






Weekly Influenza News

Week 4: January 19 to January 25, 2020

Week in Review:

Influenza Activity Indicator	Assessment of Indicator*	Interpretation
 <u>Reported cases</u>	Higher	65 local lab-confirmed case reported in week 4 ; 42 cases reported in week 3
 <u>Percent Positive of Flu Specimens[†]</u>	Similar	Simcoe Muskoka - flu A: 7.2%; flu B: 0.0% Ontario - flu A: 18.7%; flu B: 3.9%
 <u>Local Institutional Outbreaks</u>	Similar	11 influenza outbreaks reported for the 2019-20 season to date.
 <u>Local Emergency Department respiratory visits: week 4</u>	Similar	Percentage of visits is similar compared to previous week and similar to same period for the 2018-19 season.
Week 4 Overall Assessment January 19 to January 25, 2020	Similar	Reported Activity Level: Localized
		46 cases of Flu A reported in SMDHU 19 cases of Flu B reported in SMDHU
 <u>Predominant Influenza Strains:</u> Flu A(H1N1)		

Notes: Reported activity level is based on the weekly submissions to Public Health Ontario. Definition available [here](#).

*Compared to previous [surveillance week](#); based on provincial percent positivity

† Reported for week 3

Reported Local Influenza Cases

In Simcoe Muskoka, there has been **471 lab-confirmed influenza cases reported** as of 28 January 2020 - 65 cases (13.8%) of influenza were reported in week 4.

Of the 277 reported influenza A cases, 69 have been subtyped:

- 20/69 (29%) are influenza A, H3 strain
- 49/69 (71%) are influenza A, H1 strain/ H1N1 pdm09.

🔗 Figure 2 and Figure 3 below provide historic comparisons

Table 1: Summary of influenza cases for 2019-20 season

Lab-confirmed Influenza Cases	Week 4		Season-to-Date	
	N	%	N	%
Influenza A	46	71%	277	59%
Influenza B	19	29%	194	41%
Influenza A & B	0	0%	0	0%
Total	65	100%	471	100%

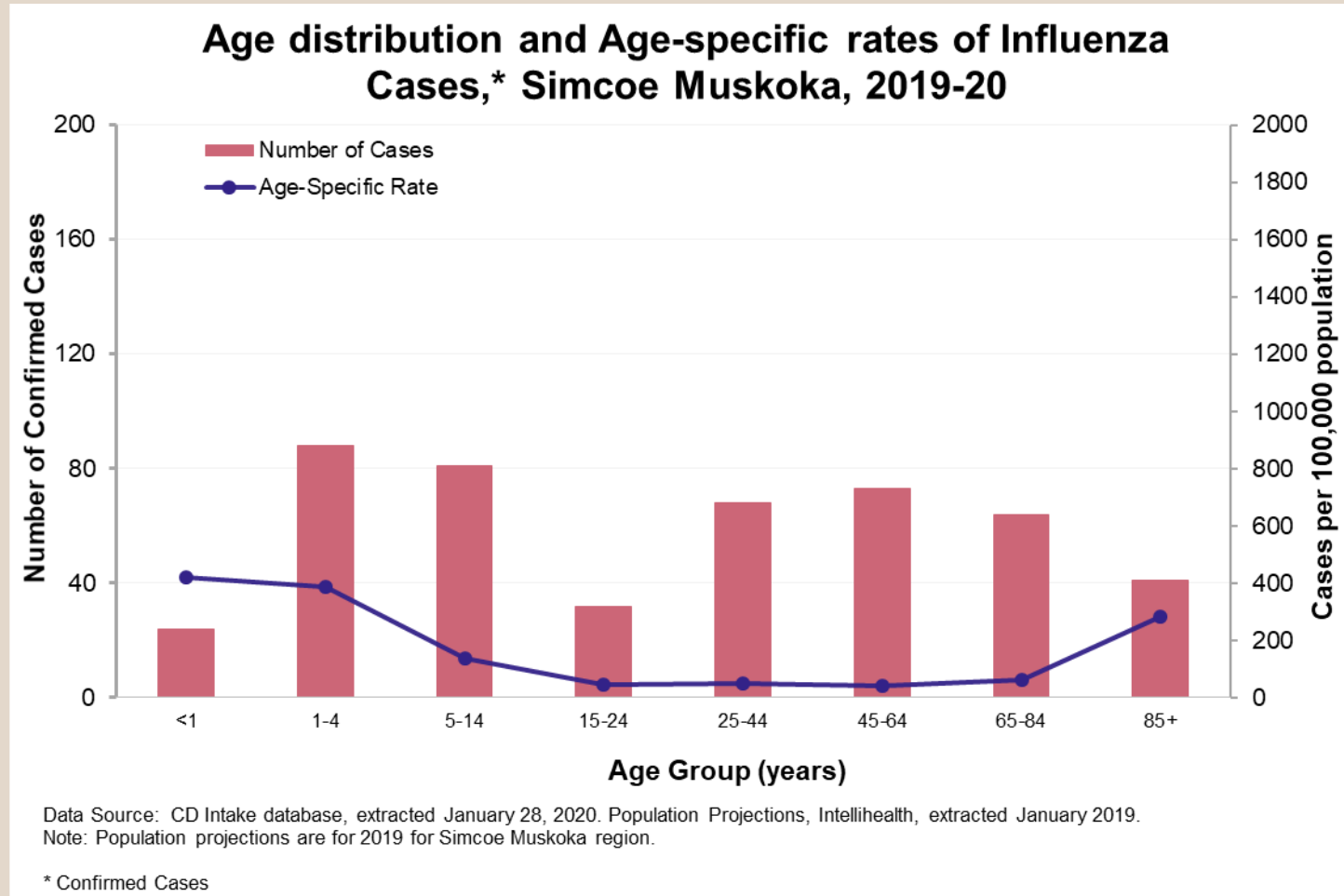
Notes:
Data source: Communicable Disease Intake Database, extracted on January 28, 2020.

Age Distribution

For the season-to-date, the majority of cases (78%) have been reported in individuals under the age of 65 years, with the highest age-specific rates being seen in children under the age of 4 years (41% of cases have been in those under the age of 14 years). Nearly one quarter (22%) of cases have been reported in individuals aged 65 and older.

Median age of reported flu cases: 28 years

Figure 1: Number and Age-specific Rate of Influenza Cases by Age Group, Simcoe Muskoka, September 2019 to present



Historical Comparison

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

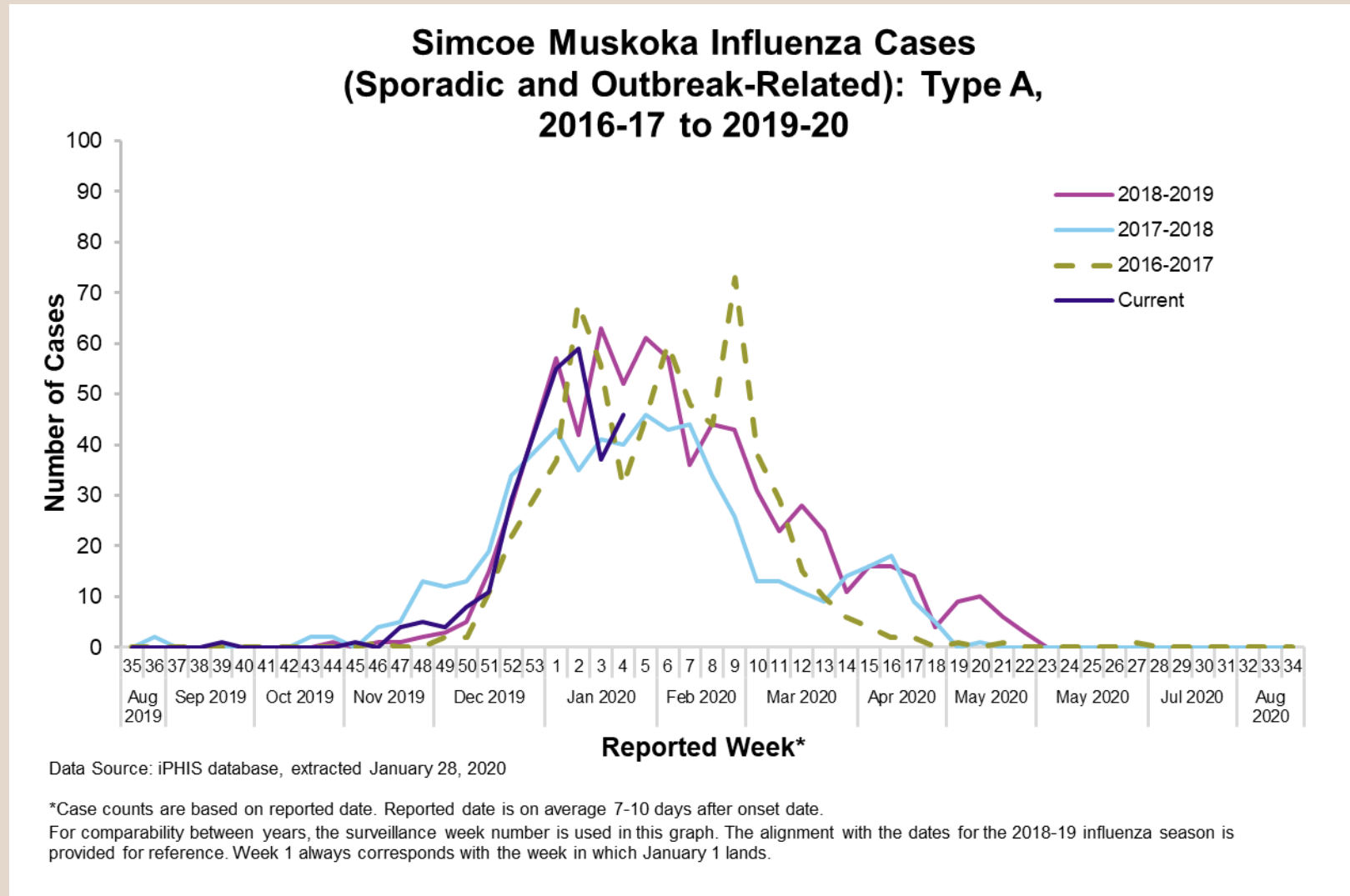
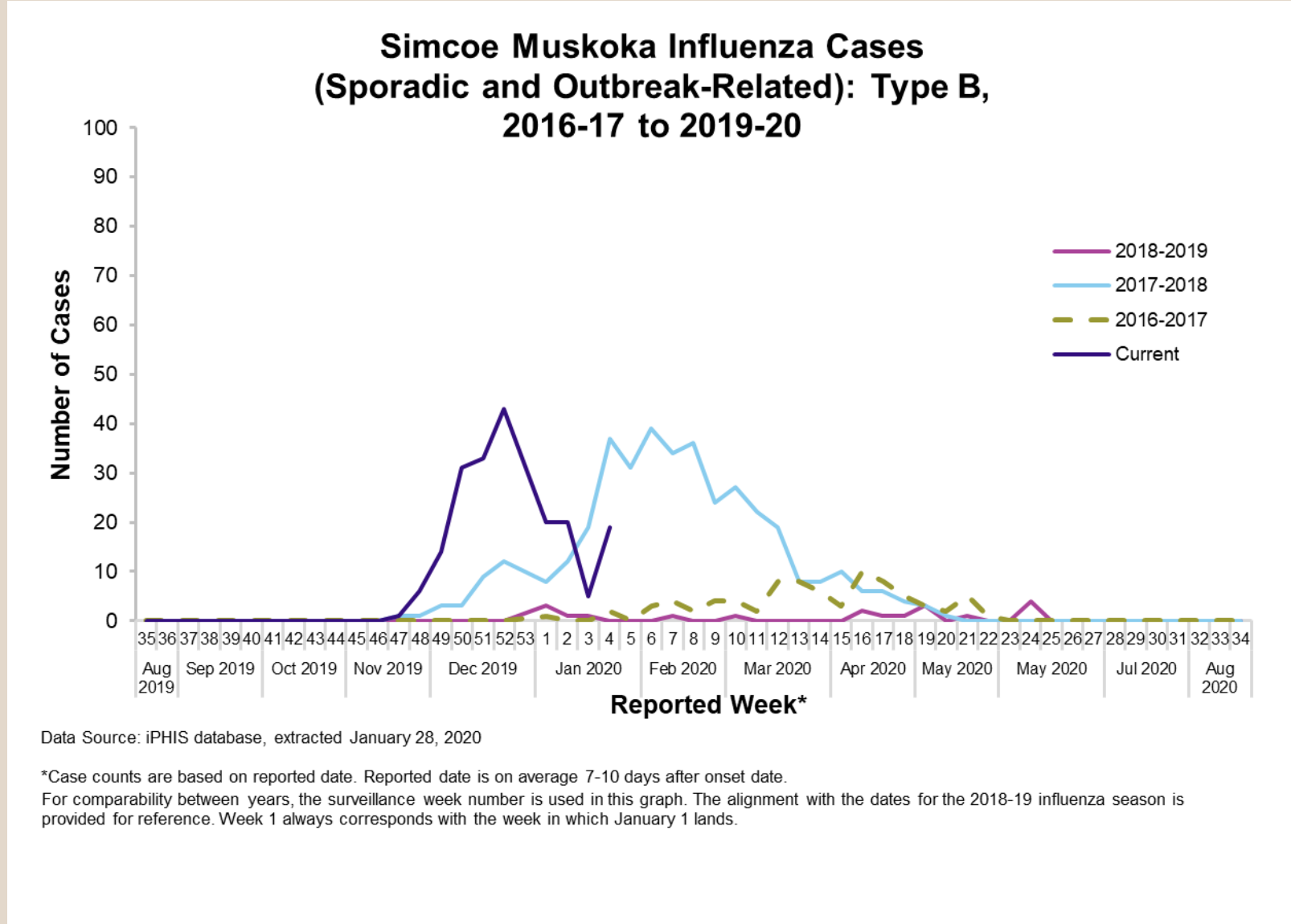


Figure 3: Reported Influenza Cases, Type B, Current Influenza Season with Historical Comparison, Simcoe Muskoka



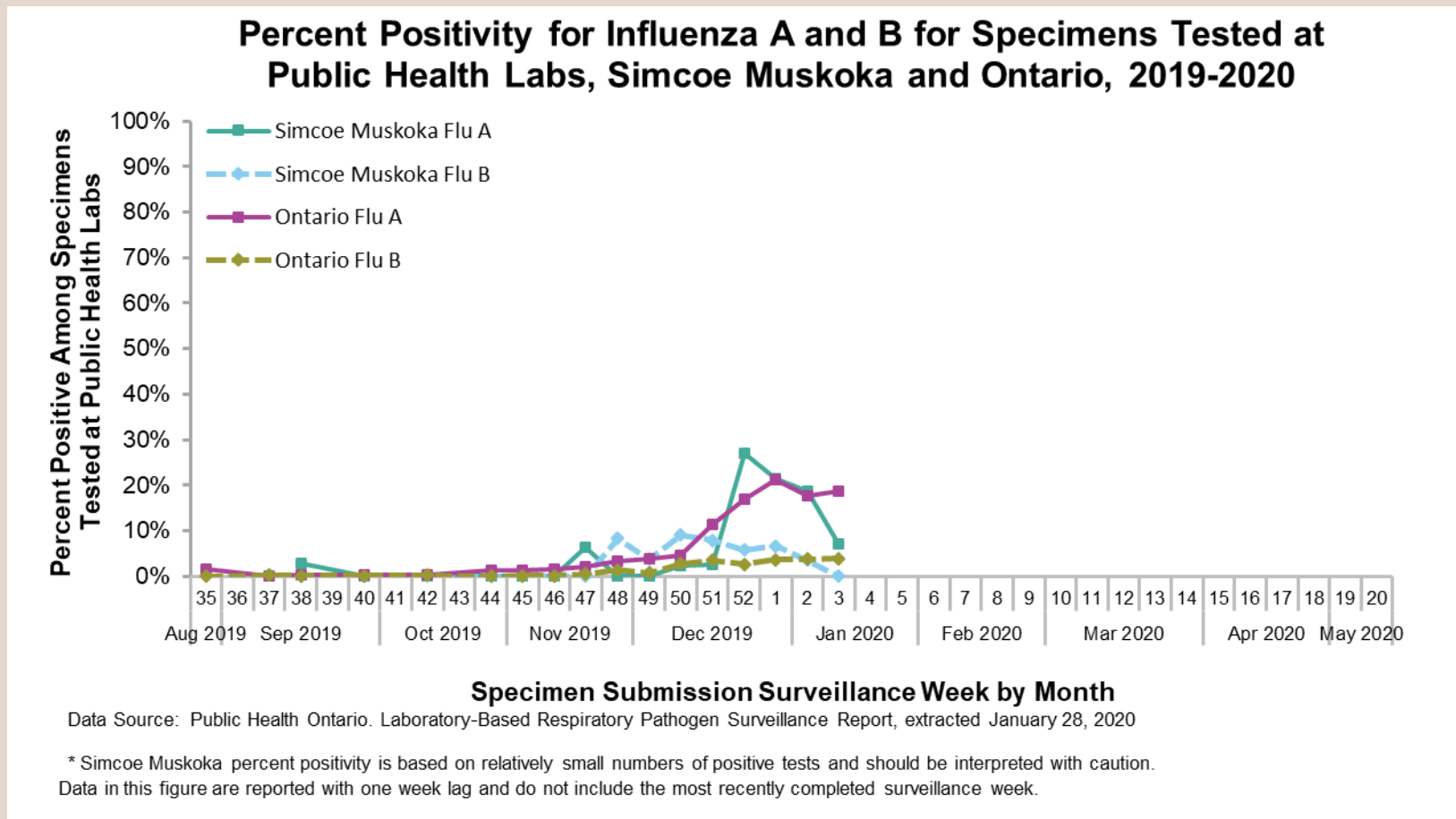
Percent positivity

Note: Percent positivity is reported with one week lag and does not include week 4.

The percentage of flu specimens that are positive (percent positivity) for Influenza A and Influenza B has increased to seasonal levels. The provincial percent positivity for influenza A in week 3 was reported at 18.7%, which is similar when compared to week 2. Influenza B percent positivity was reported at 3.9% for week 3.

Locally for week 3, percent positivity for influenza A was reported at 7.2%, while influenza B was 0.0%.

Figure 4: Percent Positivity, Influenza A & B, Simcoe Muskoka & Ontario, 2019-20

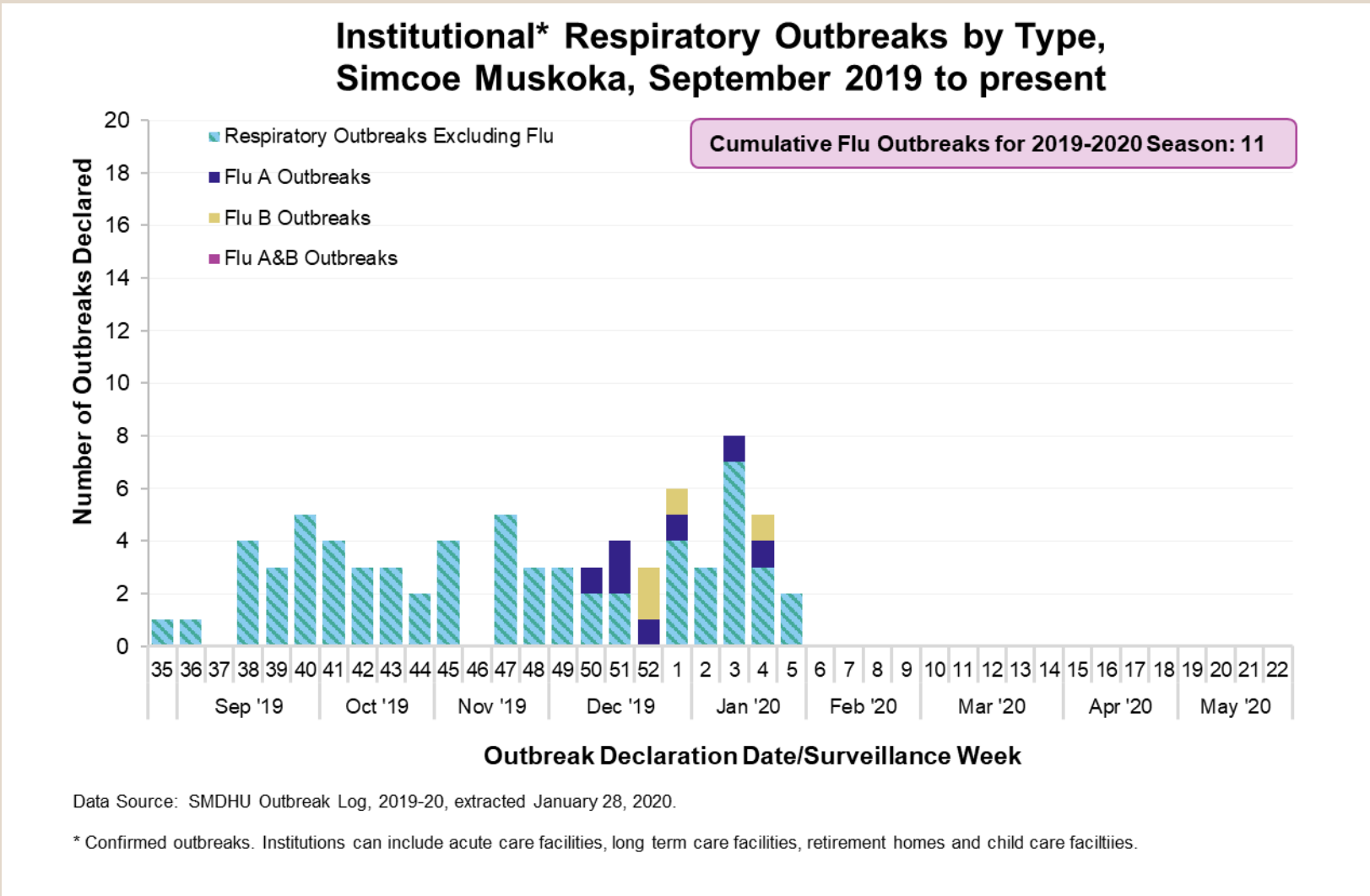


Institutional Respiratory Outbreaks

There have been 11 *lab-confirmed institutional flu outbreaks* in Simcoe Muskoka since September 1, 2019.

- Influenza A: 7 outbreaks
- Influenza B: 4 outbreaks

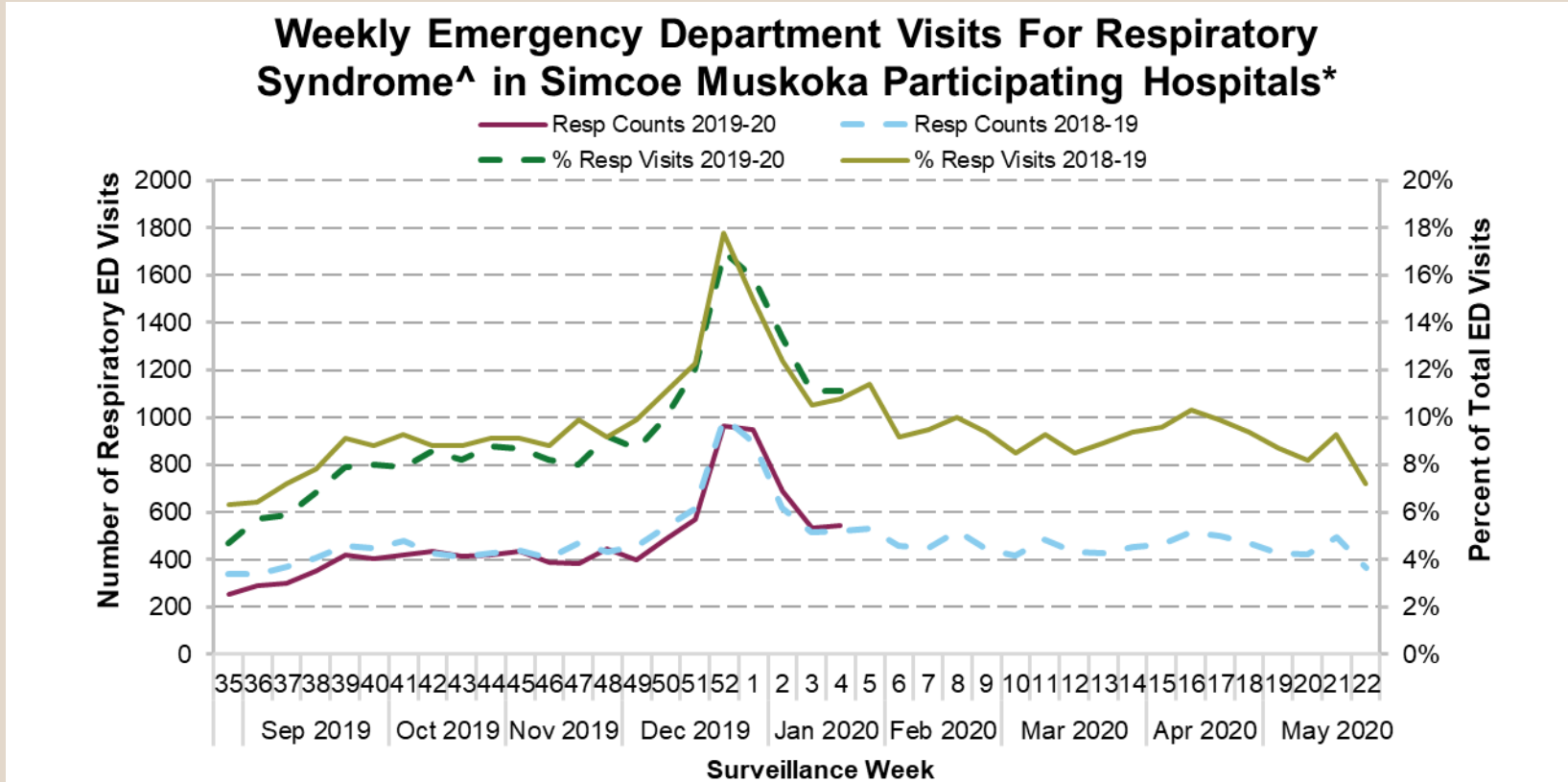
Figure 5: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2019-20



Local Emergency Department Visits

Emergency department visits for respiratory syndrome in Simcoe Muskoka accounted for 11.1% of visits in week 4. This is similar when compared to week 3, and similar when compared to the same point in the 2018-19 season.

Figure 6: Emergency Department Visits for Respiratory Syndrome at Participating Simcoe Muskoka Hospitals, 2018-19, 2019-20 Seasons



Data Source: Acute Care Enhanced Surveillance (ACES) System, extracted January 27, 2020
 Data is considered preliminary and subject to change.
 ^ 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.

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 2019-2020 influenza vaccine for the northern hemisphere contains the following strains:

- A/Kansas/14/2017(H3N2)-like;
- A/Brisbane/02/2018(H1N1)pdm09-like; and
- B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage).

Table 2: Local, Provincial and National Matched and Mismatched Flu Specimens and National Match Percent, 2019-20

Influenza Strains	Number of Specimens with Strain Characterization Results		National Match Percent [†]
	Ontario	Canada	
Influenza A Vaccine Strains			
Influenza A (H3N2) A/Kansas/14/2017(H3N2)-like	17	38	11%
Influenza A (H1N1) A/Brisbane/02/2018(H1N1)pdm09-like	159	190	57%
Influenza B Vaccine Strains			
B/Colorado/06/2017-like	42	122	98%
B/Phuket/3073/2013-like virus (Quad vaccine only)	2	2	2%

Data Source: Public Health Ontario. Laboratory-Based Respiratory Pathogen Surveillance Report – Week 3

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](#) (pg 9).

[†] Non-vaccine match strains are not reported. Match percent is calculated based on total isolates characterized nationally for each of flu A and flu B. Match percent is based primarily on antigenically similar strains. Antigenic similarity may not be reflective of influenza vaccine effectiveness.

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](#) (pg 9).

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 case information as provided by the laboratory report, the health unit investigates all outbreak cases, as information is available, in order to provide a more accurate local picture of adverse outcomes and subtyping.

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 3 Provincial Summary: For the 2019-2020 surveillance season to week 3, 6,778 laboratory-confirmed influenza cases have been reported across Ontario, 1,357 (20.0%) of which were reported in week 3. Among cumulative cases, 82.5% (5589/6778) were influenza A.

(Source: Public Health Ontario Respiratory Pathogen Bulletin, Surveillance Week 3, extracted January 28, 2020)

National

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

International Resources

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