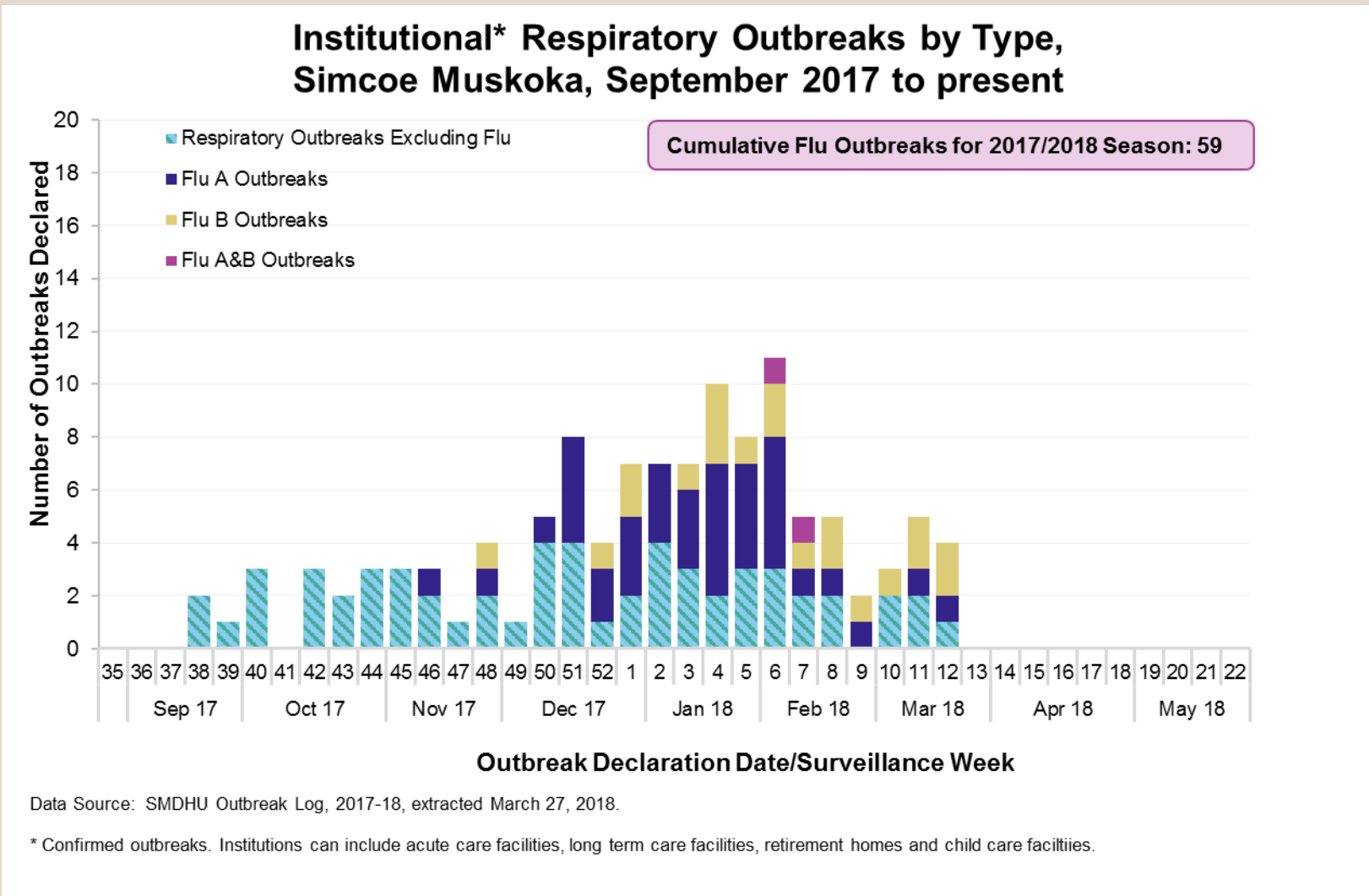


Institutional Respiratory Outbreaks

There have been 59 *lab-confirmed institutional flu outbreaks* in Simcoe Muskoka since September 1, 2017:

- Influenza A: 37 outbreaks
- Influenza B: 20 outbreaks
- Influenza A and B: 2 outbreaks

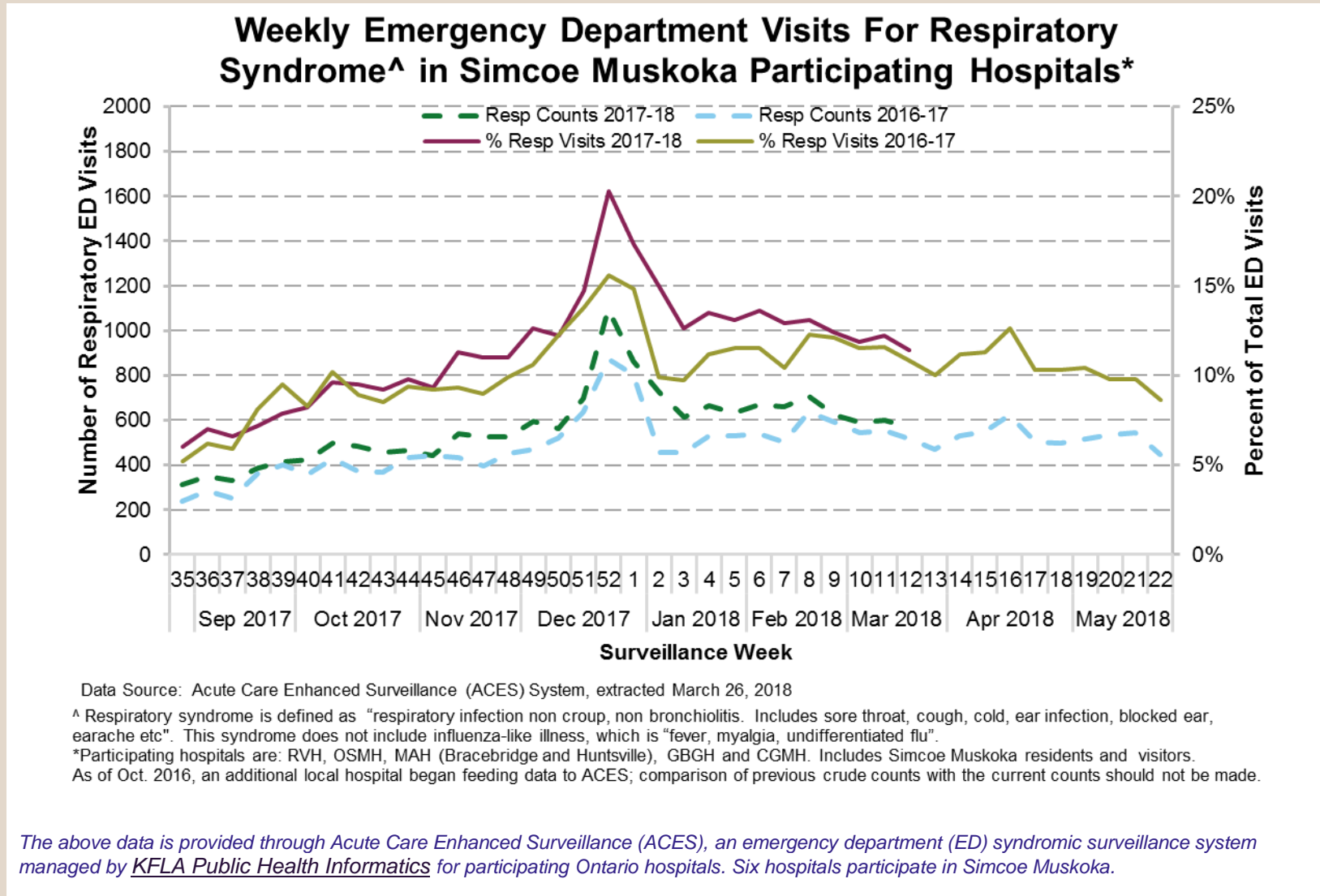
Figure 5: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2017/18



Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 11.4% of visits in week 12. This is similar compared to week 11, and similar compared to the same point in the 2016/17 season.

Figure 6: 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	139	296	64%
Influenza A (H1N1) A/Michigan/45/2015-like	64	164	36%
Influenza B Vaccine Strains			
B/Brisbane/60/2008-like	6	50	4%
B/Phuket/3073/13-like (Quad vaccine only)	427	1110	96%

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 50, extracted March 27, 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](#).

[†] Non-vaccine match strains are not reported. Percent match is based on antigenically similar strains. As of week 11, an additional 799 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 11 Provincial Summary: For the 2017-2018 surveillance season to week 11, 15,497 laboratory-confirmed influenza cases have been reported across Ontario, 812 (5%) of which were reported in week 11. Among cumulative cases, 54.2% (8395/15497) were influenza A. Of the 2325 reported influenza A cases with subtype information available, 94.0% (2186/2325) were H3N2 and 6.0% (139/2325) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 11, extracted March 27, 2018)

National

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

International Resources

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