WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: January 19 to January 25 2020 (week 4)

Summary

In New Brunswick, influenza activity continued to increase in week 4

New Brunswick:

- There have been 153 positive influenza cases in week 4. Since the beginning of the new season, 498 cases has been reported, 35 influenza A (H1N1)pdm09, 21 influenza A (H3), 126 influenza A (unsubtyped), 315 influenza B and 1 had both influenza A and B simultaneously.
- There have been 9 new influenza associated hospitalizations during week 4. So far this season, 62 influenza associated hospitalizations have been reported and 2 deaths.
- The ILI consultation rate was 31.7 consultations per 1,000 patients visits in week 4. The ILI rate was slightly below the expected levels for this time of year.
- Eleven new ILI outbreaks have been reported in schools in week 4. So far this season, 1 influenza outbreak has been reported in a nursing home, 2 outbreaks have been reported in hospitals, 2 influenza outbreaks were reported in other settings and 13 ILI outbreaks were reported in schools.

Canada:

- Influenza activity remained high in week 4, with many indicators similar to or slightly higher than the previous week.
- Influenza A and B continue to co-circulate. The proportion of laboratory tests positive for influenza A has been stable in recent weeks, while the proportion of tests positive for influenza B has increased over the past two weeks.
- Influenza A(H1N1) is currently the dominant influenza A circulating in Canada, representing 75% of subtyped influenza A specimens in week 4.
- The highest cumulative hospitalization rates are among children under 5 years of age and adults 65 years of age and older.

International:

Seasonal influenza:

In the temperate zone of the northern hemisphere, respiratory illness indicators and influenza activity remained elevated overall. In North America, influenza activity remained elevated with all seasonal influenza subtypes circulating. In Europe, influenza activity continued to increase across the region but appeared to decrease in some countries of Northern Europe. In Central Asia, influenza activity increased with influenza B viruses predominant. In Western and Eastern Asia, influenza activity remained elevated overall. In the Caribbean and Central American countries, influenza activity was low overall, except for Mexico where increased detections of influenza A viruses were reported. In tropical South American countries, increased influenza activity was reported in Peru. In tropical Africa, influenza activity was low across reporting countries. In Southern Asia, influenza activity was low in most reporting countries, but increased in Afghanistan. In South East Asia, influenza activity continued to be reported in the Lao People's Democratic Republic and Malaysia and increased in Singapore. In the temperate zones of the southern hemisphere, influenza activity remained at inter-seasonal levels. Worldwide, seasonal influenza A viruses accounted for the majority of detections.

Emerging Respiratory Viruses:

- 2019 nCoV: On December 31, 2019, a cluster of cases of pneumonia was reported in Wuhan, China, and the cause has been confirmed as a new coronavirus that has not previously been identified in humans (2019-nCoV). As of February 3, 2020, four Canadian cases of 2019-nCoV infection have been identified, all associated with travel from China (3 cases reported in ON and one case reported in BC). China has officially reported (as of February 4, 2020), 20,471 confirmed cases from 31 provinces with 425 deaths. As of February 4, the WHO reported 159 confirmed cases and one death outside of China in 23 countries (Australia, Cambodia, Canada, France, Finland, Germany, India, Italy, Japan, Korea (Republic of), Malaysia, Nepal, Philippines, Russian Federation, Singapore, Spain, Sri Lanka, Sweden, Thailand, United Arab Emirates, United Kingdom, United States of America and Viet Nam).

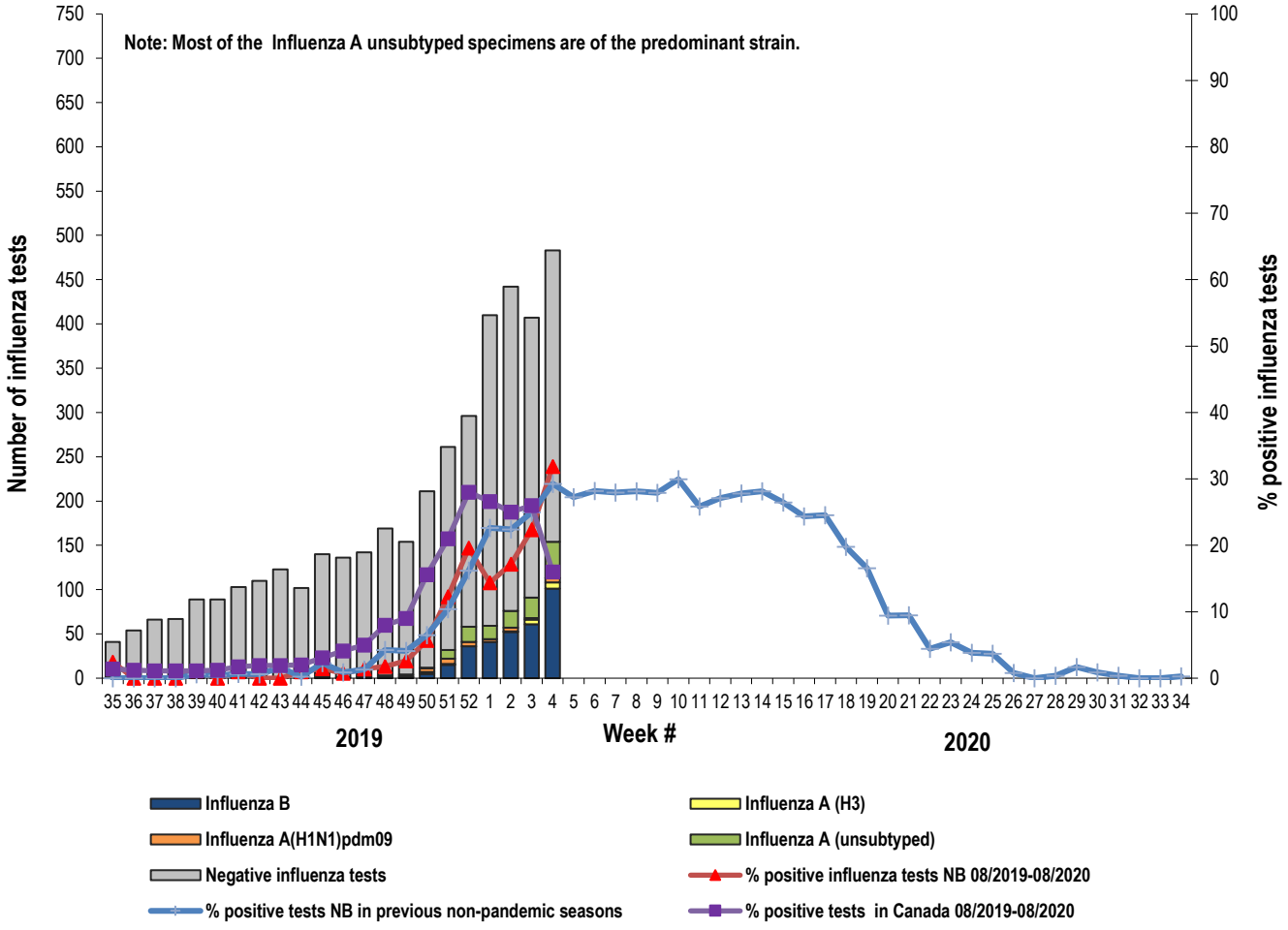
  For more timely updates, please visit the following websites:
  - WHO: https://www.who.int/emergencies/diseases/novel-coronavirus-2019
  - PHAC: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html
  - NB : https://www2.gnb.ca/content/gnb/en/departments/ocmoh/cdc/content/respiratory_diseases/coronavirus.html
- MERS CoV:
  - WHO: http://www.who.int/csr/disease/coronavirus_infections/en/
  - CDC: http://www.cdc.gov/coronavirus/mers/
  - Updated Risk Assessment (August 2018): http://www.who.int/csr/disease/coronavirus_infections/risk-assessment-august-2018.pdf?ua=1
- Avian Influenza:

1) Influenza Laboratory Data[1]

[1] Surveillance specimens are submitted by recruited New Brunswick Sentinel Practitioner Influenza Network (NB SPIN) practitioners, which are comprised of sites in Emergency Rooms, in Family Practice, in First Nations communities, in Nursing Home, in Universities and in Community Health Centers. Diagnostic specimens are submitted by physicians in the community/hospital setting. Influenza laboratory data is comprised of results from surveillance and diagnostic

- Influenza activity continued to increase in week 4.
- 153 influenza cases were reported during week 4, 4 influenza A (H1N1)pdm09, 7 influenza A (H3), 41 influenza A (unsubtyped), 100 influenza B and 1 influenza A and B co-infection.
- Since the beginning of the season, 498 influenza cases have been reported, 35 influenza A (H1N1)pdm09, 21 influenza A (H3), 126 influenza A (unsubtyped), 315 influenza B and 1 influenza A and B co-infection.

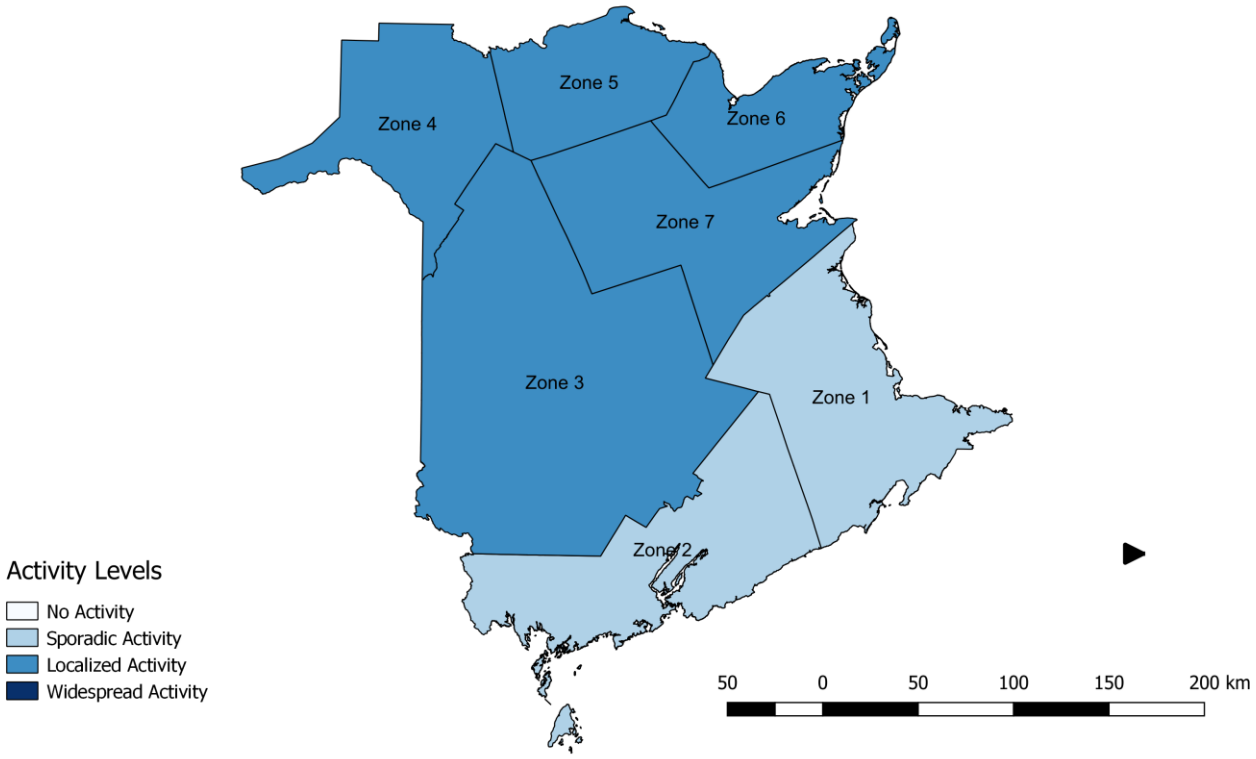
Graph 1: Number and percent of positive influenza specimens[2] in New Brunswick by week, up to January 25, 2020 (data source: G. Dumont Lab results)



specimens. All laboratory specimens are tested using a real-time PCR assay, which is a rapid detection method designed for detection of all known variants of influenza A and B. All laboratory-confirmed cases are reported for the week when laboratory confirmation was received.

[2] Total number of positive influenza tests is higher than number of cases since some individuals had co-infection of A & B simultaneously.

Figure 2: Influenza/ILI activity levels[3] by Health Zones, in New Brunswick, for week 4, season 2019/2020.



[3] No activity is defined as no laboratory-confirmed influenza detections in the reporting week, however, sporadically occurring ILI may be reported.
Sporadic activity is defined as sporadically occurring ILI and lab confirmed influenza detection(s) with no outbreaks detected within the influenza surveillance region.
Localized activity is defined as evidence of increased ILI with lab confirmed influenza detection(s) and outbreaks in schools, hospitals, residential institutions and/or other types of facilities occurring in less than 50% of the influenza surveillance region.
Widespread activity is defined as evidence of increased ILI with lab confirmed influenza detection(s) and outbreaks in schools, hospitals, residential institutions and/or other types of facilities occurring in greater than or equal to 50% of the influenza surveillance region.

Table 1: Positive influenza cases by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
(data source: G. Dumont lab results up to January 25, 2020)

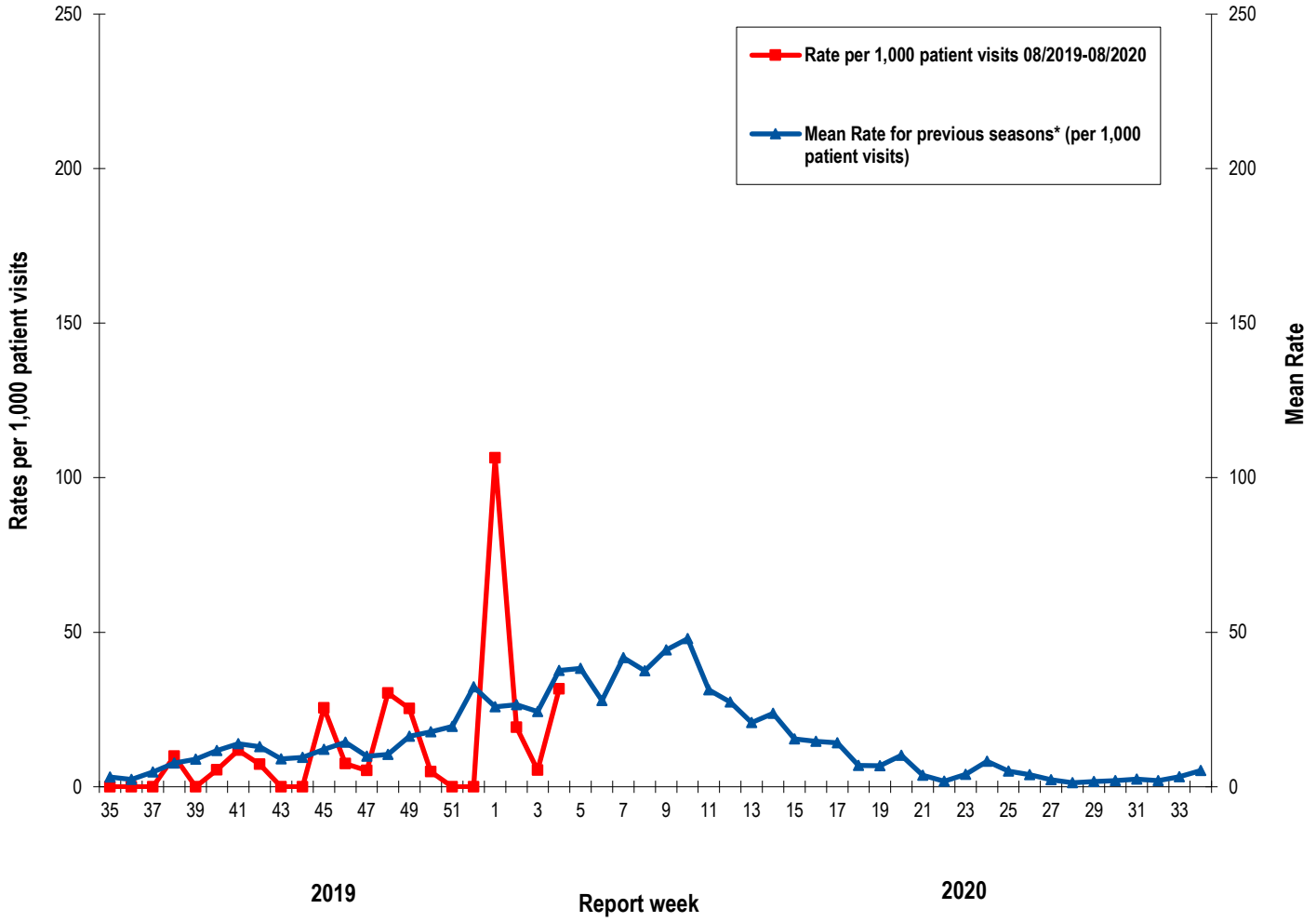
Zone	Reporting period: January/19/2020–January/25/2020						Cumulative: (2019/2020 season) Aug./25/2019 –January/25/2020						Cumulative: (2018/2019 season) Aug./26/2018 –Aug./24/2019					
	A				B	A & B co-infection	A				B	A & B co-infection	A				B	A & B co-infection
	A(H3)	(H1N1) pdm09	Unsubtyped/ Other	**A Total**	**Total**	**Total**	A(H3)	(H1N1) pdm09	Unsubtyped/ Other	**A Total**	**Total**	**Total**	(H3)	(H1N1) pdm09	Unsubtyped/ Other	**A Total**	**Total**	**Total**
Zone 1	0	3	13	**16**	**31**	**0**	7	18	61	**86**	**175**	**0**	29	97	1163	**1289**	**130**	**3**
Zone 2	0	1	5	**6**	**6**	**0**	1	5	12	**18**	**14**	**0**	6	47	293	**346**	**58**	**0**
Zone 3	0	0	1	**1**	**13**	**0**	1	4	3	**8**	**24**	**0**	9	39	260	**308**	**3**	**0**
Zone 4	1	0	4	**5**	**37**	**1**	1	2	9	**12**	**70**	**1**	2	28	135	**165**	**6**	**0**
Zone 5	4	0	10	**14**	**0**	**0**	8	2	17	**27**	**2**	**0**	2	20	84	**106**	**127**	**1**
Zone 6	2	0	7	**9**	**5**	**0**	3	3	21	**27**	**12**	**0**	5	36	200	**241**	**14**	**0**
Zone 7	0	0	1	**1**	**8**	**0**	0	1	3	**4**	**18**	**0**	9	23	160	**192**	**19**	**0**
Total NB	**7**	**4**	**41**	**52**	**100**	**1**	**21**	**35**	**126**	**182**	**315**	**1**	**62**	**290**	**2295**	**2647**	**357**	**4**

2) ILI Consultation Rates[4]

- For week 4, the ILI consultation rate was 31.7 consultations per 1,000 patients visits. The ILI rate was slightly below the expected levels for this time of year.

- During week 4, the sentinel response rate was 36% for both the FluWatch sentinel physicians and the NB SPIN practitioners.

Graph 2: ILI Consultation Rates in New Brunswick, by report week, season 2019/20 compared to previous seasons*



*** The mean rate was based on data from the 1996/97 to 2018/2019 seasons and excludes the Pandemic season (2009/10).**

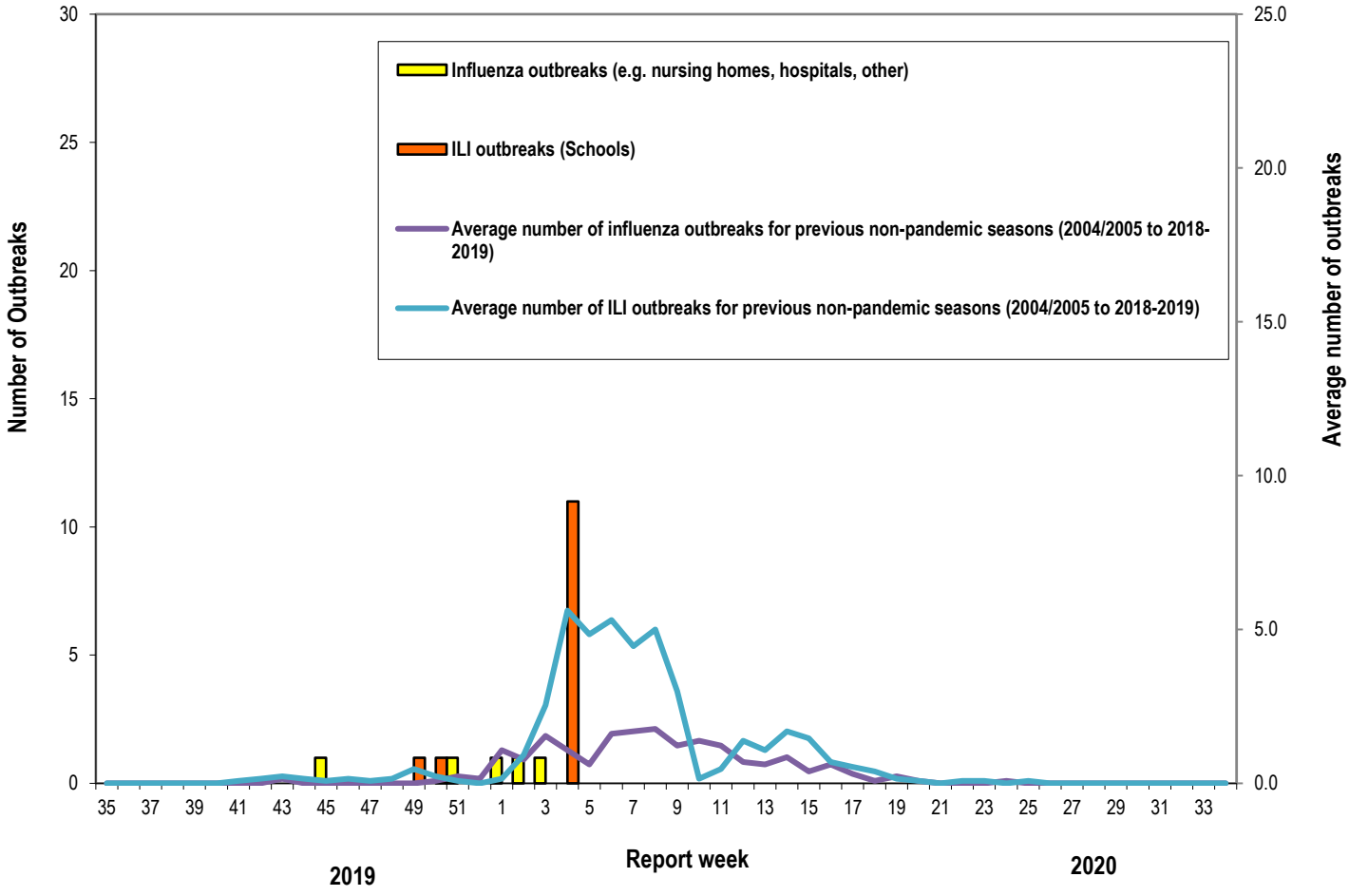
[4] A total of 28 practitioner sites (16 FluWatch sentinel physicians and 12 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

3) ILI and Laboratory-Confirmed Outbreak Data

Table 2: ILI activity/outbreaks in New Brunswick nursing homes and schools for the reporting week, current and previous seasons.

	Reporting period: January/19/2019-January/25/2020			Cumulative # of outbreaks season 2019-2020	Cumulative # of outbreaks season 2018-2019
	Lab-confirmed outbreaks in Nursing homes[5]	ILI school outbreaks[6]	Lab-confirmed outbreaks in Other settings[4]		
Zone 1	0 out of 13	0 out of 74	0	2	12
Zone 2	0 out of 16	0 out of 81	0	0	13
Zone 3	0 out of 14	4 out of 95	0	5	6
Zone 4	0 out of 6	2 out of 22	0	3	0
Zone 5	0 out of 2	1 out of 18	0	2	0
Zone 6	0 out of 9	2 out of 35	0	2	4
Zone 7	0 out of 4	2 out of 27	0	4	8
Total NB	0 out of 64	11 out of 352	0	18	43

Graph 3: Number of Influenza Outbreaks (nursing homes, hospitals, other) and ILI Outbreaks (schools) reported to Public Health in New Brunswick, by report week, season 2019/20.

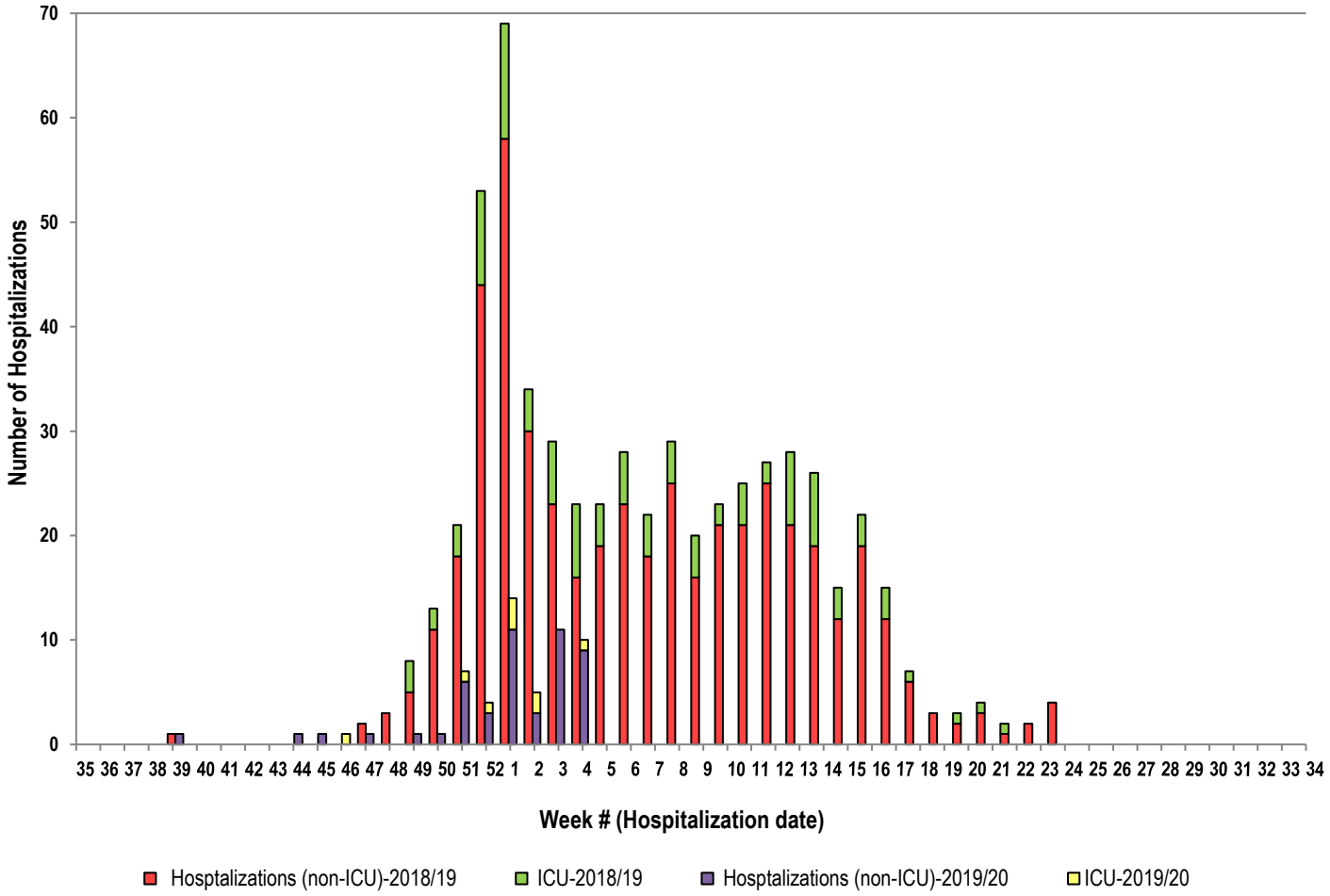


[5] Two or more ILI cases within a seven day period, including at least one laboratory-confirmed case of influenza. Outbreaks are reported in the week when laboratory confirmation is received.

[6] Schools reporting greater than 10% absenteeism which is likely due to ILI.

4) Influenza associated Hospitalization[7] and Death[8] Surveillance[9]

Graph 4: Influenza associated Hospitalizations and ICU admissions in New Brunswick, by week of hospitalization for current and past season.*



***Those who had been hospitalized 15 days or more prior to laboratory confirmation date were excluded from the graph**
****Two deaths have been reported so far in season 2019-2020.**

National Flu Watch Program - Additional information on influenza activity in Canada and around the world is available on the Public Health Agency of Canada's website at: http://www.phac-aspc.gc.ca/fluwatch/

Other Links:
World-http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html
Europe: http://www.ecdc.europa.eu/en/healthtopics/seasonal_influenza/epidemiological_data/Pages/Weekly_Influenza_Surveillance_Overview.aspx
PAHO:http://new.paho.org/hq/index.php?option=com_content&task=blogcategory&id=805&Itemid=569]
Australia: http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-surveil-ozflu-flucurr.htm]
New Zealand: [http://www.surv.esr.cri.nz/virology/influenza_weekly_update.php
Argentina: http://www.msal.gov.ar/
South Africa: http://www.nicd.ac.za/
US: www.cdc.gov/flu/weekly/

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[7] Hospitalizations (including ICU admissions) are influenza associated; they may or may not be due to influenza.

[8] Deaths are influenza associated; influenza may not be the direct cause of death.

[9] In early January 2014, the Office of the Chief Medical Officer of Health implemented a new provincial surveillance system in collaboration with the Regional Health Authorities to monitor influenza-associated hospitalizations, intensive care unit admissions and deaths. A standardized Enhanced Surveillance Form is used to collect data on hospitalizations.