

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: May 3 to June 13 2020 (weeks 19-24)

Summary

In New Brunswick, influenza activity has returned to inter-seasonal levels in weeks 19 to 24

New Brunswick:

- There have been no positive influenza cases in weeks 19-24. Since the beginning of the new season, 2351 cases has been reported, 69 influenza A (H1N1)pdm09, 30 influenza A (H3), 860 influenza A (unsubtyped), 1379 influenza B and 13 had both influenza A and B simultaneously.
- There has been no new influenza associated hospitalizations during weeks 19-24. So far this season, 268 influenza associated hospitalizations have been reported and 11 deaths.
- The ILI consultation rate was 9.9 per 1,000 patients visits in week 19 and was 0.0 per 1,000 patients visits for weeks 20-24. The ILI rate was within the expected levels for this time of year.
- No new influenza/ILI outbreaks were reported in weeks 19-24. So far this season, 9 influenza outbreaks have been reported in nursing homes, 1 outbreak has been reported in a hospital, 6 influenza outbreaks were reported in other settings and 72 ILI outbreaks were reported in schools.

Canada:

- In weeks 20 to 24, exceptionally low levels of influenza activity were reported across Canada.
- During weeks 20 to 24, the percentage of tests positive for influenza (0.08%) remained at the lowest level recorded for the past nine seasons. The proportion of primary care visits for ILI were lower than average; no outbreaks and very few influenza-related hospitalizations were reported.
- Many influenza surveillance indicators may be influenced by the COVID-19 pandemic, including changes in healthcare-seeking behaviour, and testing capacity. Current data should be interpreted with consideration for this context.

International:

Seasonal influenza:

The current influenza epidemiological and virological data should be interpreted with caution as the ongoing COVID-19 pandemic might have influenced to different extents health seeking behaviours, staffing/routines in sentinel sites, as well as testing priorities and capacities in Member States. The various hygiene and physical distancing measures implemented by Member States to reduce SARS-CoV2 virus transmission might also have played a role in interrupting influenza virus transmission. Globally, influenza activity was at lower levels than expected for this time of the year. In the temperate zone of the northern hemisphere, influenza activity returned to inter-seasonal levels while in the temperate zones of the southern hemisphere, the influenza season has not started yet. In the Caribbean and Central American countries, no or low influenza detections were reported in most reporting countries. Increased severe acute respiratory infection (SARI) activity was reported in some countries. In tropical South American and tropical Africa, there were no influenza viruses detected across reporting countries. In Southern Asia, influenza like illness (ILI) and SARI activity decreased in Bhutan and Nepal. In South East Asia, no influenza detections were reported in Thailand. Worldwide, seasonal influenza A viruses accounted for the majority of detections.

Effectiveness of 2019-2020 influenza vaccine:

- Based on a recently published [Canadian Vaccine Effectiveness Study](#), mid-season vaccine effectiveness (VE) estimates indicate that this year's vaccine is approximately 58% (95%CI: 47 to 66%) effective against the circulating strains (H1N1pdm09, H3 and B). A VE of 58% means that 6 cases out of 10 would have been prevented if they received the vaccination. This is still a substantial protection against medically-attended influenza illness in the early part of the season, especially for children, despite the fact that a considerable proportion of the circulating strains were genetically mismatched to the vaccine strains.

Emerging Respiratory Viruses:

- **COVID-19:** 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 (COVID-19). As of June 23, 2020, 101,963 cases of COVID-19 infection in Canada have been identified with 8,454 deaths. One-hundred-sixty-five cases have been identified in New Brunswick with 2 deaths. As of June 24, the WHO reported globally 9 129 146 confirmed cases and 473 797 deaths in 212 countries/territories/areas.

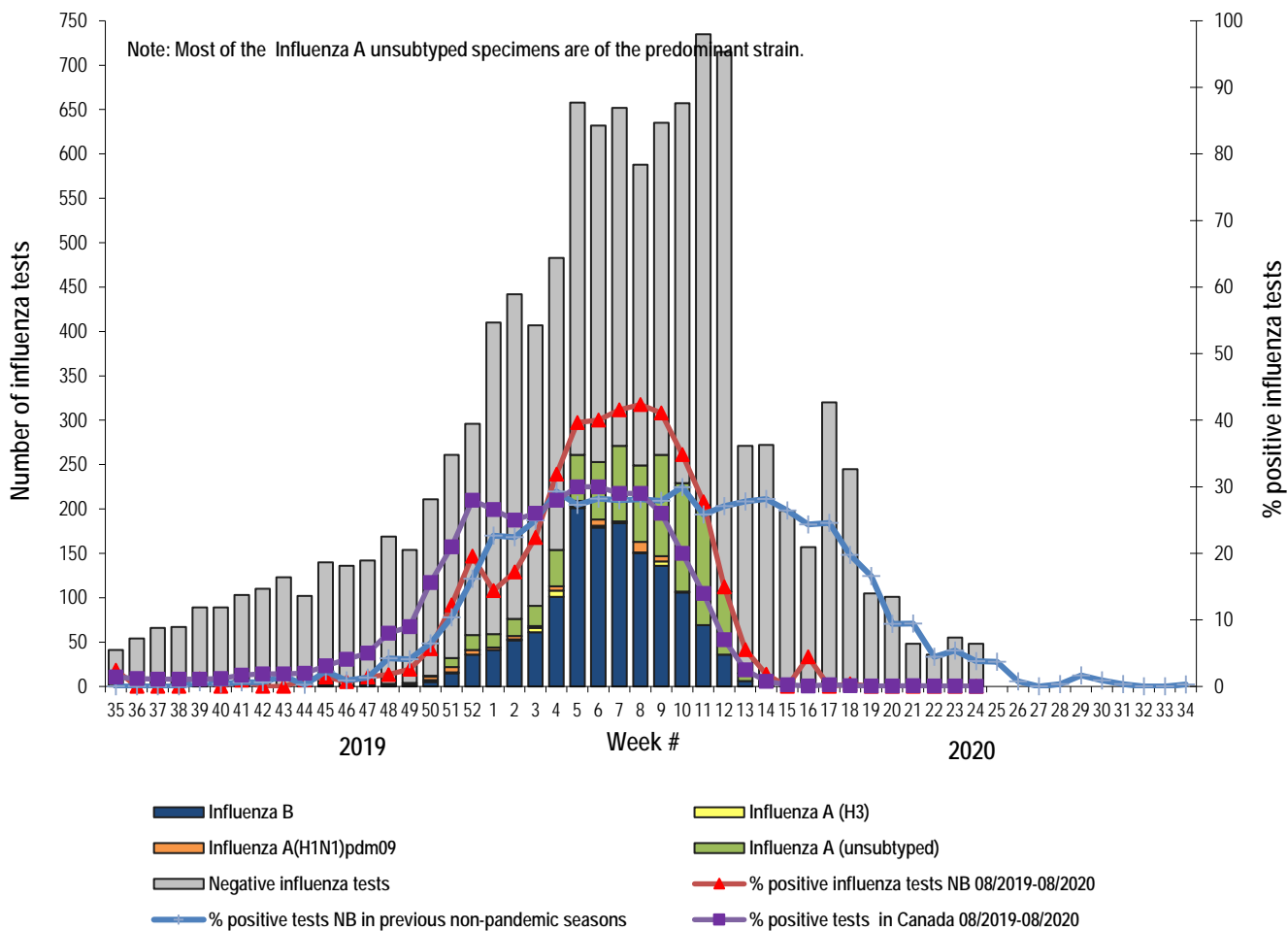
For more timely updates, please visit the following websites:

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

1) Influenza Laboratory Data¹

- Influenza activity returned to inter-seasonal levels in weeks 19 to 24.
- No influenza cases were reported during weeks 19-24.
- Since the beginning of the season, 2351 influenza cases have been reported, 69 influenza A (H1N1)pdm09, 30 influenza A (H3), 860 influenza A (unsubtyped), 1379 influenza B and 13 influenza A and B co-infection.

Graph 1: Number and percent of positive influenza specimens² in New Brunswick by week, up to June 13, 2020 (data source: G. Dumont Lab results)



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.

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 24, 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.

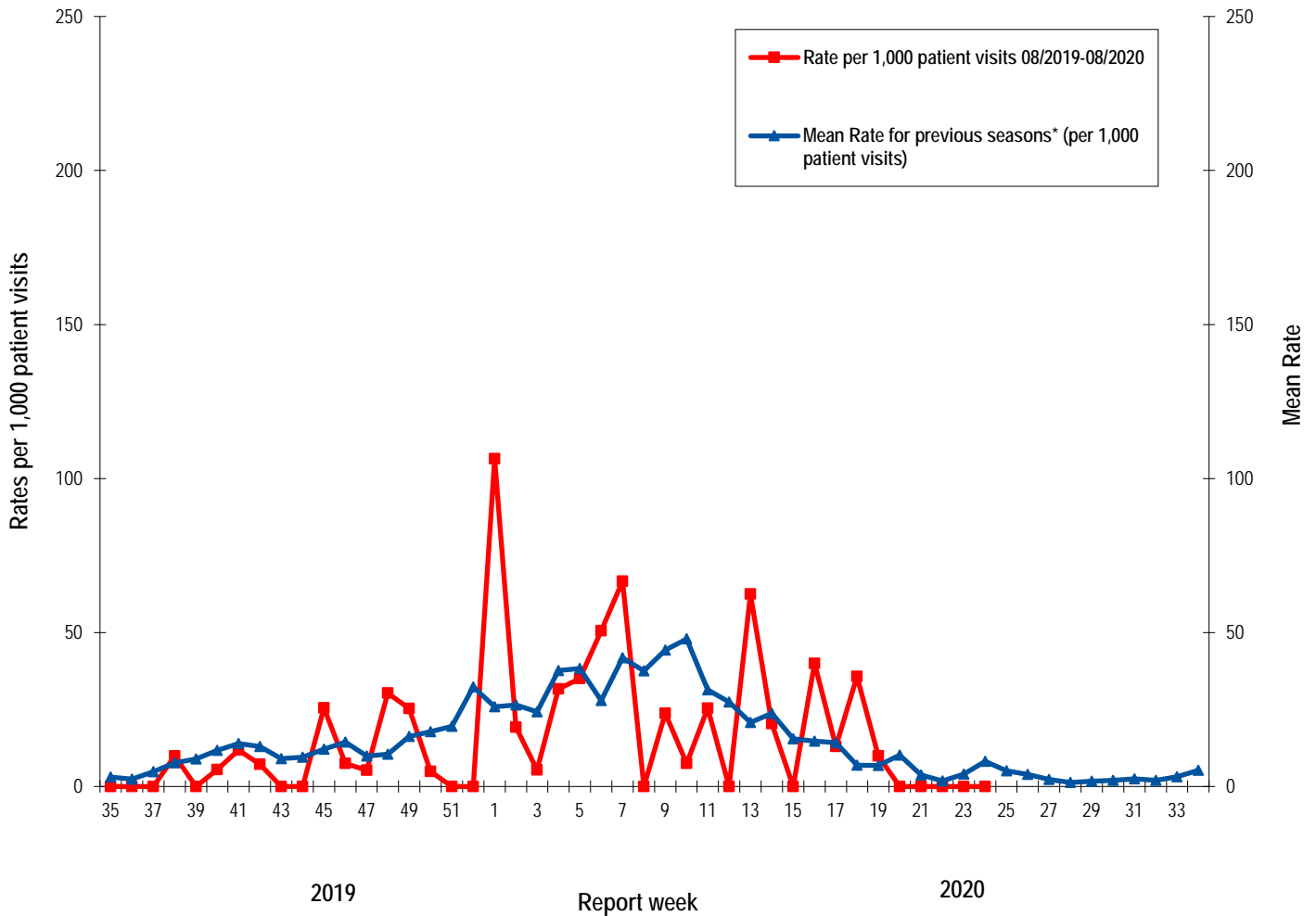
Table 1: Positive influenza cases by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to June 13, 2020)

Zone	Reporting period: May/03/2020–June/13/2020						Cumulative: (2019/2020 season) Aug./25/2019 –June/13/2020						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- 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	0	0	0	0	0	0	9	28	324	361	665	3	29	97	1163	1289	130	3
Zone 2	0	0	0	0	0	0	3	11	121	135	96	2	6	47	293	346	58	0
Zone 3	0	0	0	0	0	0	1	8	102	111	188	5	9	39	260	308	3	0
Zone 4	0	0	0	0	0	0	1	7	43	51	212	1	2	28	135	165	6	0
Zone 5	0	0	0	0	0	0	10	5	85	100	17	1	2	20	84	106	127	1
Zone 6	0	0	0	0	0	0	6	7	120	133	98	1	5	36	200	241	14	0
Zone 7	0	0	0	0	0	0	0	3	65	68	103	0	9	23	160	192	19	0
Total NB	0	0	0	0	0	0	30	69	860	959	1379	13	62	290	2295	2647	357	4

2) ILI Consultation Rates⁴

- For weeks 19-24, the ILI consultation rate was 9.9 consultations per 1,000 patients visits for week 19 and 0.0 consultations per 1,000 patients visits for weeks 20-24. The ILI rate was within the expected levels for this time of year.
- During weeks 19-24, the sentinel response rate ranged between 29% and 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).

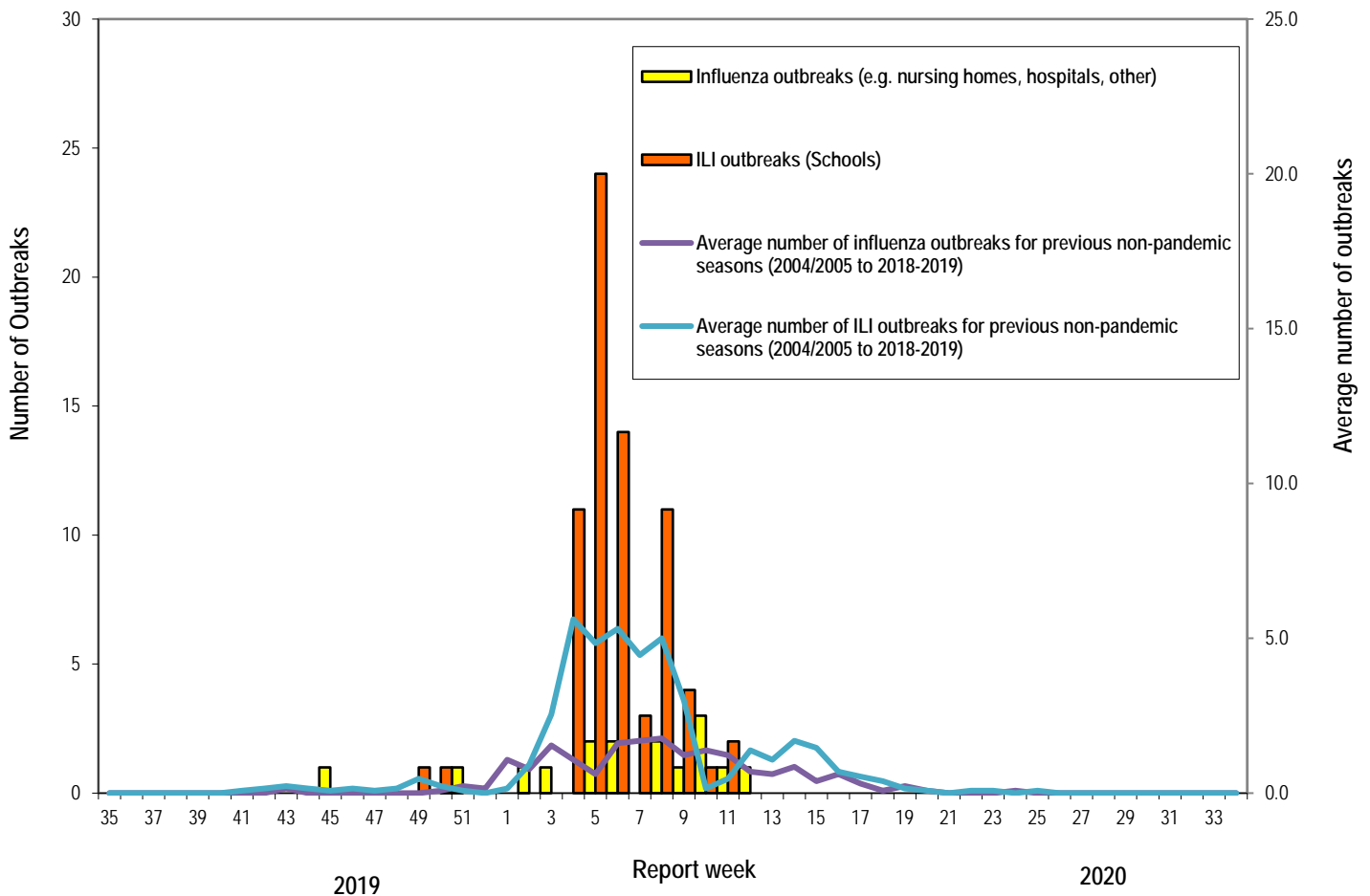
⁴ A total of 28 practitioner sites (16 FluWatch sentinel physicians and 12 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

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: May/03/2019 to June/13/2020			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 15	0 out of 74	0	13	12
Zone 2	0 out of 16	0 out of 81	0	15	13
Zone 3	0 out of 16	0 out of 95	0	27	6
Zone 4	0 out of 5	0 out of 22	0	10	0
Zone 5	0 out of 2	0 out of 18	0	3	0
Zone 6	0 out of 9	0 out of 35	0	8	4
Zone 7	0 out of 5	0 out of 27	0	12	8
Total NB	0 out of 68	0 out of 352	0	88	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.

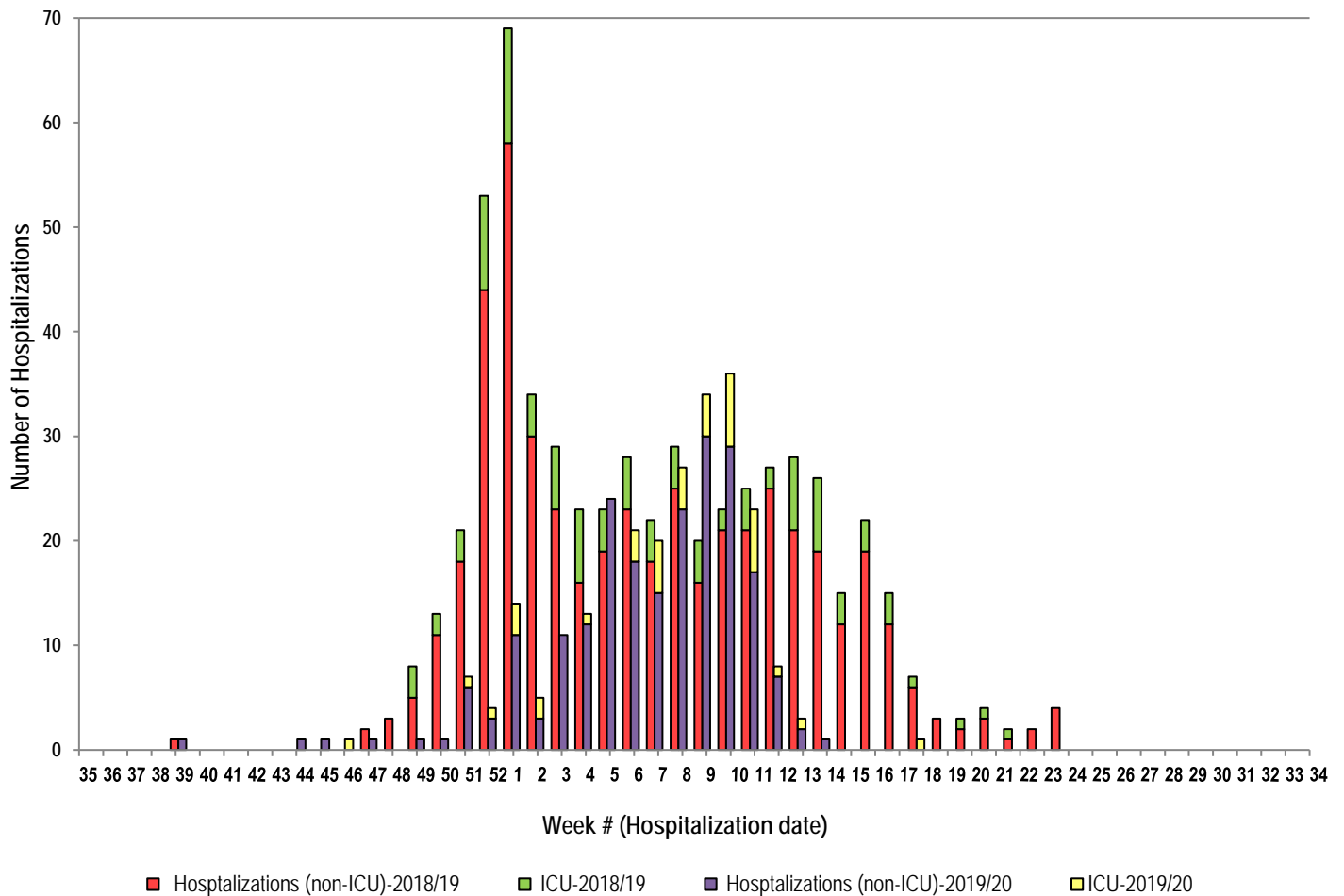


⁵ Two or more ILI cases within a seven day period, including at least one laboratory-confirmed case of influenza. Outbreaks are reported in the week when laboratory confirmation is received.

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

**Eleven 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.