

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: December 15 2019 to January 4 2020 (weeks 51-52 & 1)

Summary

In New Brunswick, influenza activity increased in weeks 51-52 & 1

New Brunswick:

- There have been 149 positive influenza cases in weeks 51-52 & 1. Since the beginning of the new season, 178 cases has been reported, 25 influenza A (H1N1)pdm09, 8 influenza A (H3), 43 influenza A (unsubtyped) and 102 influenza B.
- There have been 23 new influenza associated hospitalizations during weeks 51-52 & 1. So far this season, 32 influenza associated hospitalizations have been reported and 2 deaths.
- The ILI consultation rate was 0.0 consultations per 1,000 patients visits for weeks 51 & 52 and was 106.4 in week 1. The ILI rate was below the expected levels in weeks 51 & 52 and was above the expected levels in week 1.
- Two new influenza outbreaks were reported in hospitals in the 3-week period. So far this season, 1 influenza outbreak has been reported in a nursing home, 2 outbreaks have been reported in hospitals and 2 ILI outbreaks were reported in schools.

Canada:

- Influenza activity continued to increase during this three-week period.
- Influenza A(H3N2), A(H1N1) and B continue to co-circulate. Although influenza A remains the predominant circulating type, influenza B continues to circulate at higher levels than usual. In addition, while A(H3N2) remains the predominant subtype for the season to date, the proportion of A(H1N1) appears to be increasing.
- Differences in the predominant circulating type/subtype by age-group are observed. The majority (90%) of sentinel site hospitalizations among adults are associated with influenza A, while pediatric sentinel hospitalizations are a mix of influenza A (46%) and B (54%).

International:

Seasonal influenza:

In the temperate zone of the northern hemisphere, respiratory illness indicators and influenza activity continued to increase in most countries. In North America, influenza activity further increased and although all seasonal influenza subtypes were co-circulating there was a high proportion of influenza B viruses. In Europe, influenza activity continued to increase across the region and was reported at moderate levels in some countries of Northern Europe. In Central Asia, influenza activity increased with influenza A and B viruses co-circulating. In Northern Africa, influenza activity was low overall. In Western Asia, influenza activity remained elevated overall and continued to increase in Iraq, Israel, Jordan, Turkey and Yemen. In East Asia, ILI and influenza activity continued to increase overall. In the Caribbean and Central American countries, influenza activity was low overall, except for Cuba where increased detections of influenza B/Victoria lineage viruses were reported. In tropical South American countries, increased influenza activity was reported from Ecuador and Colombia in recent weeks. In tropical Africa, influenza activity was elevated in some countries of Eastern and Middle Africa. In Southern Asia, influenza activity was low in most reporting countries, but remained elevated in the Islamic Republic of Iran, though decreased. In South East Asia, influenza activity was reported in the Lao People's Democratic Republic and Malaysia. In the temperate zones of the southern hemisphere, influenza activity remained at inter-seasonal levels. Worldwide, seasonal influenza A(H3N2) viruses accounted for the majority of detections.

Emerging Respiratory Viruses:

- 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:
 - WHO: www.who.int/csr/disease/avian_influenza/en/index.html

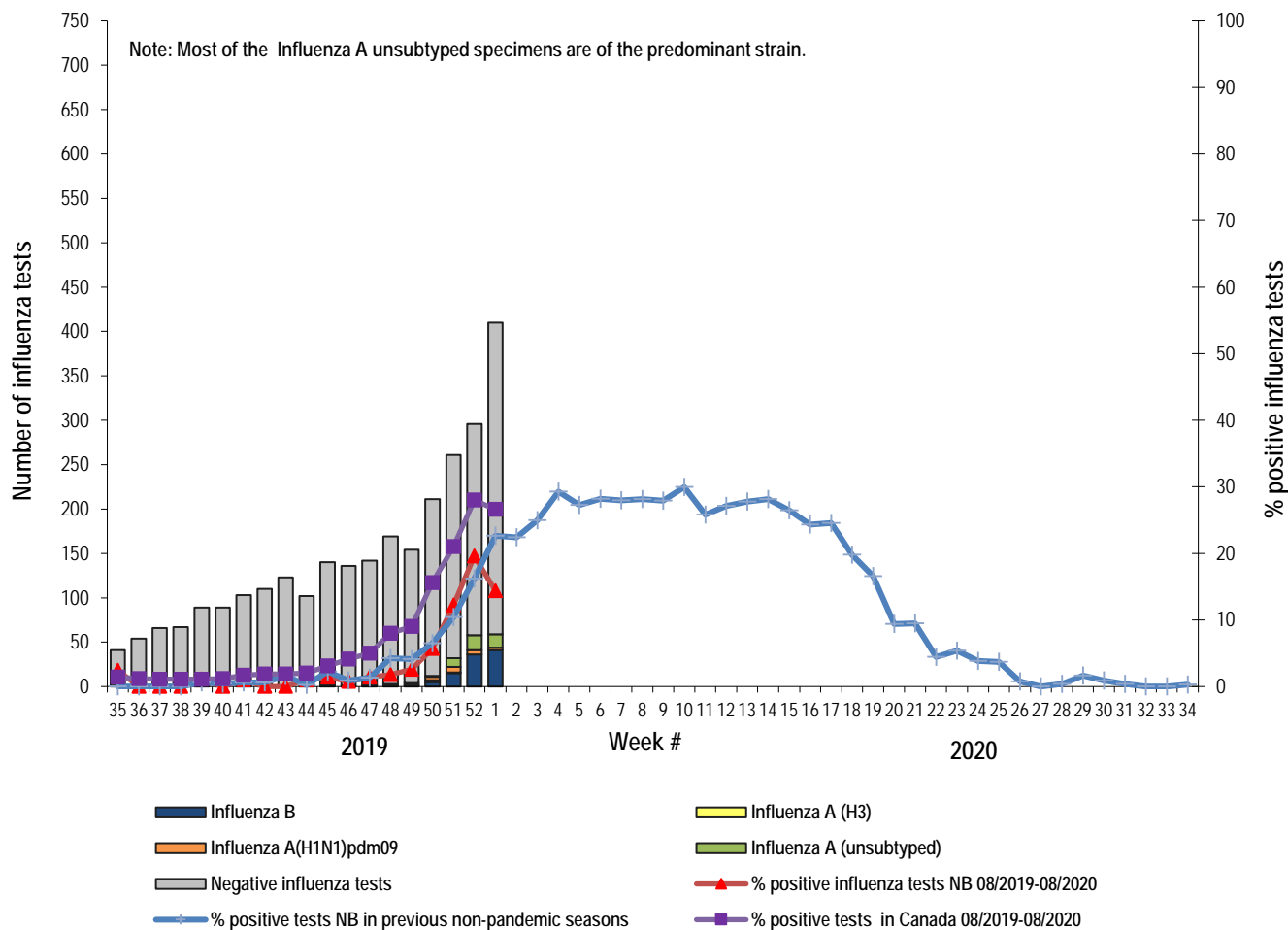
1) Influenza Laboratory Data¹

- Influenza activity increased in weeks 51-52 & 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 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.

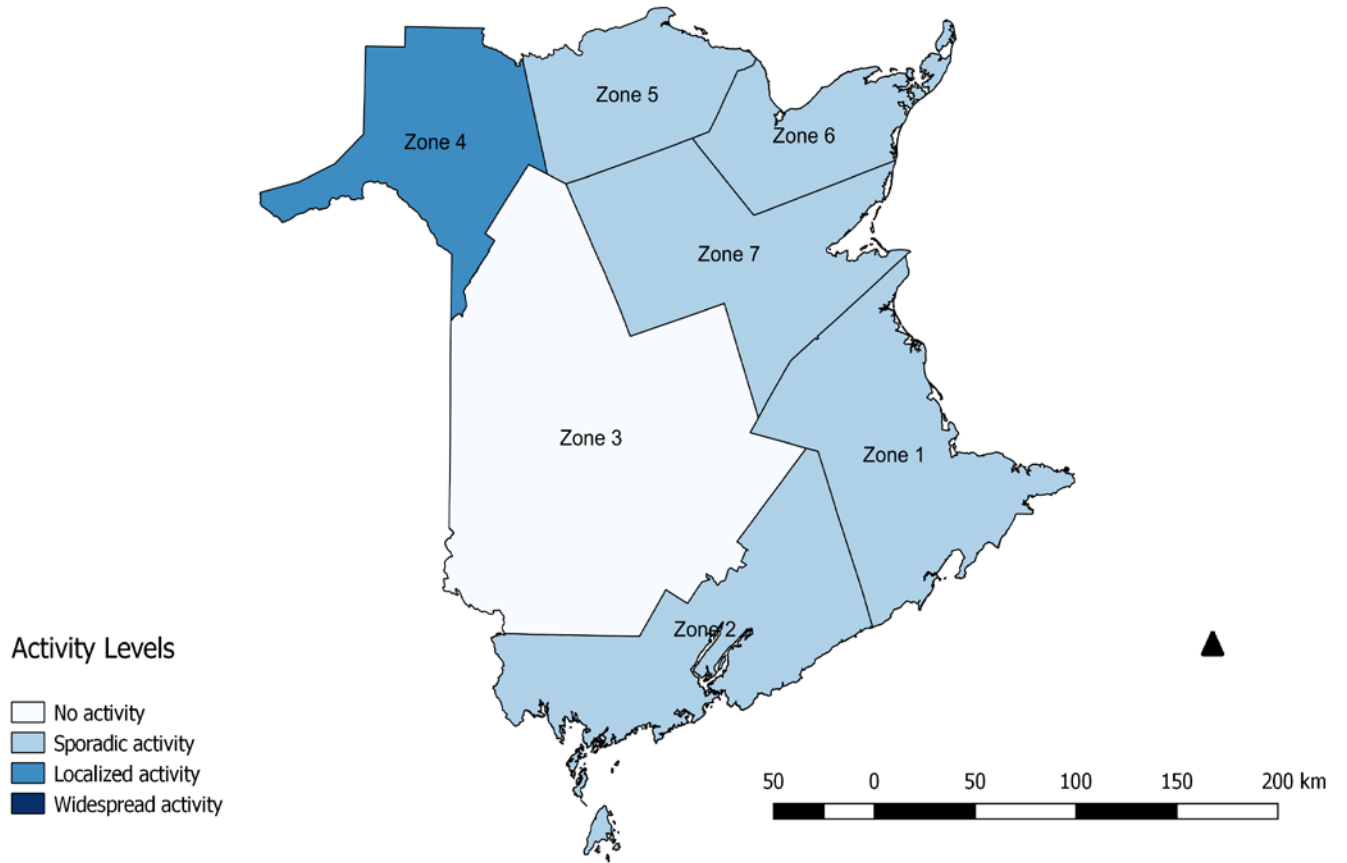
- One-hundred-forty-nine influenza cases were reported during weeks 51-52 & 1, 14 influenza A (H1N1)pdm09, 1 influenza A (H3), 42 influenza A (unsubtyped) and 92 influenza B.
- Since the beginning of the season, 178 influenza cases have been reported, 25 influenza A (H1N1)pdm09, 8 influenza A (H3), 43 influenza A (unsubtyped) and 102 influenza B.

Graph 1: Number and percent of positive influenza specimens² in New Brunswick by week, up to January 4, 2020 (data source: G. Dumont Lab results)



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 levels³ by Health Zones, in New Brunswick, for week 1, 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.

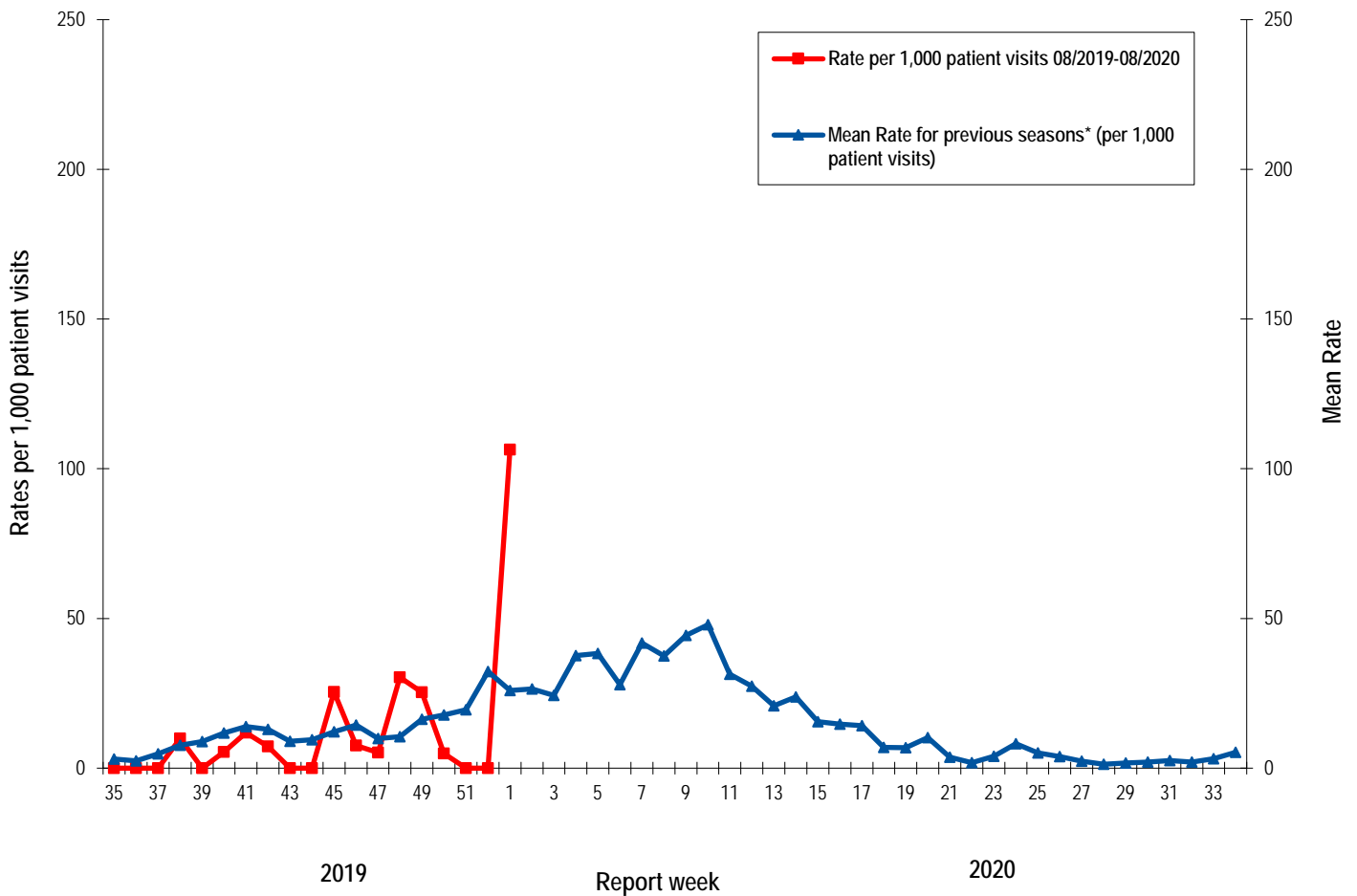
Table 1: Positive influenza cases by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to January 4, 2020)

Zone	Reporting period: December/15/2019–January/04/2020						Cumulative: (2019/2020 season) Aug./25/2019 –January/04/2020						Cumulative: (2018/2019 season) Aug./26/2018 –Aug./24/2019									
	A					B	A & B co- infection					A					B	A & B co- infectio n				
	A(H3)	(H1N1) pdm09	Unsubty ped/ Other	A Total	Total	Total	A(H3)	(H1N1) pdm09	Unsubty ped/ Other	A Total	Total	Total	(H3)	(H1N1) pdm09	Unsubty ped/ Other	A Total	Total	Total				
Zone 1	1	10	26	37	78	0	6	14	27	47	83	0	29	97	1163	1289	130	3				
Zone 2	0	1	5	6	3	0	1	2	5	8	5	0	6	47	293	346	58	0				
Zone 3	0	1	0	1	0	0	1	3	0	4	2	0	9	39	260	308	3	0				
Zone 4	0	1	2	3	5	0	0	1	2	3	5	0	2	28	135	165	6	0				
Zone 5	0	1	1	2	1	0	0	2	1	3	1	0	2	20	84	106	127	1				
Zone 6	0	0	6	6	3	0	0	2	6	8	3	0	5	36	200	241	14	0				
Zone 7	0	0	2	2	2	0	0	1	2	3	3	0	9	23	160	192	19	0				
Total NB	1	14	42	57	92	0	8	25	43	76	102	0	62	290	2295	2647	357	4				

2) ILI Consultation Rates⁴

- For weeks 51 & 52, the ILI consultation rate was 0.0 consultations per 1,000 patients visits and for week 1, the ILI consultation rate was 106.4 consultations per 1,000 patients visits. The ILI rate was below the expected levels for weeks 51 & 52 and above the expected levels for week 1.
- During weeks 51, 52 & 1, the sentinel response rate was 29%, 21% and 18%, respectively, 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).

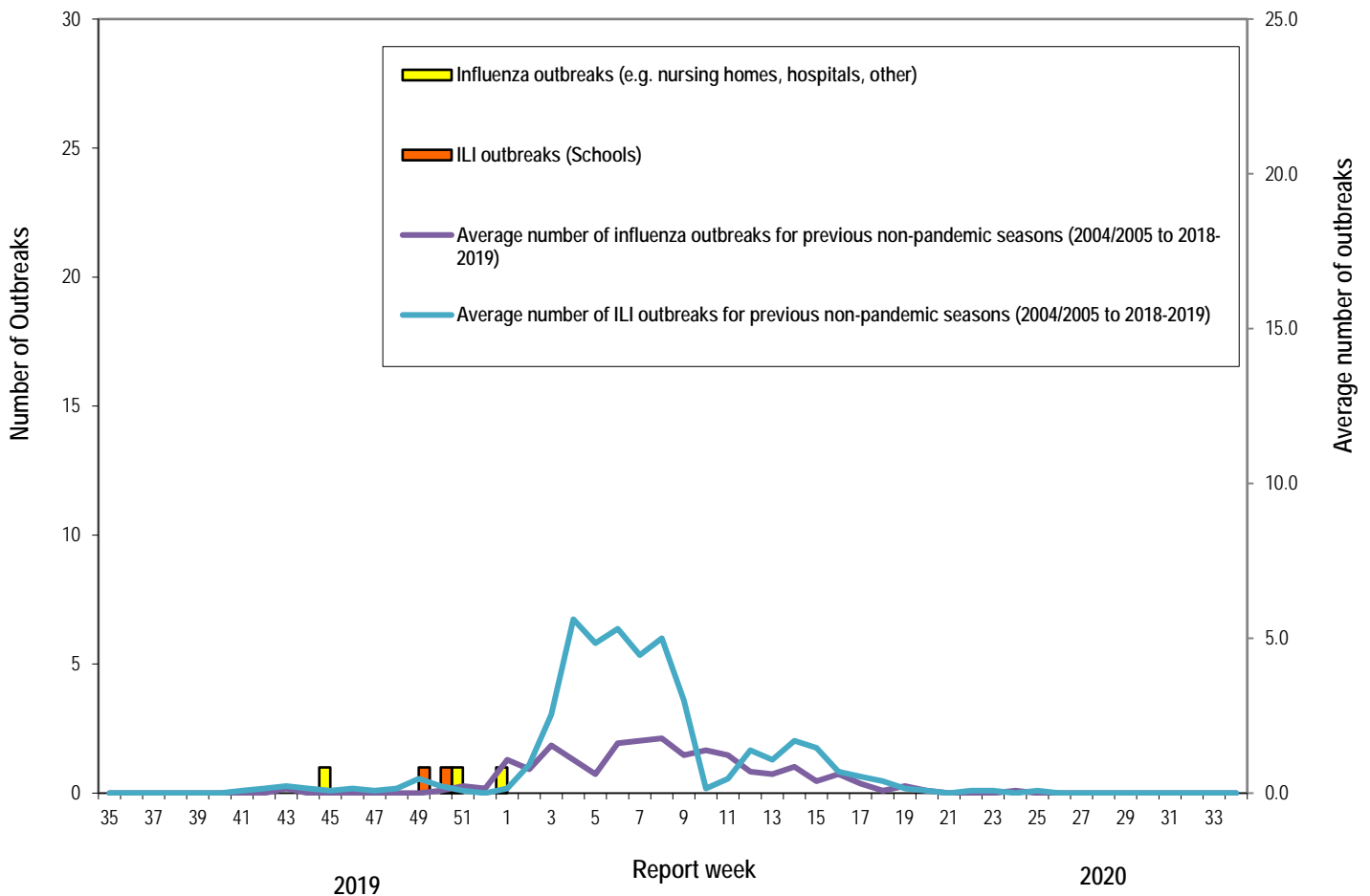
⁴ A total of 28 practitioner sites (16 FluWatch sentinel physicians and 12 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

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: December/15/2019-January/04/2020			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	1	1	12
Zone 2	0 out of 16	0 out of 81	0	0	13
Zone 3	0 out of 14	0 out of 95	0	1	6
Zone 4	0 out of 6	0 out of 22	1	1	0
Zone 5	0 out of 2	0 out of 18	0	0	0
Zone 6	0 out of 9	0 out of 35	0	0	4
Zone 7	0 out of 4	0 out of 27	0	2	8
Total NB	0 out of 64	0 out of 352	2	5	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.

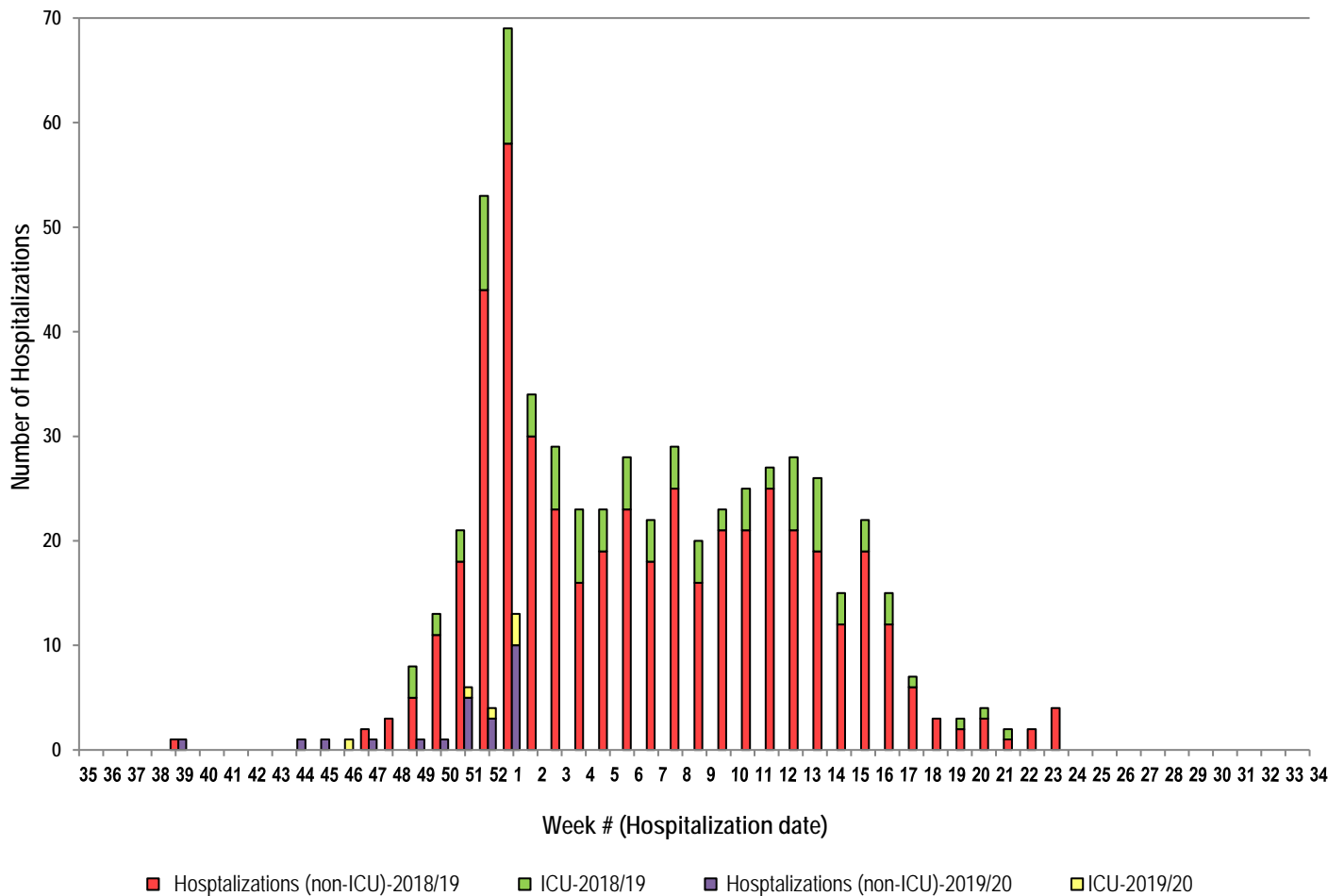


⁵ Two or more ILI cases within a seven day period, including at least one laboratory-confirmed case of influenza. Outbreaks are reported in the week when laboratory confirmation is received.

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

4) Influenza associated Hospitalization⁷ and Death⁸ Surveillance⁹

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.