

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: March 29 to April 4 2020 (week 14)

Summary

In New Brunswick, influenza activity continued to decrease in week 14

New Brunswick:

- There have been 5 positive influenza cases in week 14. Since the beginning of the new season, 2344 cases has been reported, 69 influenza A (H1N1)pdm09, 30 influenza A (H3), 857 influenza A (unsubtyped), 1375 influenza B and 13 had both influenza A and B simultaneously.
- There have been 1 new influenza associated hospitalization during week 14. So far this season, 267 influenza associated hospitalizations have been reported and 8 deaths.
- The ILI consultation rate was 20.4 consultations per 1,000 patients visits in week 14. The ILI rate was within the expected levels for this time of year.
- No new influenza/ILI outbreaks were reported in week 14. So far this season, 9 influenza outbreaks have been reported in a nursing home, 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 week 14, the percentage of tests positive for influenza remained below 5%. This suggests that the end of the influenza season at the national level occurred in week 12 (mid-March).
- Overall, very low levels of influenza activity are being reported across Canada.
- The percentage of tests positive for influenza this week (0.75%) is at the lowest level ever recorded for week 14 (end of March) for the past nine seasons. This level is usually not seen until mid to late summer.
- Laboratory detections and syndromic indicators may be influenced by the COVID-19 pandemic. These data should be interpreted with caution.
- This is the last weekly FluWatch report for the 2019-2020 season. Monthly reports will be published over the spring and summer on the following dates: May 15, June 19, July 24 and August 28. Weekly reporting of laboratory detections of respiratory viruses will continue via our Respiratory Virus Detections Surveillance System.

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 capacities in Member States. In the temperate zone of the northern hemisphere, influenza activity decreased overall though influenza like illness (ILI) activity remained elevated in some reporting countries. In the Caribbean and Central American countries, influenza activity was reported in some countries. Severe acute respiratory infection (SARI) activity increased in Costa Rica and Jamaica. In tropical South American countries, influenza activity decreased from the previous reporting period. In tropical Africa, there were no or low influenza detections reported. In Southern Asia, ILI and SARI activity increased in Bhutan. In South East Asia, influenza activity was reported in Lao People's Democratic Republic. In the temperate zones of the southern hemisphere, influenza activity remained at inter-seasonal levels overall, though influenza detections appeared to increase in Brazil and South Africa. Increased SARI activity was reported in Chile and Paraguay. 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 April 18, 2020, 32 400 cases of COVID-19 infection in Canada have been identified with 1 346 deaths. One-hundred-eighteen cases have been identified in New Brunswick with no deaths. China has officially reported (as of April 17, 2020), 82,692 confirmed cases with 4,632 deaths. As of April 17, the WHO reported globally 2 074 529 confirmed cases and 139 378 deaths in 212 countries/territories/areas.

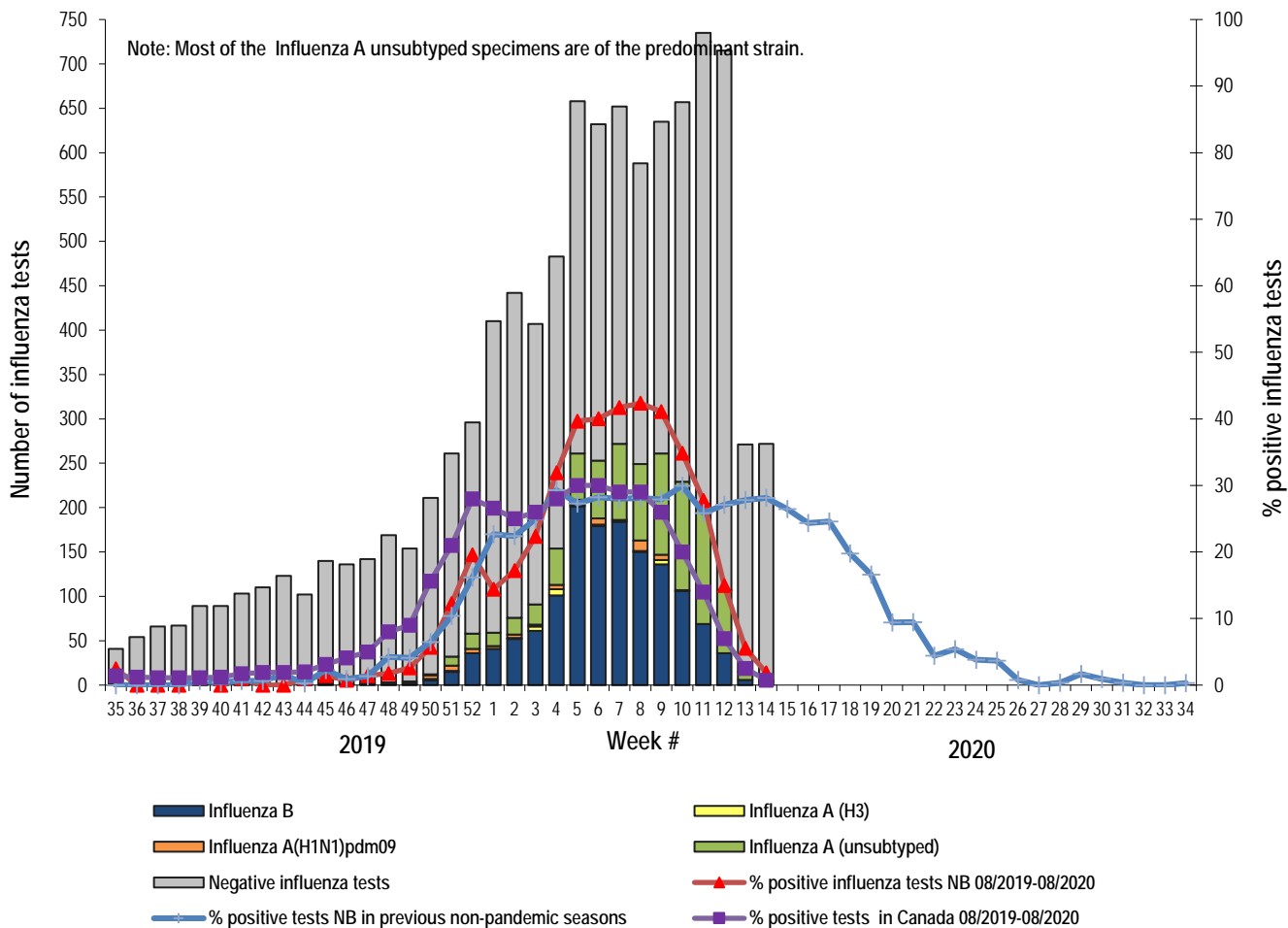
For more timely updates, please visit the following websites:

- 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 continued to decrease in week 14.
- 5 influenza cases were reported during week 14, 0 influenza A (H1N1)pdm09, 0 influenza A (H3), 2 influenza A (unsubtyped), 3 influenza B and 0 influenza A and B co-infection.
- Since the beginning of the season, 2344 influenza cases have been reported, 69 influenza A (H1N1)pdm09, 30 influenza A (H3), 857 influenza A (unsubtyped), 1375 influenza B and 13 influenza A and B co-infection.

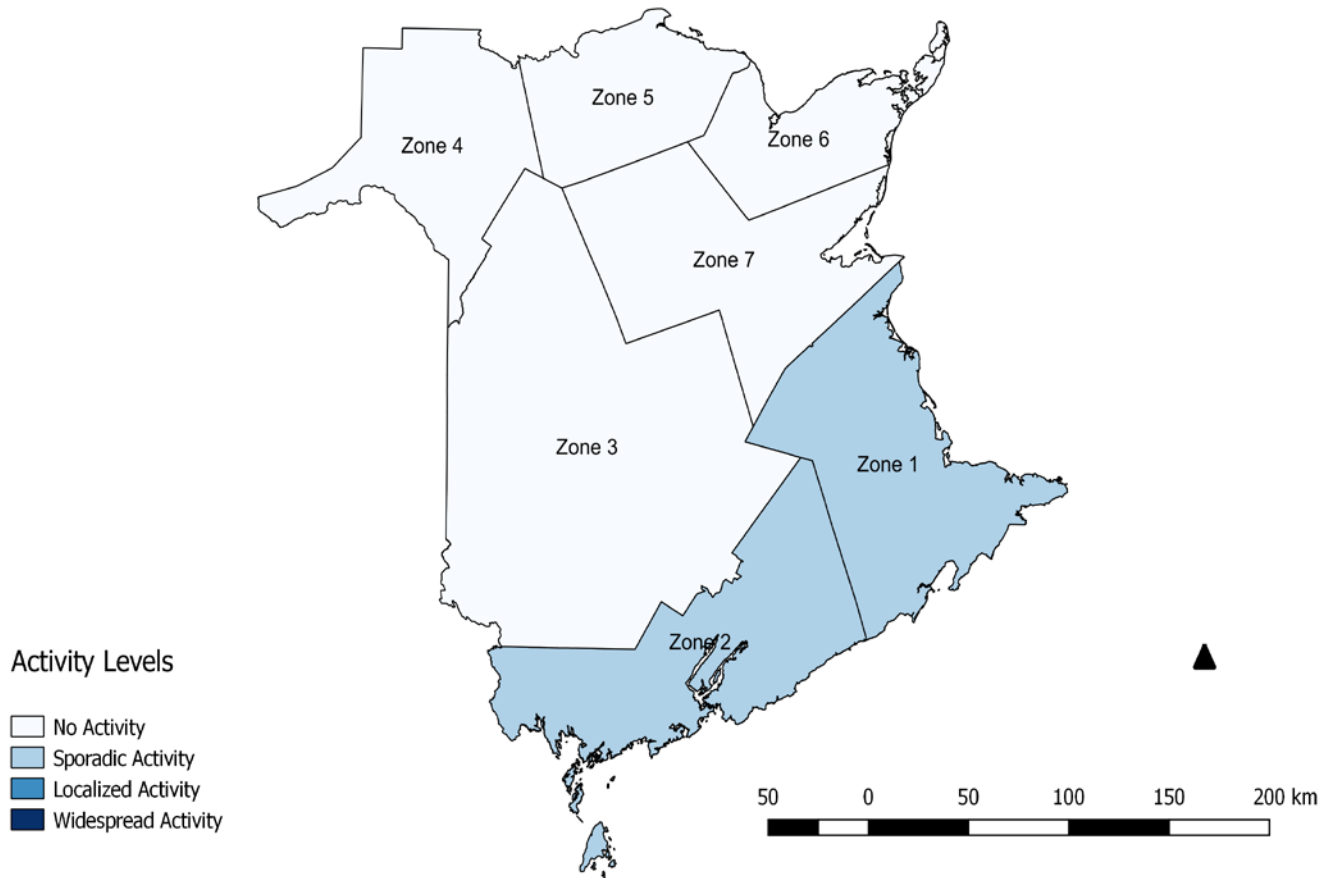
Graph 1: Number and percent of positive influenza specimens² in New Brunswick by week, up to April 4, 2020
(data source: G. Dumont Lab results)



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 14, 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.

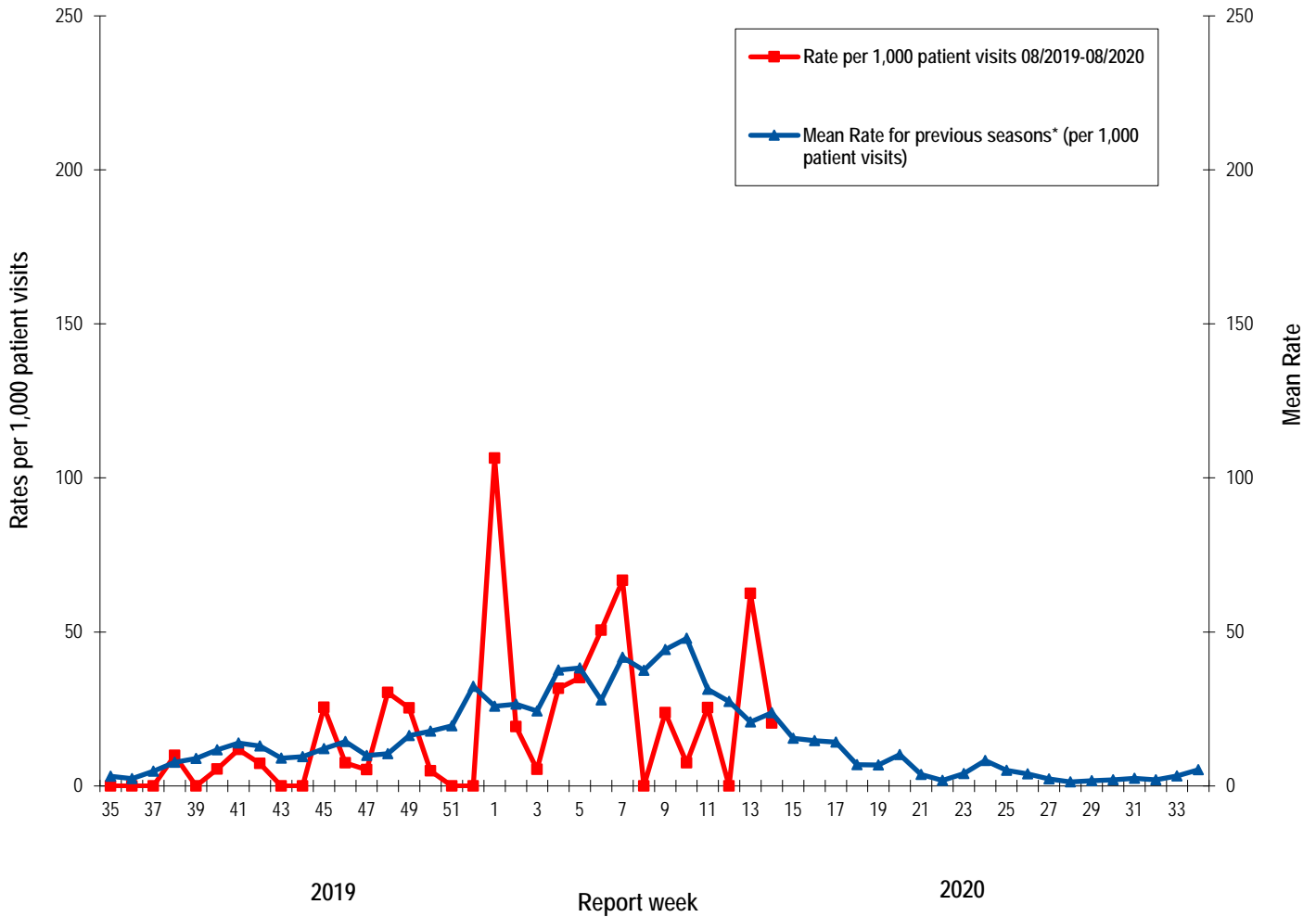
Table 1: Positive influenza cases by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to April 4, 2020)

Zone	Reporting period: March/29/2020–April/04/2020						Cumulative: (2019/2020 season) Aug./25/2019 –April/04/2020						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	1	1	1	0	9	28	325	362	665	3	29	97	1163	1289	130	3
Zone 2	0	0	1	1	2	0	3	11	121	135	96	2	6	47	293	346	58	0
Zone 3	0	0	0	0	0	0	1	8	98	107	184	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	2	2	3	0	30	69	857	956	1375	13	62	290	2295	2647	357	4

2) ILI Consultation Rates⁴

- For week 14, the ILI consultation rate was 20.4 consultations per 1,000 patients visits. The ILI rate was within the expected levels for this time of year.
- During week 14, the sentinel response rate was 25% 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).

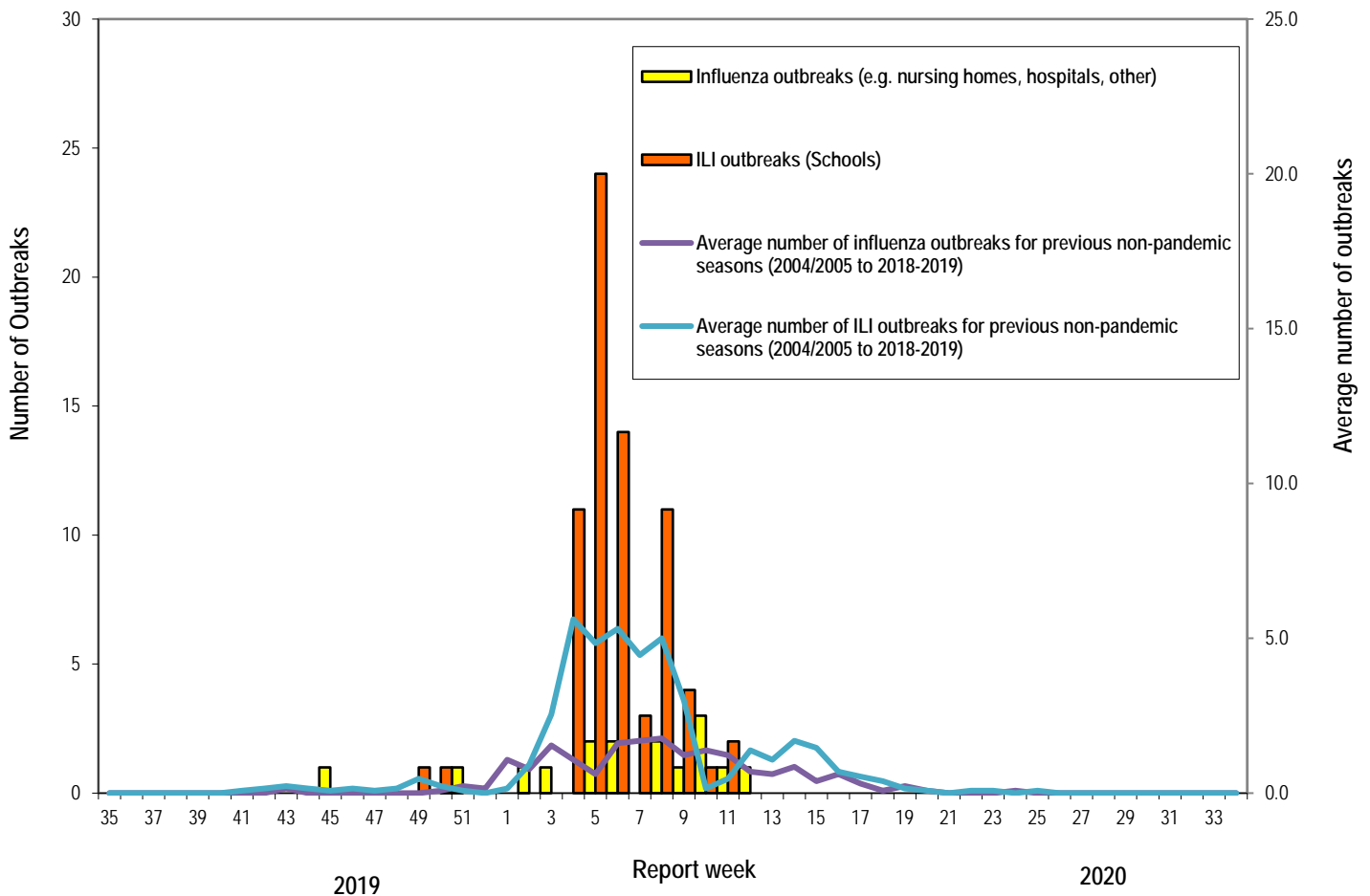
⁴ A total of 28 practitioner sites (16 FluWatch sentinel physicians and 12 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

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: March/29/2019-April/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 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.

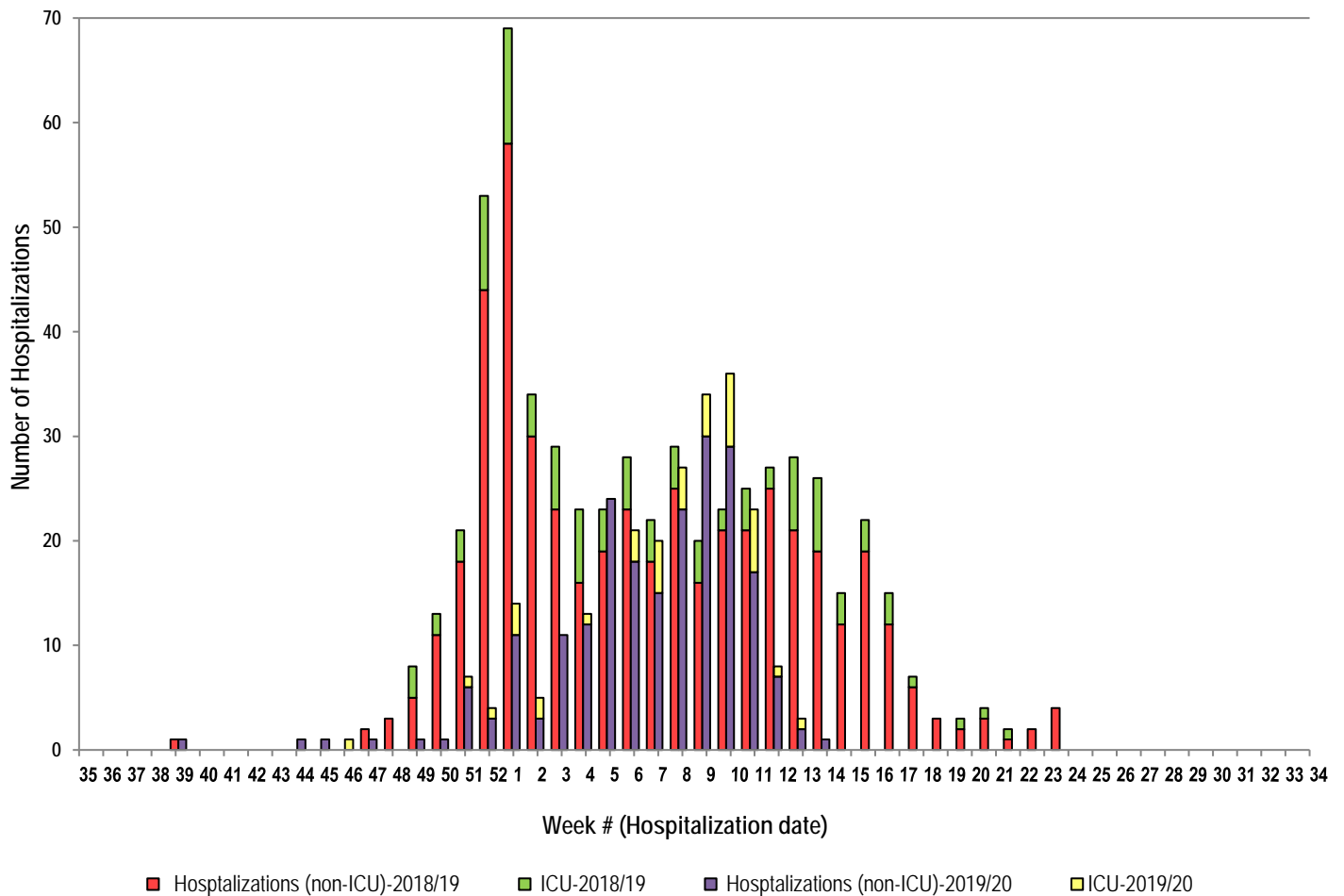


⁵ Two or more ILI cases within a seven day period, including at least one laboratory-confirmed case of influenza. Outbreaks are reported in the week when laboratory confirmation is received.

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

**Eight 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.