

Weekly Influenza News

Week 13: March 25 to March 31, 2018

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
<u>Reported cases</u>	Lower	17 local lab-confirmed case reported in week 13 ; 30 cases reported in week 12
<u>Percent Positive of Flu Specimens[†]</u>	Similar	Simcoe Muskoka: - flu A (10.8%); flu B (13.8%) Ontario: - flu A (12.3%); flu B (8.9%)
<u>Local Institutional Outbreaks</u>	Lower	One institutional influenza outbreak was declared in week 13. Sixty influenza outbreaks reported for the season to date.
<u>Local Emergency Department respiratory visits: week 13</u>	Similar	Percentage of visits is similar compared to previous week and similar compared to same period in the 2016/17 season
Week 13 Overall Assessment March 25 to March 31, 2018	Lower	Reported Activity Level: Localized 9 new cases of Flu A reported 8 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 12

Reported Local Influenza Cases

In Simcoe Muskoka, there have been **850 lab-confirmed influenza cases reported** as of 4 April 2018; 17 (2%) of which were reported in week 13 – this was lower compared to week 12.

Of the 504 reported influenza A cases, only 188 have been subtyped:

- 173/188 (92%) are influenza A, H3 strain
- 15/188 (8%) 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 13		Season-to-Date	
	N	%	N	%
Influenza A	9	56%	504	59%
Influenza B	8	44%	346	41%
Influenza A & B	0	0%	0	0%
Total	17	100%	850	100%

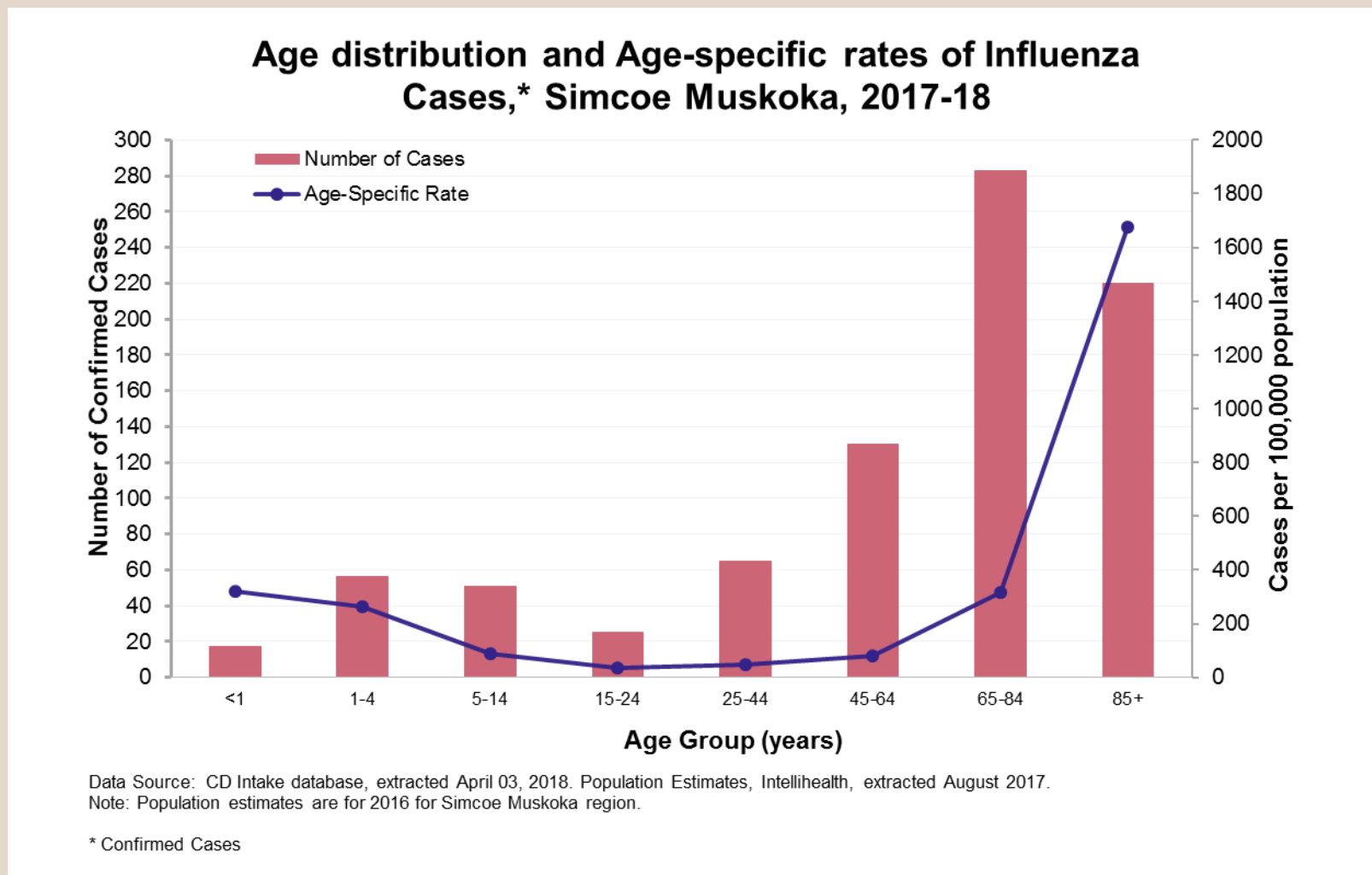
Notes:
Data source: Communicable Disease Intake Database, extracted on April 04, 2018.

Age Distribution

For the season-to-date, 59.4% of cases have been reported in individuals aged 65 and older. The corresponding age-specific rates are 314.9 cases per 100,000 population (65-84 years) and 1685.2 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

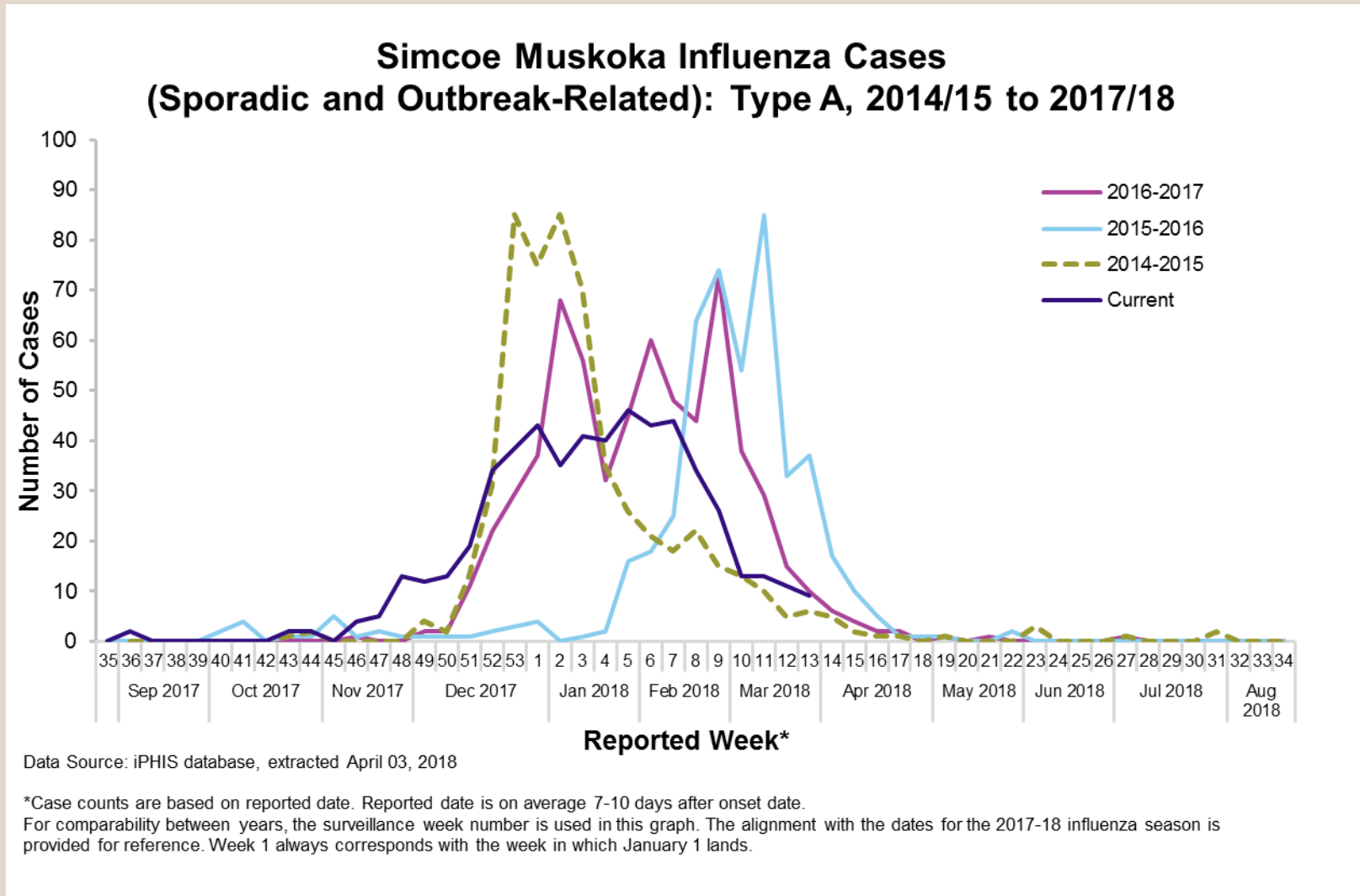
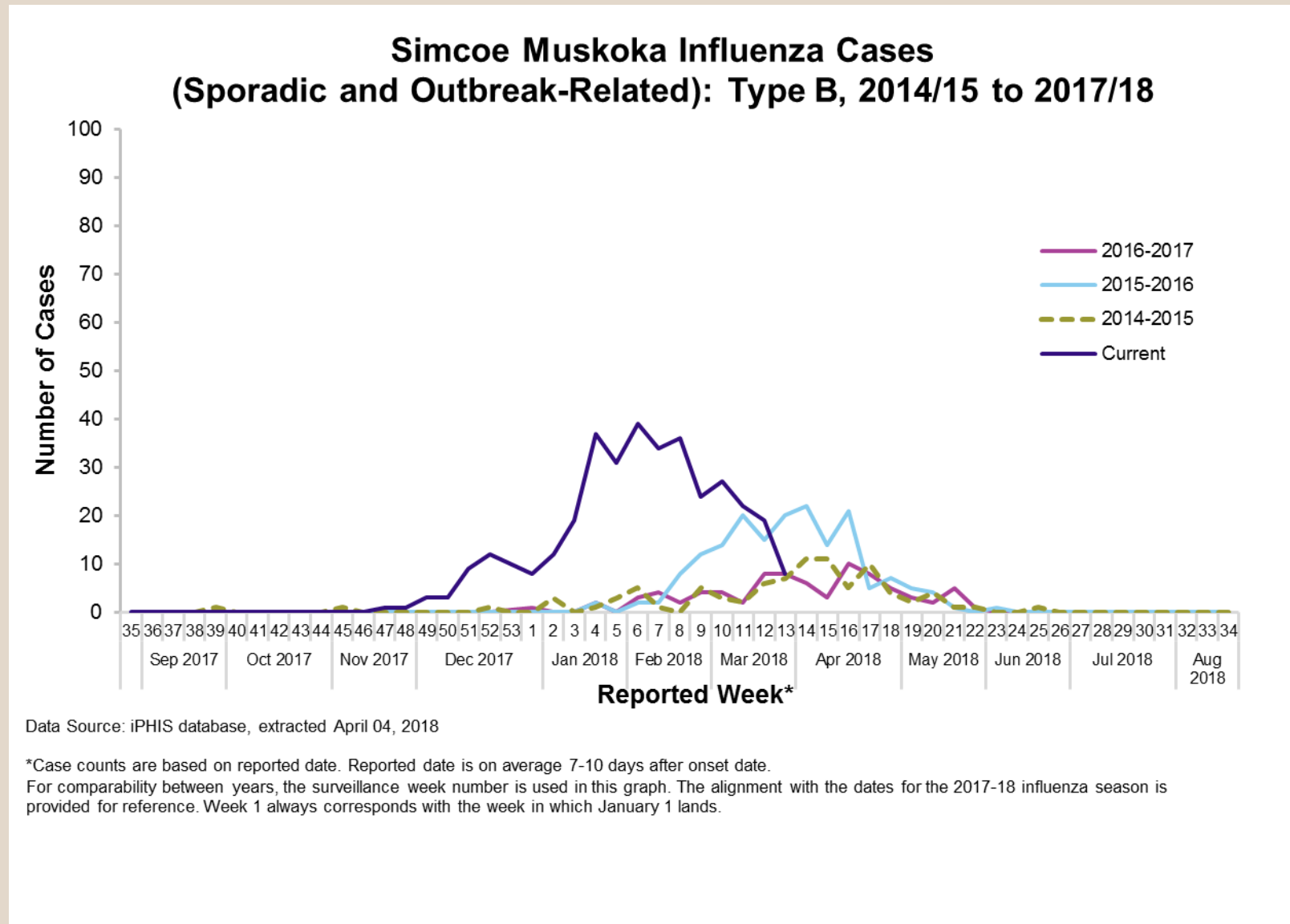


Figure 3: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



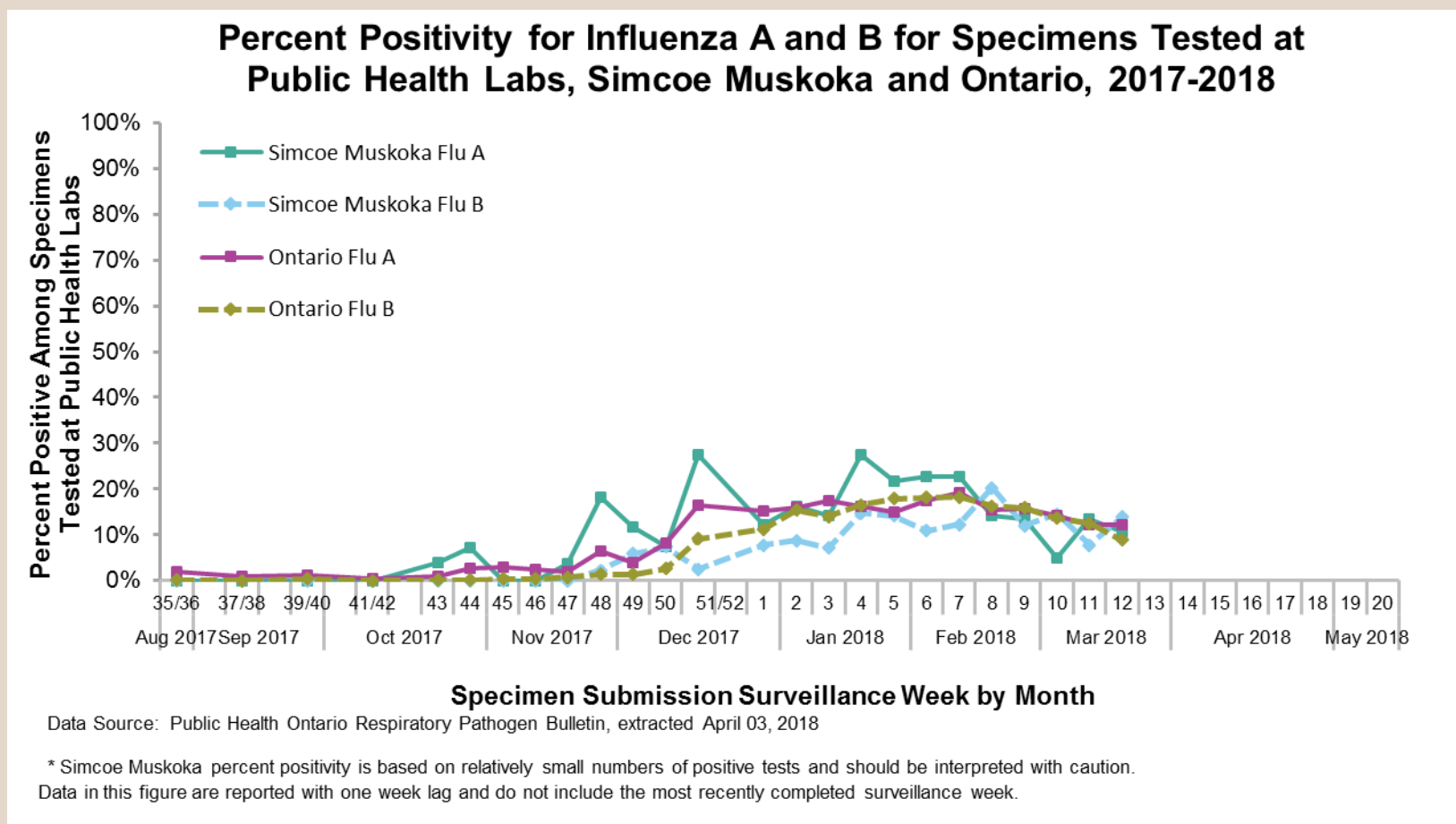
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 13.

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 12 was reported at 12.3%, which is the same as week 11. Influenza B percent positivity was reported at 8.9% for week 12.

Locally for week 12, percent positivity for influenza A was reported at 10.8%, while influenza B was 13.8%.

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

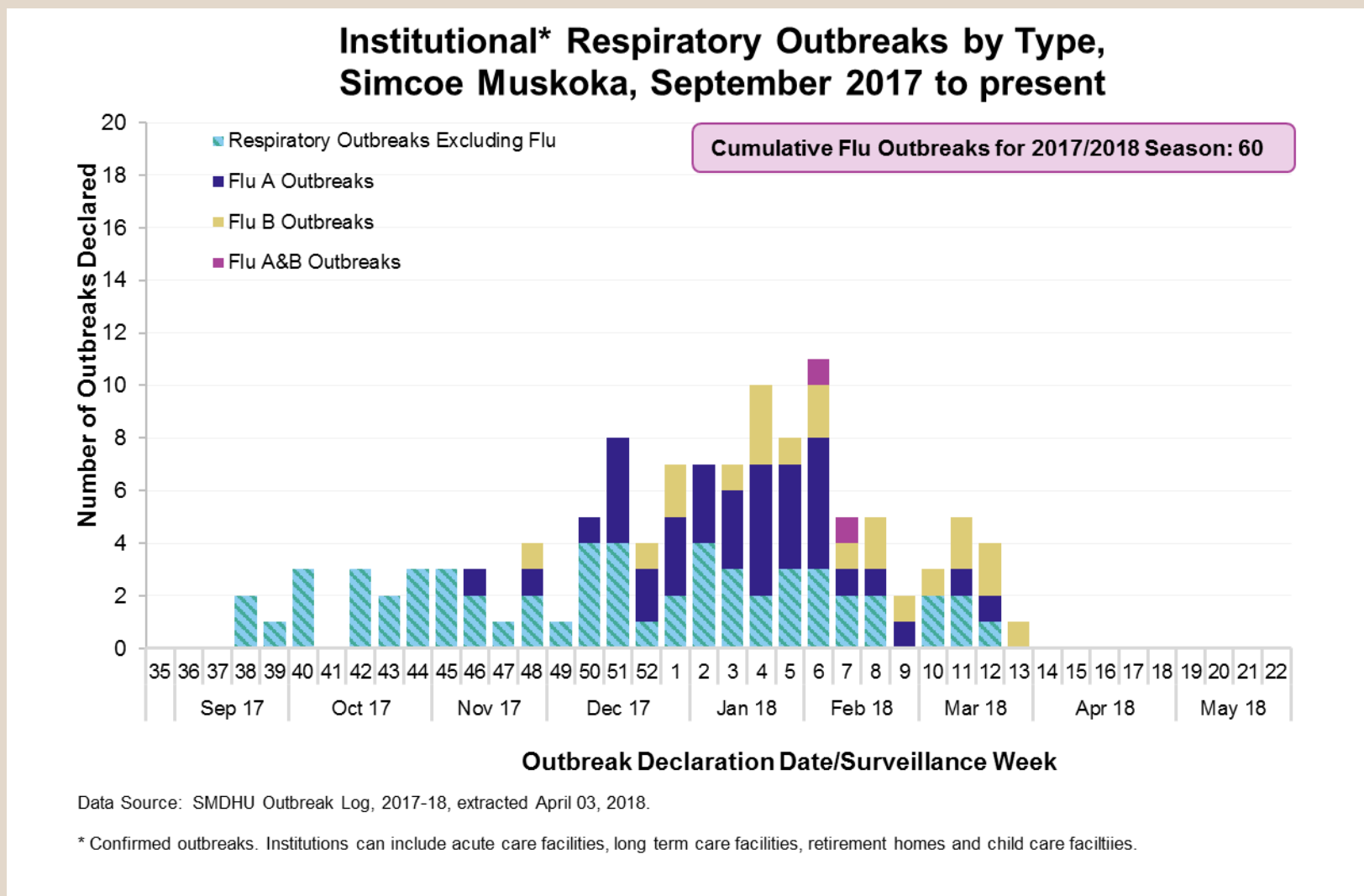


Institutional Respiratory Outbreaks

There have been 60 *lab-confirmed institutional flu outbreaks* in Simcoe Muskoka since September 1, 2017:

- Influenza A: 37 outbreaks
- Influenza B: 21 outbreaks
- Influenza A and B: 2 outbreaks

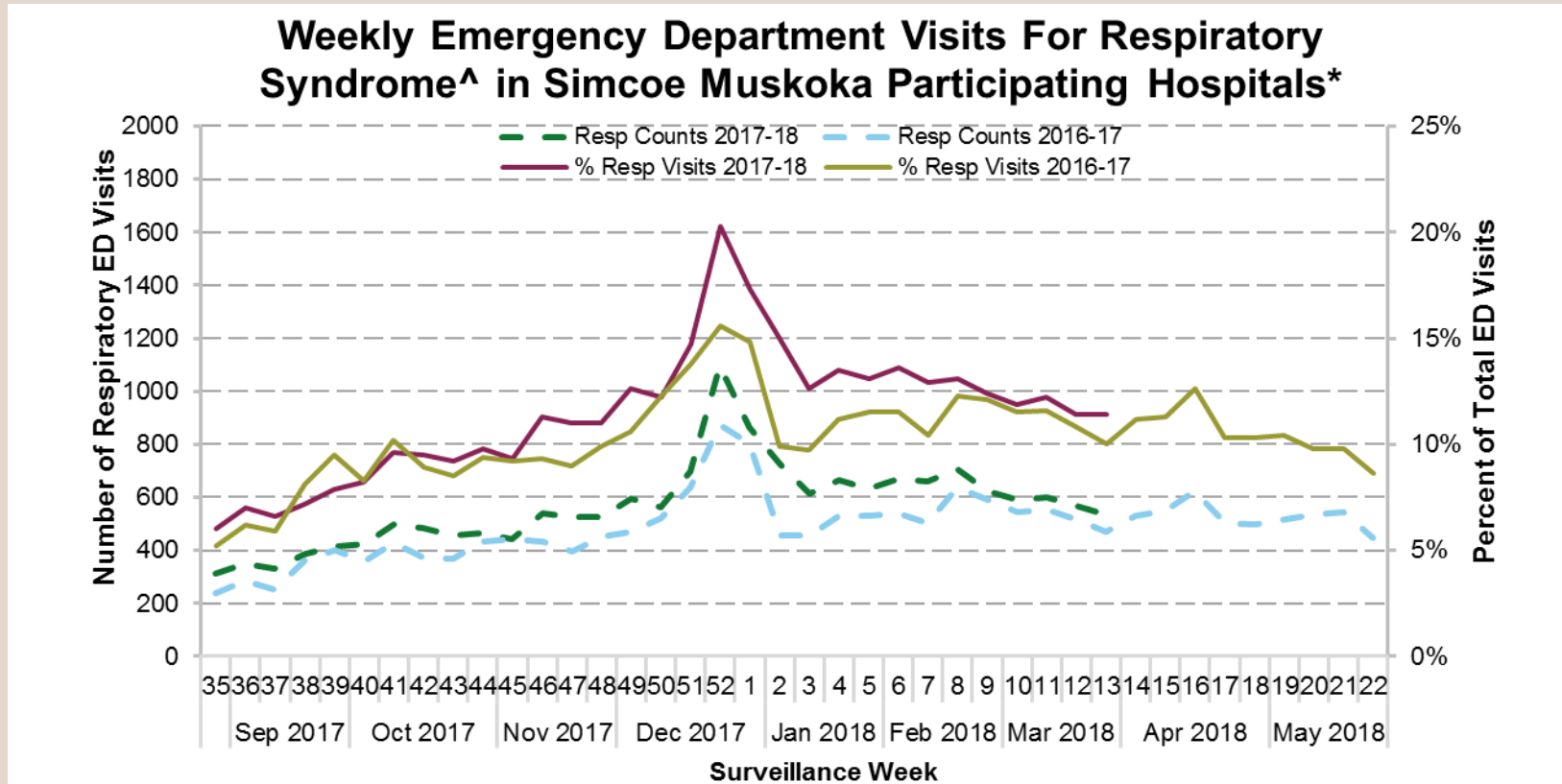
Figure 5: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2017/18



Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 11.4% of visits in week 13. This is similar compared to week 12, 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



Data Source: Acute Care Enhanced Surveillance (ACES) System, extracted April 02, 2018
 ^ 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	150	309	63%
Influenza A (H1N1) A/Michigan/45/2015-like	69	182	37%
Influenza B Vaccine Strains			
B/Brisbane/60/2008-like	8	56	4%
B/Phuket/3073/13-like (Quad vaccine only)	491	1269	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 April 4, 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 12, 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 12 Provincial Summary: For the 2017-2018 surveillance season to week 12, 16,067 laboratory-confirmed influenza cases have been reported across Ontario, 560 (3.5%) of which were reported in week 12. Among cumulative cases, 54.2% (8705/16067) were influenza A. Of the 2453 reported influenza A cases with subtype information available, 93.8% (2302/2453) were H3N2 and 6.2% (151/2453) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 12, extracted April 4, 2018)

National

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

International Resources

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