

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: April 21 to April 27 2019 (week 17)

Summary

In New Brunswick, influenza activity remains elevated in week 17

New Brunswick:

- There have been 87 positive influenza cases in week 17. To date this season, 2816 cases have been reported, 235 influenza A (H1N1)pdm09, 2315 influenza A (unsubtyped), 16 influenza A (H3), 247 influenza B and 3 had both influenza A and B simultaneously.
- There have been 14 influenza associated hospitalizations during week 17. So far this season, 588 influenza associated hospitalizations have been reported and 33 deaths.
- The ILI consultation rate was 31.9 consultations per 1,000 patients visits in week 17. The ILI rate was above the expected levels for this time of year.
- Two new influenza outbreaks were reported in week 17(Hospital & Community setting). So far this season, 16 influenza outbreaks have been reported in nursing homes, 6 in Hospitals, 4 in other settings (Residential facility and Assisted Living) and 17 ILI outbreaks have been reported in schools.

Canada:

- Influenza activity is declining, however influenza A(H3N2) and influenza B continue to circulate in many regions across the country.
- A second smaller wave of influenza activity, dominated by A(H3N2), continued to decrease this week.
- The proportion of laboratory detections of influenza A(H3N2) has been steadily increasing since mid-January and accounted for 82% of subtyped influenza A detections this week; however, influenza A(H1N1)pdm09 remains the predominant subtype to date this season.
- Detections of influenza A continue to be greater than those of influenza B. There is currently very little influenza B circulation compared to previous seasons.

International:

Seasonal influenza:

In the temperate zone of the northern hemisphere influenza activity decreased overall. In North America, influenza activity continued to decrease with influenza A(H3N2) the dominant virus, followed by influenza B. In Europe, influenza activity decreased across the continent. Both influenza A viruses co-circulated; influenza A(H3N2) was the most frequently identified subtype. In North Africa, influenza detections were low across reporting countries. In Western Asia, influenza activity appeared to decrease overall, with exception of Saudi Arabia where activity remained elevated. In East Asia, influenza activity was reported in some countries, with influenza B viruses most frequently detected, followed by influenza A(H3N2). A second wave of influenza activity was reported in the Republic of Korea. In Southern Asia, influenza activity was low overall. In the Caribbean, Central American countries, and the tropical countries of South America, influenza and RSV activity were low in general. In West and Middle Africa, influenza activity was low across reporting countries. Influenza activity continued to be reported from Eastern Africa although in decreasing trend with predominantly influenza A(H3N2) followed by B detections. In the temperate zones of the southern hemisphere, influenza detections increased in southern Australia and South Africa. The influenza activity in South America remained at inter-seasonal levels. Worldwide, seasonal influenza A viruses accounted for the majority of detections.

Effectiveness of 2018-2019 influenza vaccine for influenza A(H1N1)pdm09:

- Based on a recently published [Canadian influenza vaccine effectiveness study](#), mid-season vaccine effectiveness estimates indicate that this year's flu shot is approximately 72%(95%CI: 60 to 81%) effective against the predominant circulating strain. The study confirmed that significant protection was observed in all age groups, especially young children who have been disproportionately affected by influenza this season.

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

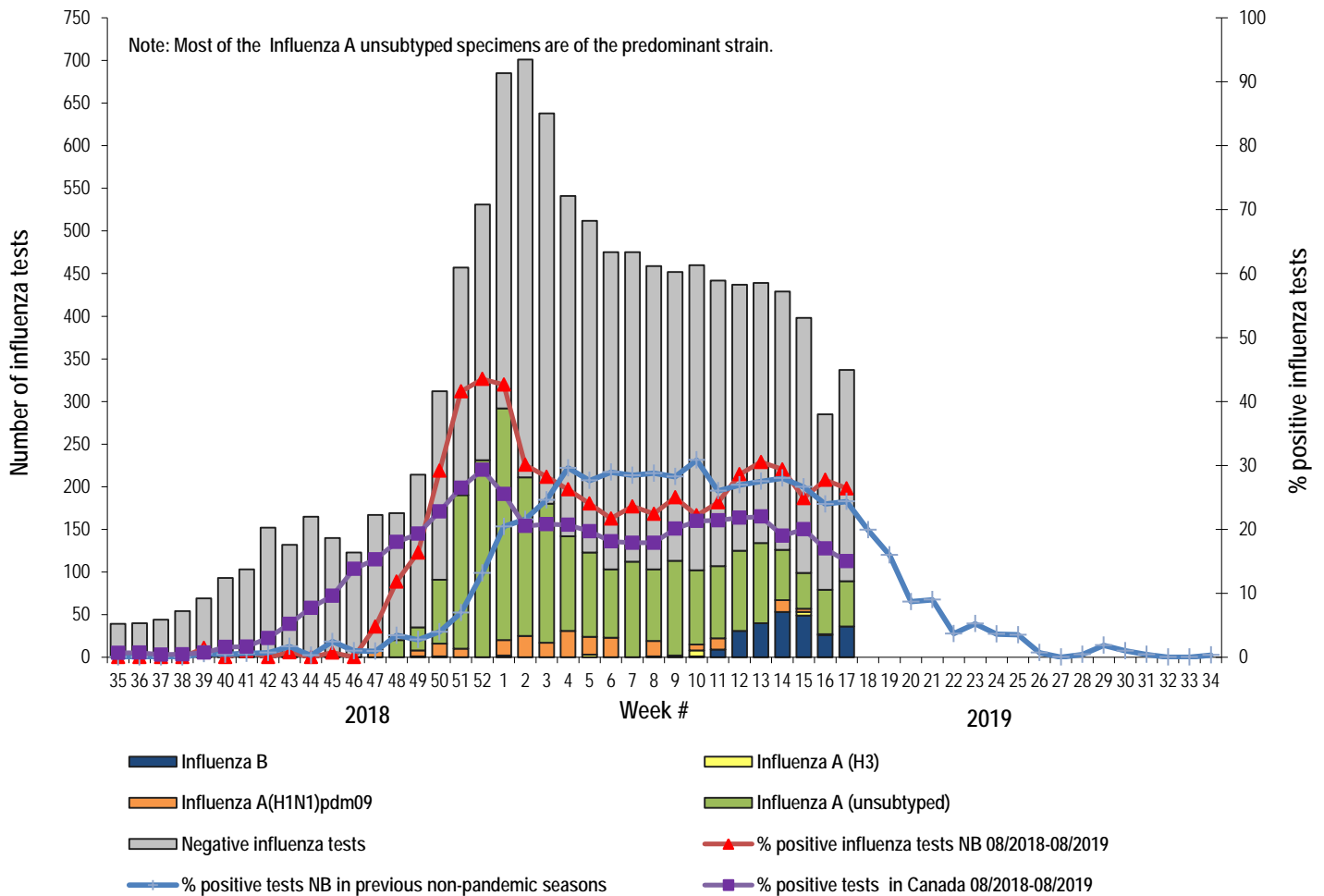
1) Influenza Laboratory Data¹

- Influenza activity remains elevated in week 17.

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.

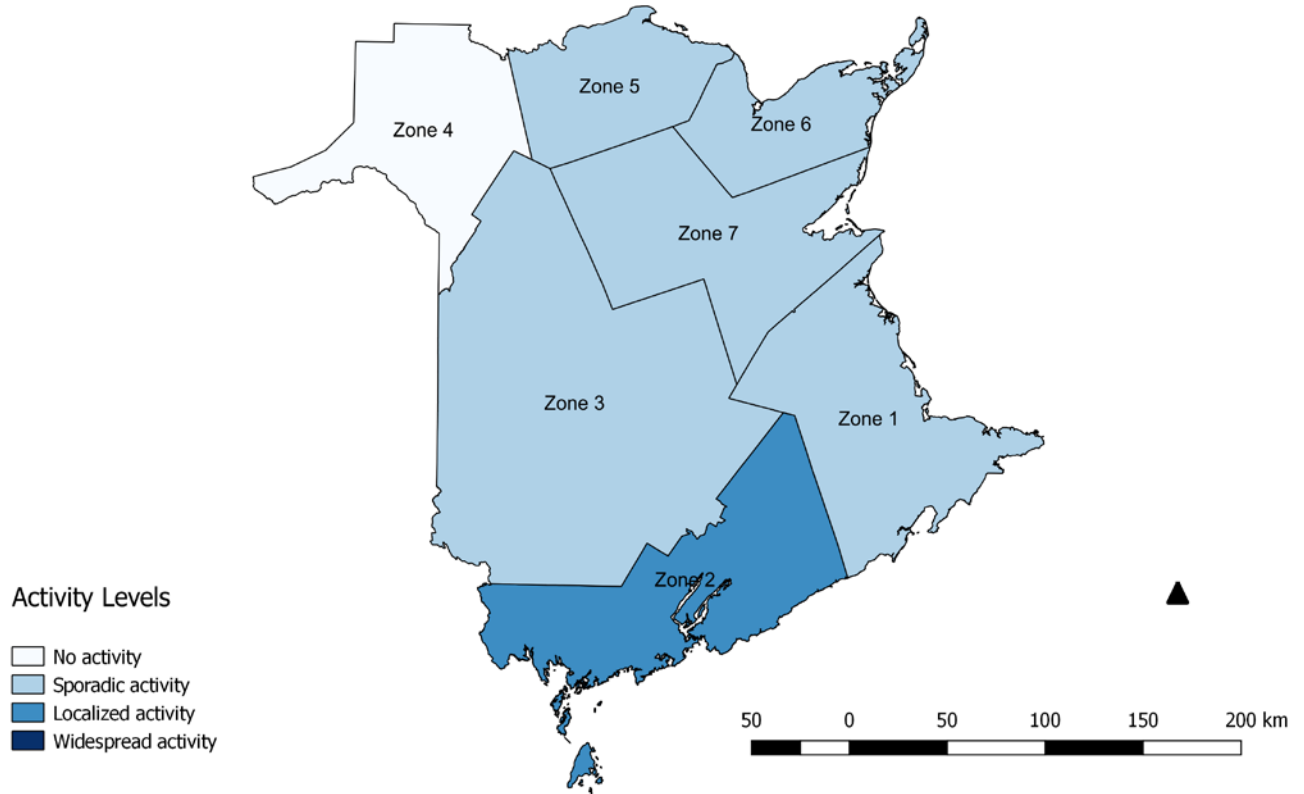
- Eighty-seven influenza cases were reported during week 17, 51 were A (unsubtyped), 34 were influenza B and 2 were co-infection of influenza A & B.
- Since the beginning of the season, 2816 influenza cases have been reported, 235 influenza A(H1N1)pdm09, 2315 influenza A(unsubtyped), 16 influenza A (H3), 247 influenza B and 3 with co-infection of influenza A & B simultaneously.

Graph 1: Number and percent of positive influenza specimens² in New Brunswick by week, up to April 27, 2019 (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 17, season 2018/2019.



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.

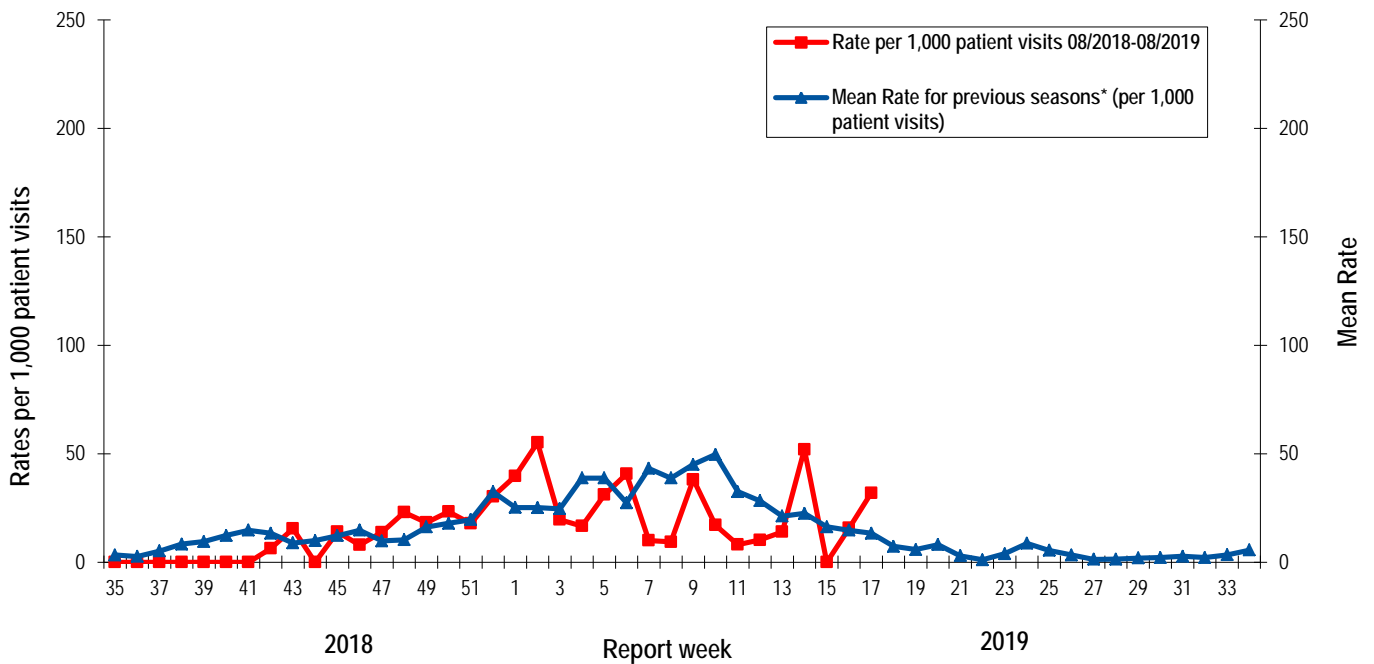
Table 1: Positive influenza cases by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to April 27, 2019)

Zone	Reporting period: April/21/2019–April/27/2019						Cumulative: (2018/2019 season) Aug./26/2018 –Apr./27/2019						Cumulative: (2017/2018 season) Aug./27/2017 –Aug./25/2018									
	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	Total	(H3)	(H1N1) pdm09	Unsubty ped/ Other	A Total	Total	Total			
Zone 1	0	0	19	19	21	1	6	81	1151	1238	80	2	102	12	575	689	756	11				
Zone 2	0	0	19	19	11	0	1	39	303	343	29	0	32	3	126	161	158	1				
Zone 3	0	0	7	7	0	0	2	29	265	296	0	0	63	3	194	260	163	3				
Zone 4	0	0	0	0	0	0	1	22	141	164	2	0	19	2	53	74	84	0				
Zone 5	0	0	4	4	0	1	2	17	85	104	127	1	9	0	8	17	6	0				
Zone 6	0	0	1	1	1	0	3	25	202	230	2	0	38	3	75	116	68	0				
Zone 7	0	0	1	1	1	0	1	22	168	191	7	0	17	2	72	91	63	0				
Total NB	0	0	51	51	34	2	16	235	2315	2566	247	3	280	25	1103	1408	1298	15				

2) ILI Consultation Rates⁴

- For week 17, the ILI consultation rate was 31.9 consultations per 1,000 patients visits. The ILI rate was above the expected levels for this time of year.
- During week 17, the sentinel response rate was 18%, for both the FluWatch sentinel physicians and the NB SPIN practitioners.

Graph 2: ILI Consultation Rates in New Brunswick, by report week, season 2018/19 compared to previous seasons*



* The mean rate was based on data from the 1996/97 to 2017/2018 seasons and excludes the Pandemic season (2009/10).

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.

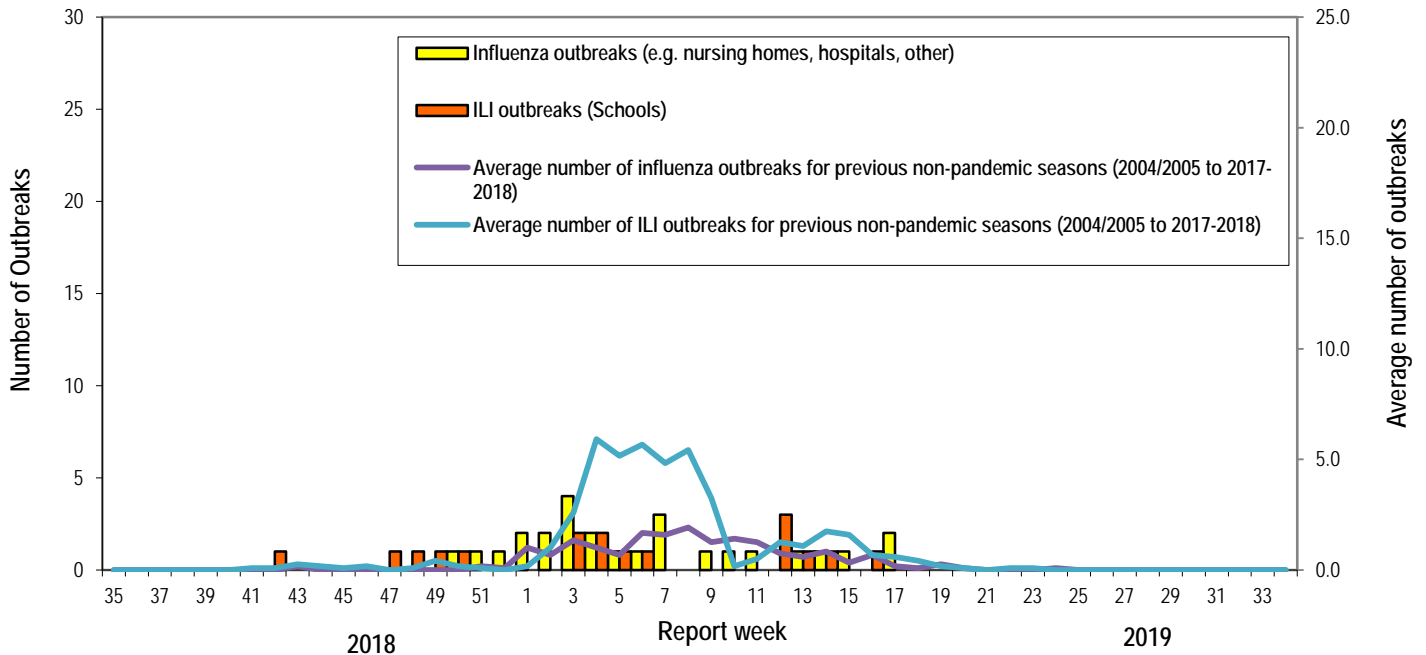
	Reporting period: April/21/2019–April/27/2019			Cumulative # of outbreaks season 2018-2019	Cumulative # of outbreaks season 2017-2018
	Lab-confirmed outbreaks in Nursing homes ⁵	ILI school outbreaks ⁶	Lab-confirmed outbreaks in Other settings ⁴		
Zone 1	0 out of 13	0 out of 74	0	12	9
Zone 2	0 out of 16	0 out of 81	2	13	11
Zone 3	0 out of 14	0 out of 95	0	6	21
Zone 4	0 out of 6	0 out of 22	0	1	1
Zone 5	0 out of 2	0 out of 18	0	0	0
Zone 6	0 out of 9	0 out of 35	0	4	3
Zone 7	0 out of 4	0 out of 27	0	7	3
Total NB	0 out of 64	0 out of 352	2	43	48

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.

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.

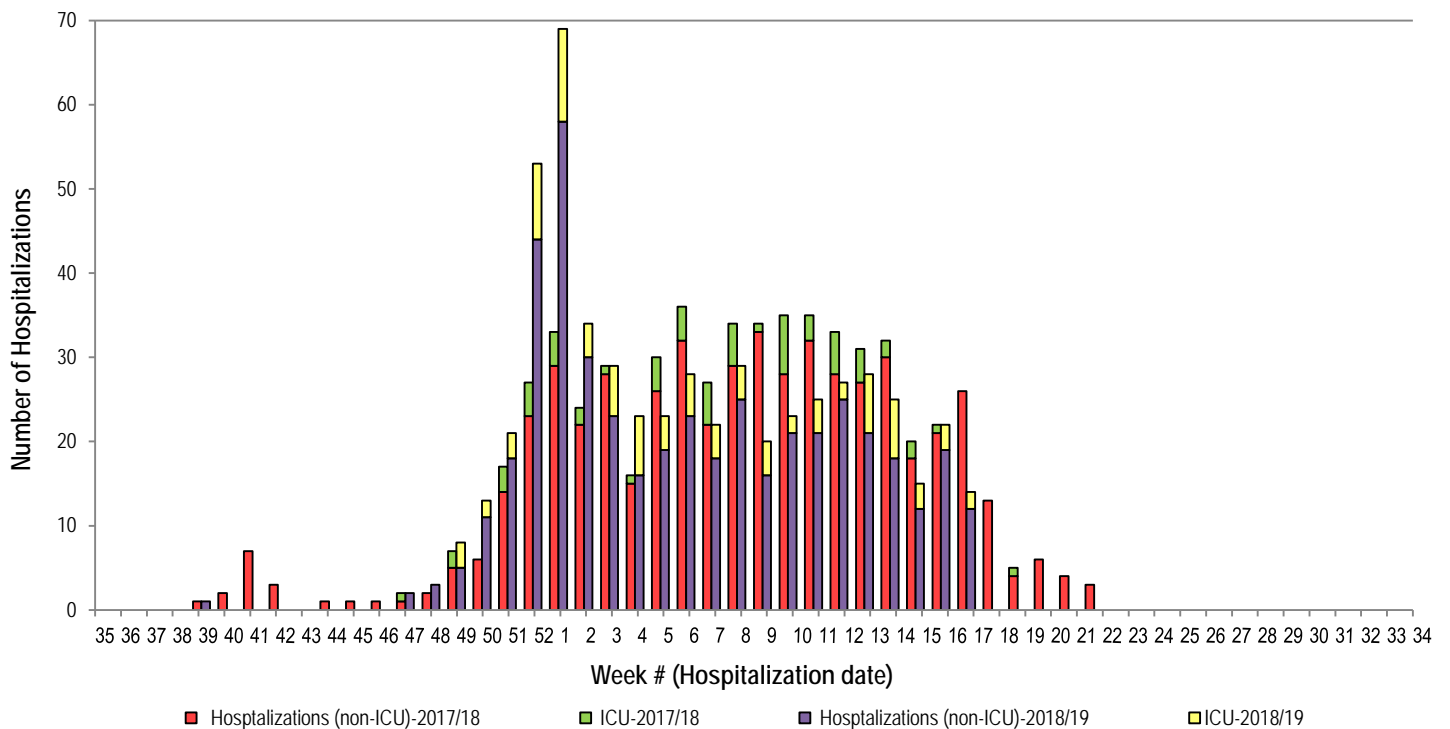
⁶ Schools reporting greater than 10% absenteeism which is likely due to ILI.

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 2018/19.



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

**Thirty-three deaths have been reported so far in season 2018-2019.

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.

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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