






Weekly Influenza News

Week 3: January 14 to January 20, 2018

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Higher	60 local lab-confirmed case reported in week 3 ; 48 cases reported in week 2
 <u>Percent Positive of Flu Specimens[†]</u>	Similar	Simcoe Muskoka: - flu A (16.3%); flu B (8.8%) Ontario: - flu A (16.0%); flu B (15.4%)
 <u>Local Institutional Outbreaks</u>	Similar	Four institutional influenza outbreaks were declared in week 3. Twenty-three influenza outbreaks reported for the season to date.
 <u>Local Emergency Department respiratory visits: week 3</u>	Lower	Percentage of visits is lower compared to previous week and higher compared to same period in the 2016/17 season
Week 3 Overall Assessment January 14 to January 20, 2018	Similar	Reported Activity Level: Widespread 41 new cases of Flu A reported 19 new cases of Flu B reported
 <u>Predominant Influenza Strains:</u> Influenza A (H3), 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 2

Reported Local Influenza Cases

In Simcoe Muskoka, there have been **315 lab-confirmed influenza cases reported** as of 24 January 2018; 60 (19.2%) of which were reported in week 3 – this was higher when compared to week 2.

Of the 235 reported influenza A cases, only 55 have been subtyped:

- 52/55 (95%) are influenza A, H3 strain
- 3/55 (5%) 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 3		Season-to-Date	
	N	%	N	%
Influenza A	41	68%	235	75%
Influenza B	19	32%	80	25%
Influenza A & B	0	0%	0	0%
Total	60	100%	315	100%

Notes:

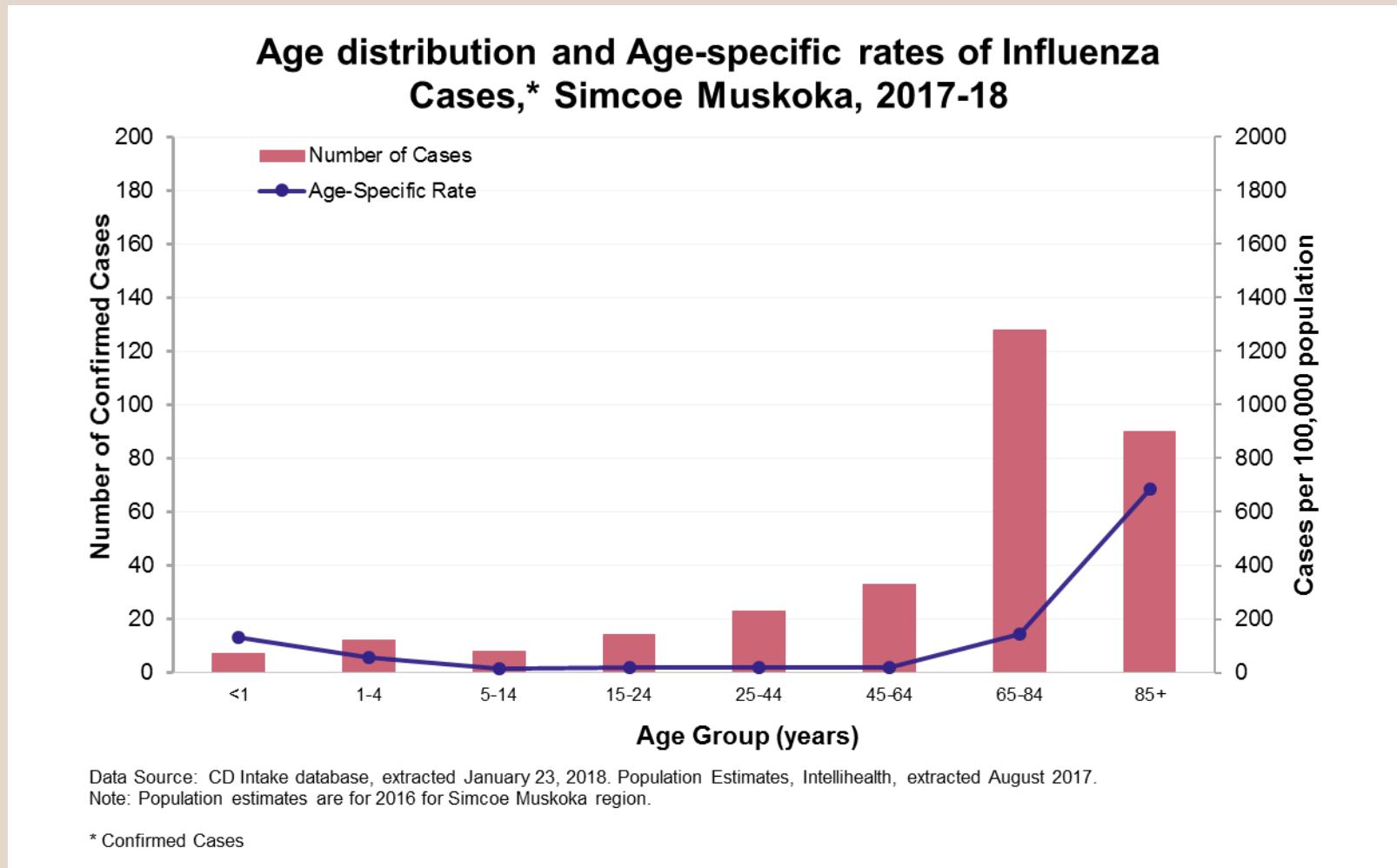
Data source: Communicable Disease Intake Database, extracted on January 24, 2018.

Age Distribution

For the season-to-date, over two-thirds (69.2%) of cases have been reported in individuals aged 65 and older. The corresponding age-specific rates are 142.4 cases per 100,000 population (65-84 years) and 686.3 cases per 100,000 population (85+ years), respectively. While less than 5% of cases were reported in the <1 years of age group, the age-specific rates is 131.1 cases per 100,000 population.

Median age of reported flu cases: **75 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

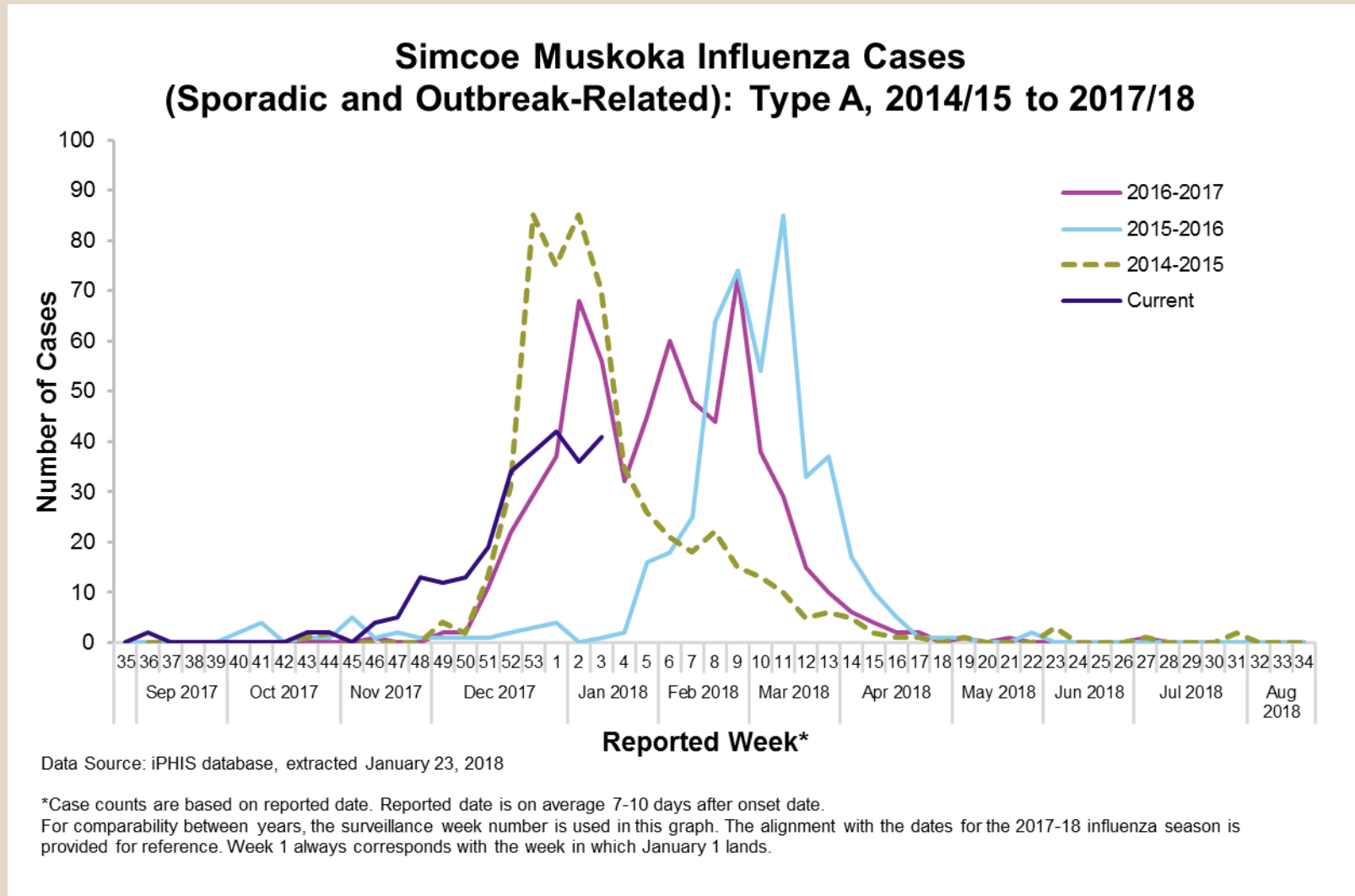
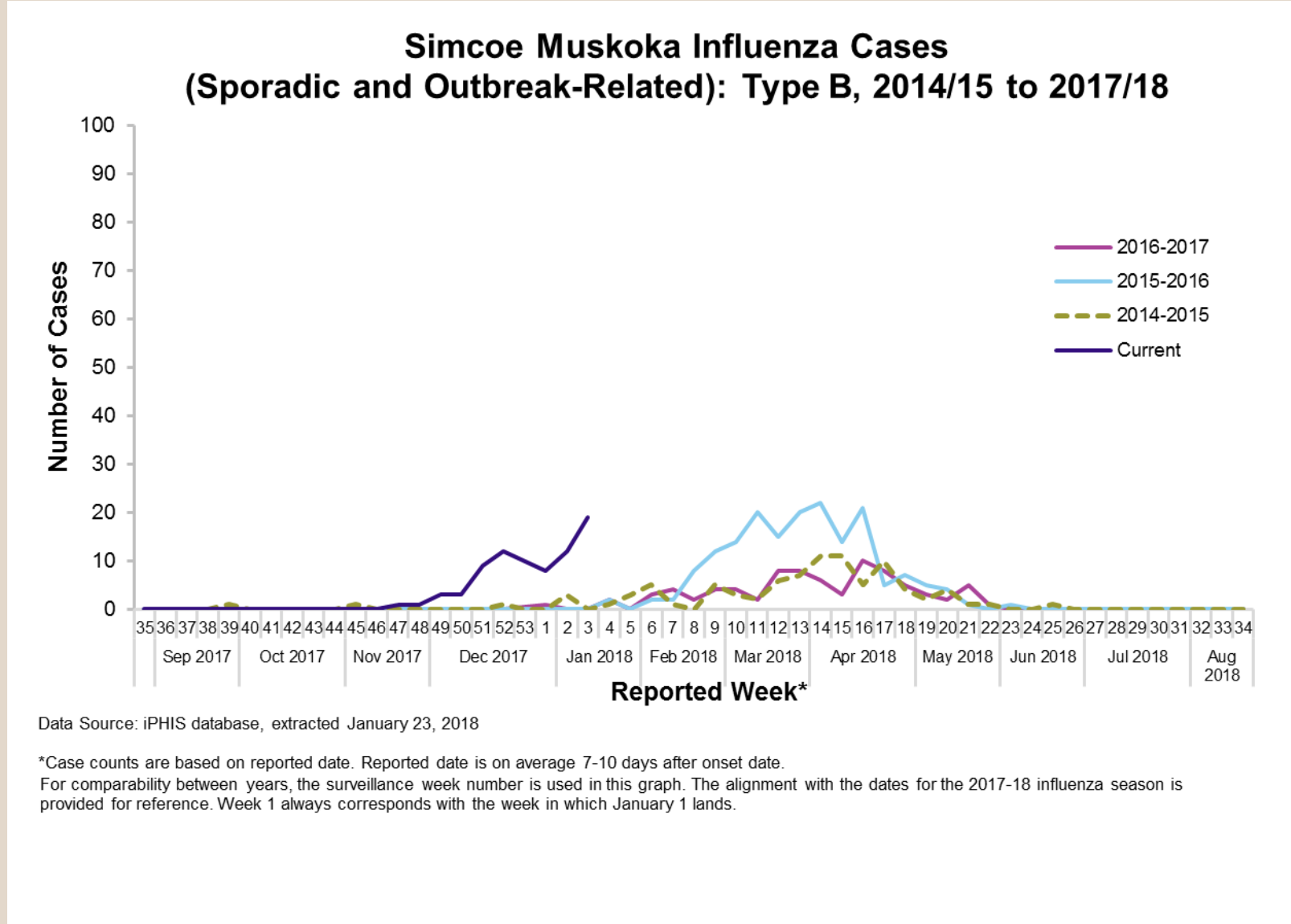


Figure 3: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



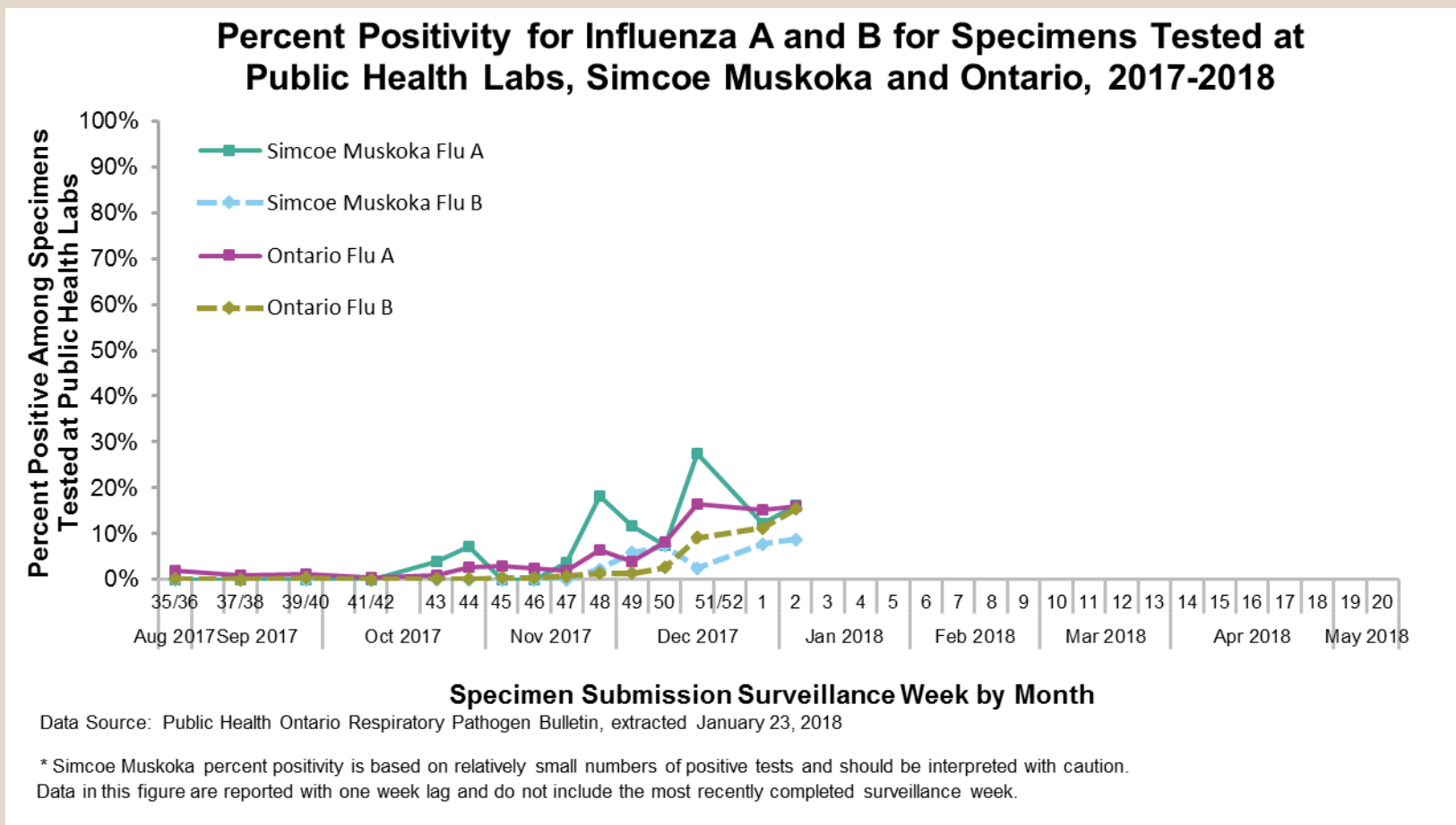
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 3.

The percentage of flu specimens that are positive (percent positivity) for Influenza A and Influenza B is increasing for the season. The provincial percent positivity for influenza A in week 2 was reported at 16.0%, which is similar compared to week 1. Influenza B percent positivity was reported at 15.4% for week 2.

Locally for week 2, percent positivity for influenza A was reported at 16.3%, while influenza B was 8.8%.

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

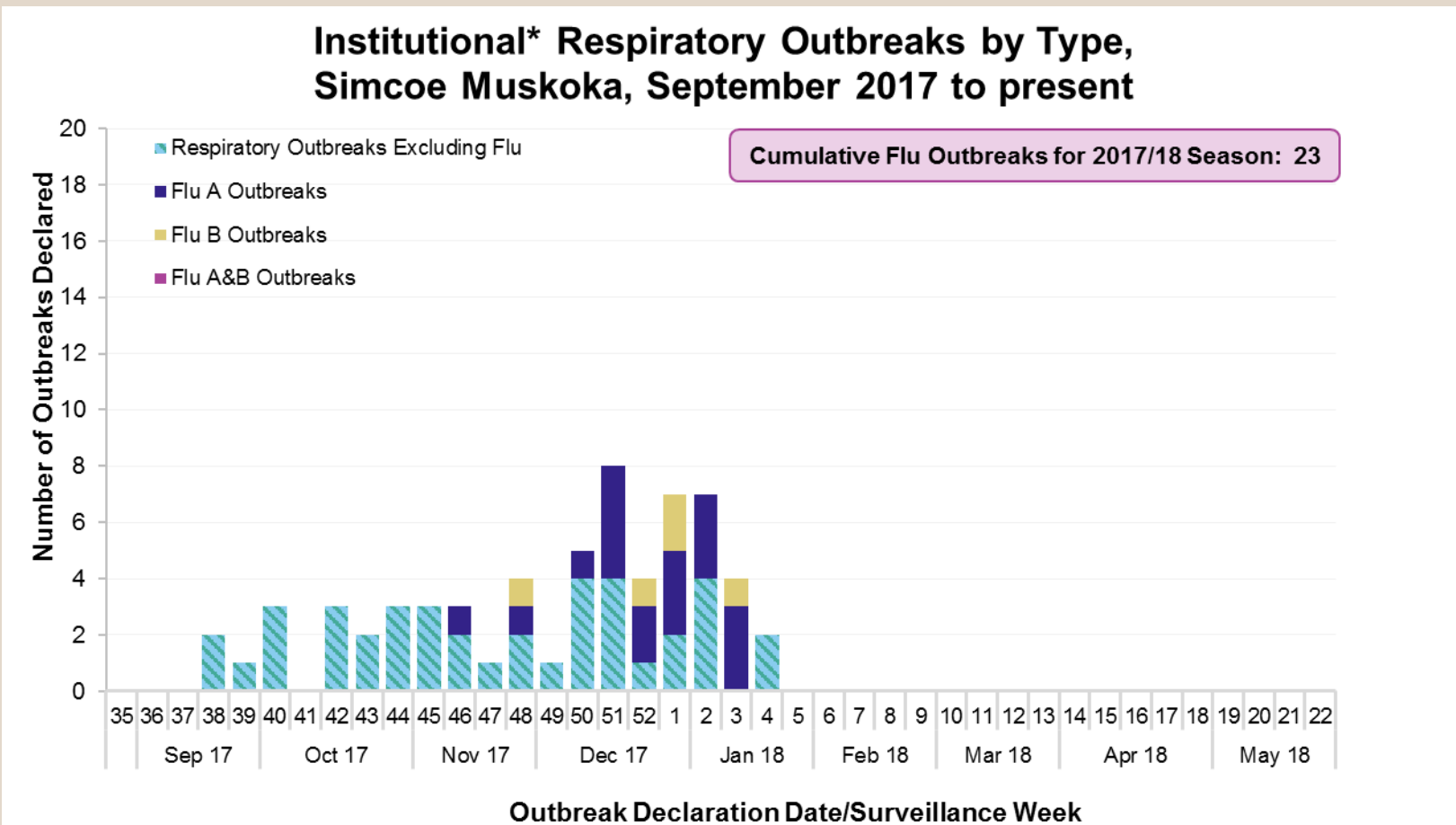


Institutional Respiratory Outbreaks

There have been 23 *lab-confirmed institutional flu outbreak* in Simcoe Muskoka since September 1, 2017:

- Influenza A: 18 outbreaks
- Influenza B: five outbreaks

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



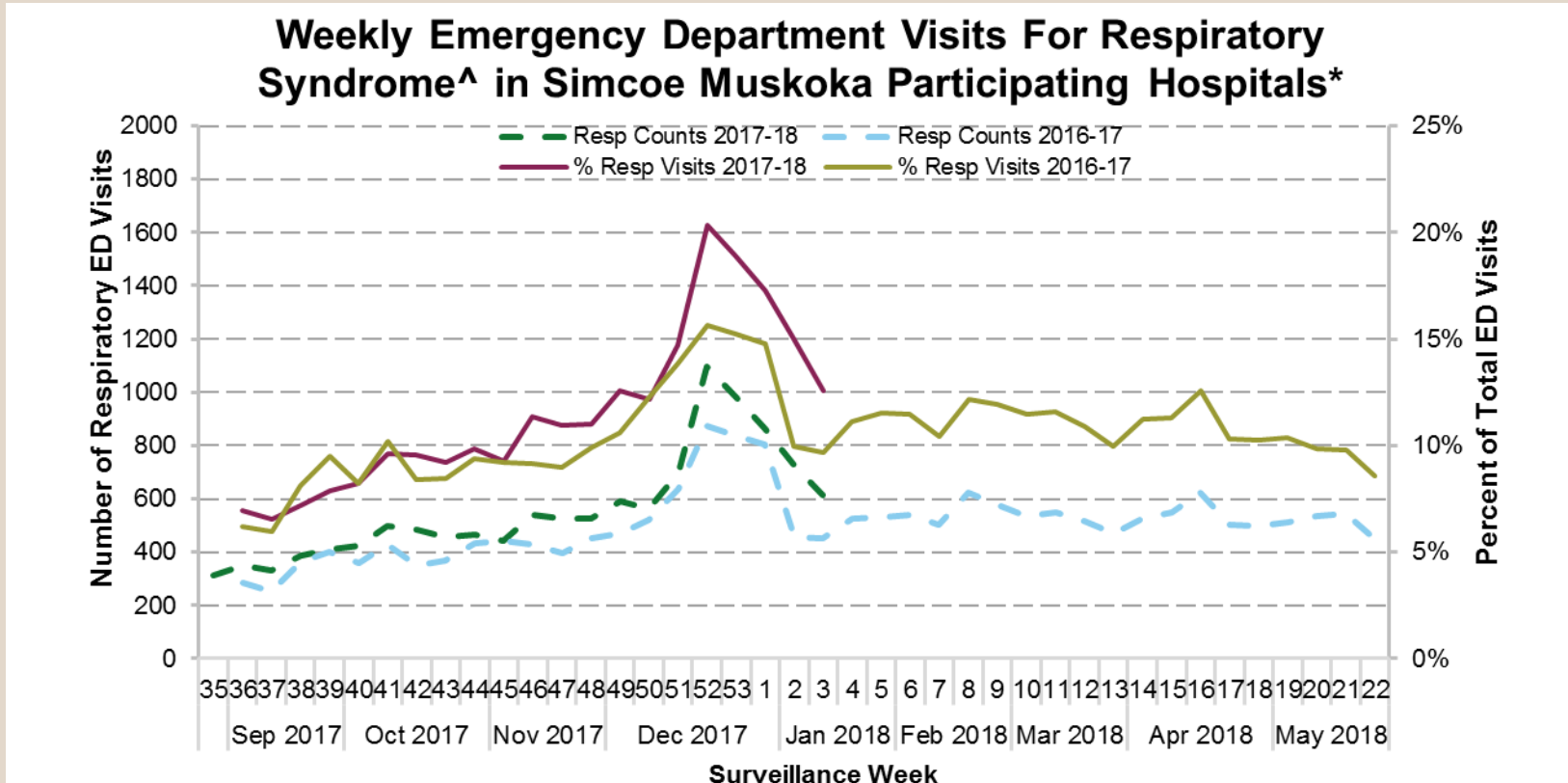
Data Source: SMDHU Outbreak Log, 2017-18, extracted January 23, 2018.

* 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 12.6% of visits in week 3. This is lower compared to week 2, and higher 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 January 23, 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	30	73	68%
Influenza A (H1N1) A/Michigan/45/2015-like	22	34	32%
Influenza B Vaccine Strains			
B/Brisbane/60/2008-like	1	7	5%
B/Phuket/3073/13-like (Quad vaccine only)	53	142	95%

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 January 24, 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 2, an additional 227 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 2 Provincial Summary: For the 2017-2018 surveillance season to week 2, 3,499 laboratory-confirmed influenza cases have been reported across Ontario, 1,194 (34.1%) of which were reported in week 2. Among cumulative cases, 61.6% (2156/3499) were influenza A. Of the 634 reported influenza A cases with subtype information available, 95.0% (602/634) were H3N2 and 5.0% (32/634) were (H1N1)pdm09.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 2, extracted January 24, 2018)

National

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

International Resources

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