WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: April 23 to May 20, 2023 (week 17-20)

Summary

In New Brunswick, influenza activity is low

New Brunswick:

- There have been 12 positive influenza cases in weeks 17 to 20. Since the beginning of the season, 4374 cases have been reported, 139 influenza A(H3) viruses, 15 influenza A(H1N1) pdm09, 4198 influenza A (unsubtyped) and 22 influenza B.
- There have been 1 new influenza associated hospitalization during weeks 17 to 20. Since the beginning of the season, 880 hospitalizations have been reported and 67 deaths.
- The ILI consultation rate was 19.2 and 34.8 per 1,000 patients visits for week 17 and 18 respectively and 0.0 per 1,000 patients visits for weeks 19 and 20. The ILI rate was above the expected levels for this time of the year for weeks 17 and 18, and below the expected levels for this time of the year for weeks 19 and 20.
- No new influenza outbreaks and six new ILI school outbreaks were reported in weeks 17 to 20. So far this season, 36 influenza outbreaks were reported, and 249 ILI school outbreaks were reported.

Canada:

- At the national level, influenza activity has been stable and remains at interseasonal levels. Sporadic influenza activity continues to be reported in many regions across Canada.
- In week 20, a total of 345 laboratory detections (132 influenza A and 213 influenza B) were reported. Influenza B detections (62%) are predominant.
- The percentage of FluWatchers reporting fever and cough was 1 % in week 20. The percentage of FluWatchers reporting cough and fever is below seasonal levels.

International:

Seasonal influenza:

Globally, influenza detections decreased further due to a decline in detections in the northern hemisphere, while some countries in the southern hemisphere reported an increase in influenza detections in recent weeks. In the countries of North America, most indicators of influenza activity were at levels typically observed between influenza seasons. Influenza B viruses predominated in Canada and, in the most recent week, in the United States of America (USA). In Europe, overall influenza detections decreased and influenza positivity from sentinel sites decreased below the epidemic threshold of 10% at the regional level. Overall, influenza B viruses predominated in both sentinel and non-sentinel surveillance as all subregions experienced a wave of influenza B activity after an initial influenza A wave. Of the few influenza A viruses detected, the majority were influenza A(H1N1)pdm09. Influenza detections were low in all reporting countries. In Central Asia, no influenza detections were reported this period despite continued testing.). In Northern Africa, no influenza detections were reported. In Western Asia, influenza activity remained low overall with detections of all seasonal influenza subtypes. In East Asia, influenza activity decreased overall, although detections of mainly influenza A(H1N1)pdm09 continued to increase in Hong Kong Special Administrative Region (SAR), China. A slight increase of influenza detections was reported in the Republic of Korea. In the Caribbean and Central American countries, influenza activity of mainly influenza B/Victoria lineage viruses was low or below baseline in most countries, although increases in influenza activity were reported in a few countries. In the tropical countries of South America, influenza activity decreased overall during this reporting period although positivity increased to extraordinary level in Bolivia. In tropical Africa, influenza detections were low in reporting countries. Influenza A virus detections outnumbered B virus detections. In Southern Asia, influenza activity remained low with influenza B viruses predominant followed by A(H3N2) viruses. Influenza activity was low in reporting countries. In South-East Asia, influenza activity decreased overall, reflecting a decrease in detections in Malaysia. Influenza A(H3N2) viruses predominated overall. Singapore continued to report elevated detections of predominantly A(H3N2) viruses. In the temperate zones of the southern hemisphere, influenza activity remained low, however influenza activity increased slightly in Australia and Chile and in pneumonia surveillance in South Africa. Influenza A viruses were predominant and among the subtyped viruses and influenza A(H1N1)pdm09 predominated in these countries.

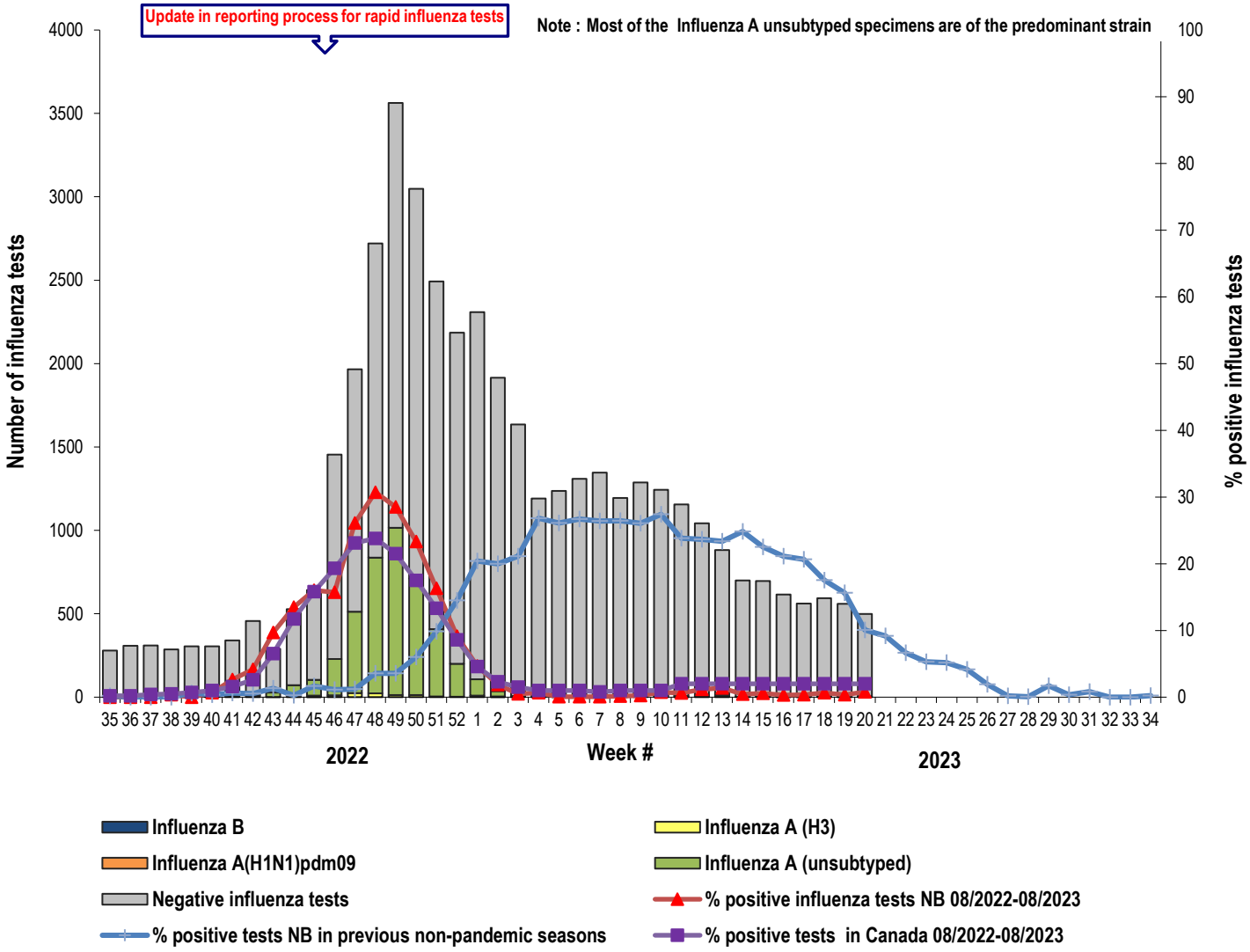
Emerging Respiratory Viruses:

- COVID-19: On December 31, 2019, a cluster of cases of pneumonia was reported in Wuhan, China, and the cause was confirmed as a new coronavirus that had not previously been identified in humans (COVID-19). As of May 30, 2023, 4,676,878 cases of COVID-19 infection in Canada have been identified with 52,425 deaths. Since August 28, 2022, fifteen thousand seven hundred and ninety-four cases have been identified in New Brunswick with 239 deaths. As of May 24, the WHO reported globally 766 895 075 confirmed cases and 6 935 889 deaths.
  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: WHO EMRO | MERS outbreaks | MERS-CoV | Health topics
  - CDC: http://www.cdc.gov/coronavirus/mers/
- Avian Influenza:
  - WHO: WHO EMRO | Avian influenza | Avian influenza | Health topics

1) Influenza Laboratory Data[1]

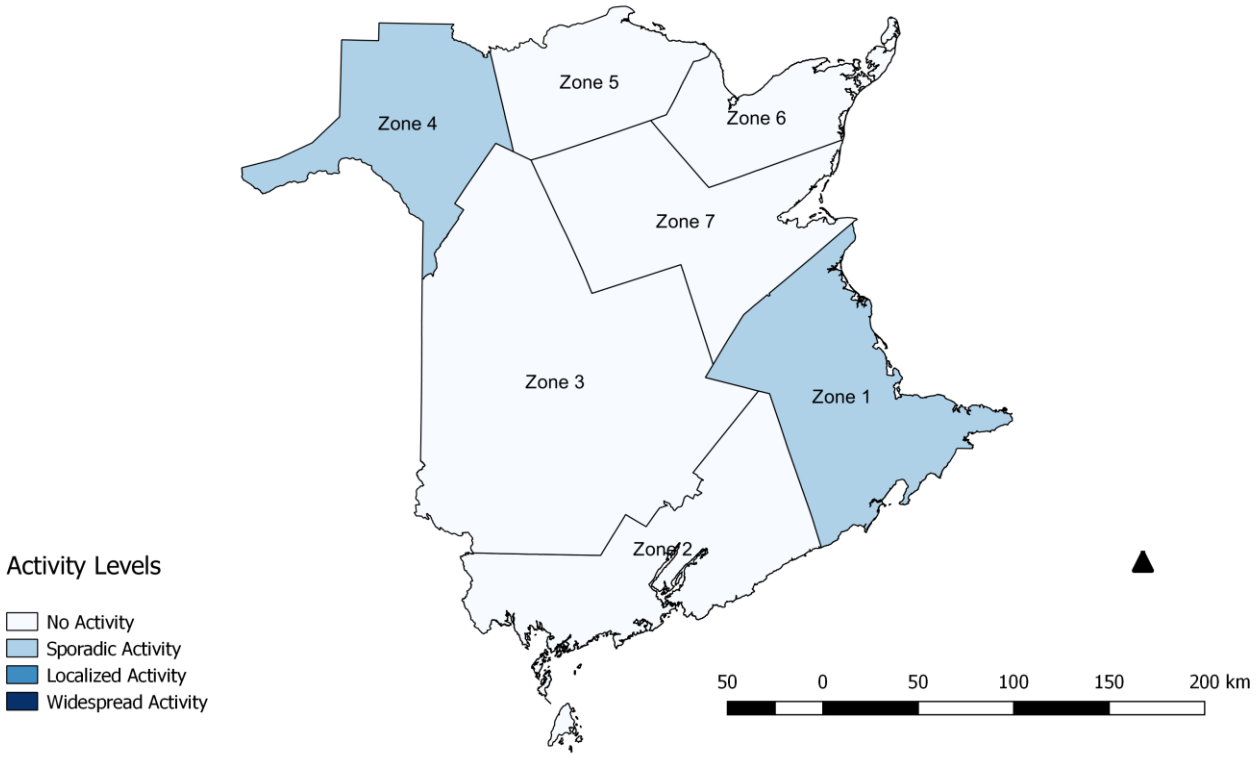
- Influenza activity is low in weeks 17-20.
- Twelve influenza cases were reported during weeks 17 to 20, one influenza A(H3), four influenza A(H1N1) pdm09, one influenza A (unsubtyped) and six influenza B.
- Since the beginning of the season, 4374 cases have been reported, 139 influenza A(H3) viruses, 15 influenza A(H1N1) pdm09, 4198 influenza A (unsubtyped) and 22 influenza B.

Graph 1: Number and percent of positive influenza specimens in New Brunswick by week, up to May 20, 2023 (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.

Figure 2: Influenza/ILI activity levels[2] by Health Zones, in New Brunswick, for week 20, season 2022/2023.



[2] 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 season 2019-2020.
(data source: G. Dumont lab results up to May 20, 2023)

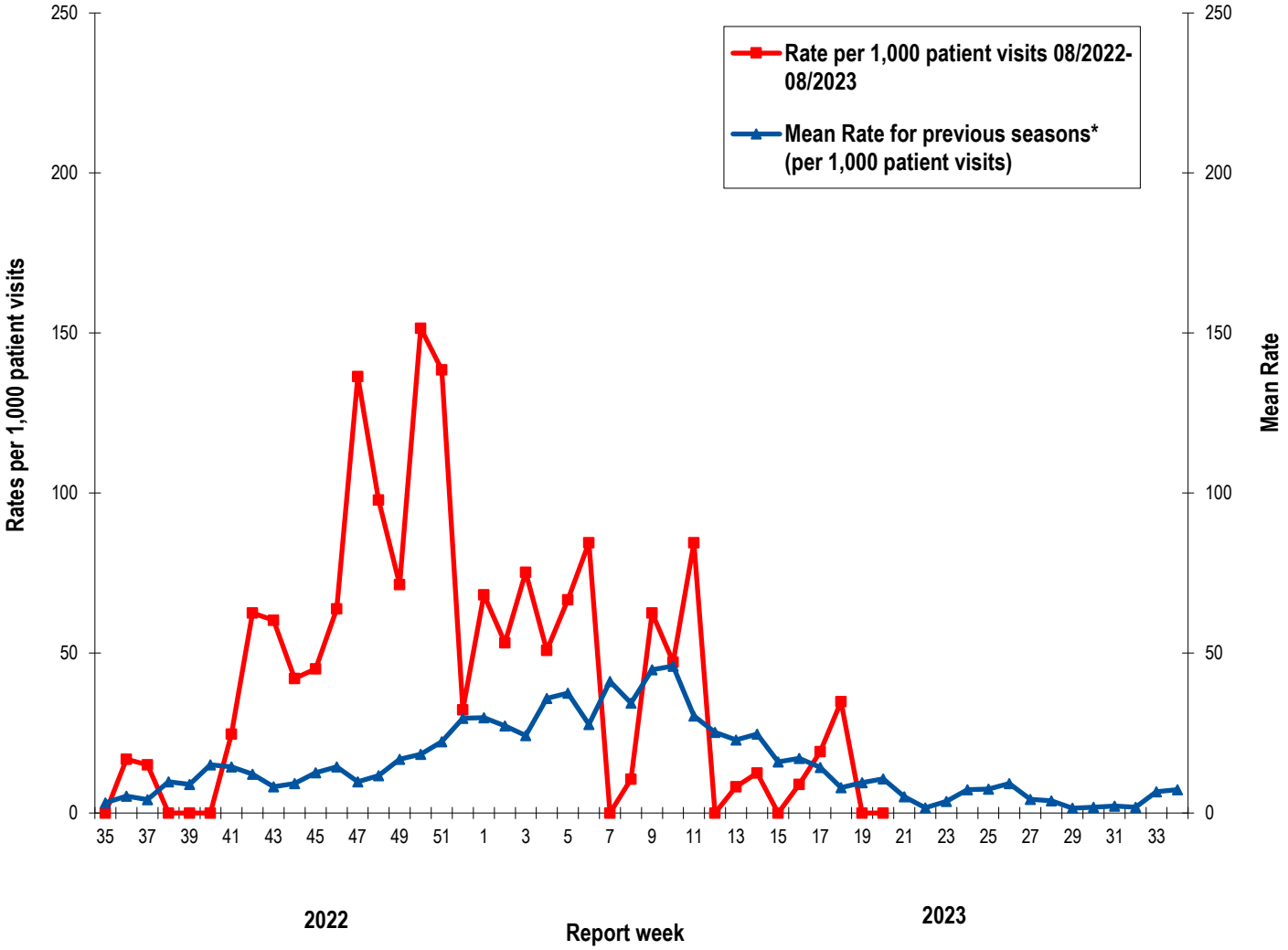
Zone	Reporting period: April/23/2023–May/20/2023						Cumulative: (2022/2023 season) Aug./28/2022 – May/20/2023						Cumulative: (2021/2022 season) Aug./29/2021 –Aug./27/2022					
	A				B	A & B co-infection	A				B	A & B co-infection	A				B	A & B co-infection
	A(H3)	(H1N1) pdm09	Unsubty ped/ Other	**A 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	0	0	**1**	**3**	**0**	80	0	1161	**1241**	**10**	1	124	0	115	**239**	**0**	**0**
Zone 2	0	2	0	**2**	**1**	**0**	28	2	800	**830**	**3**	0	11	0	60	**71**	**0**	**0**
Zone 3	0	0	0	**0**	**1**	**0**	9	0	824	**833**	**4**	0	33	0	55	**88**	**1**	**0**
Zone 4	0	2	1	**3**	**0**	**0**	7	12	371	**390**	**2**	0	4	0	10	**14**	**0**	**0**
Zone 5	0	0	0	**0**	**0**	**0**	5	0	135	**140**	**1**	0	1	0	7	**8**	**0**	**0**
Zone 6	0	0	0	**0**	**0**	**0**	8	1	596	**605**	**0**	0	5	0	13	**18**	**0**	**0**
Zone 7	0	0	0	**0**	**1**	**0**	2	0	311	**313**	**2**	0	1	0	2	**3**	**0**	**0**
Total NB	**1**	**4**	**1**	**6**	**6**	**0**	**139**	**15**	**4198**	**4352**	**22**	**0**	**179**	**0**	**262**	**441**	**1**	**0**

2) ILI Consultation Rates[3]

- The ILI consultation rate was 19.2 and 34.8 per 1,000 patients visits for week 17 and 18 respectively and 0.0 per 1,000 patients visits for weeks 19 and 20. The ILI rate was above the expected levels for this time of year for weeks 17-18, and below the expected levels for weeks 19-20.

- During weeks 17 to 20, the sentinel response rate was 17% for both the FluWatch sentinel physicians and the NB SPIN practitioners.

Graph 2: ILI Consultation Rates in New Brunswick, by report week, season 2022/23 compared to previous seasons*



*** The mean rate was based on data from the 1996/97 to 2021/2022 seasons and excludes the Pandemic season (2009/10, 2020/21).**

[3] A total of 23 practitioner sites (14 FluWatch sentinel physicians and 9 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

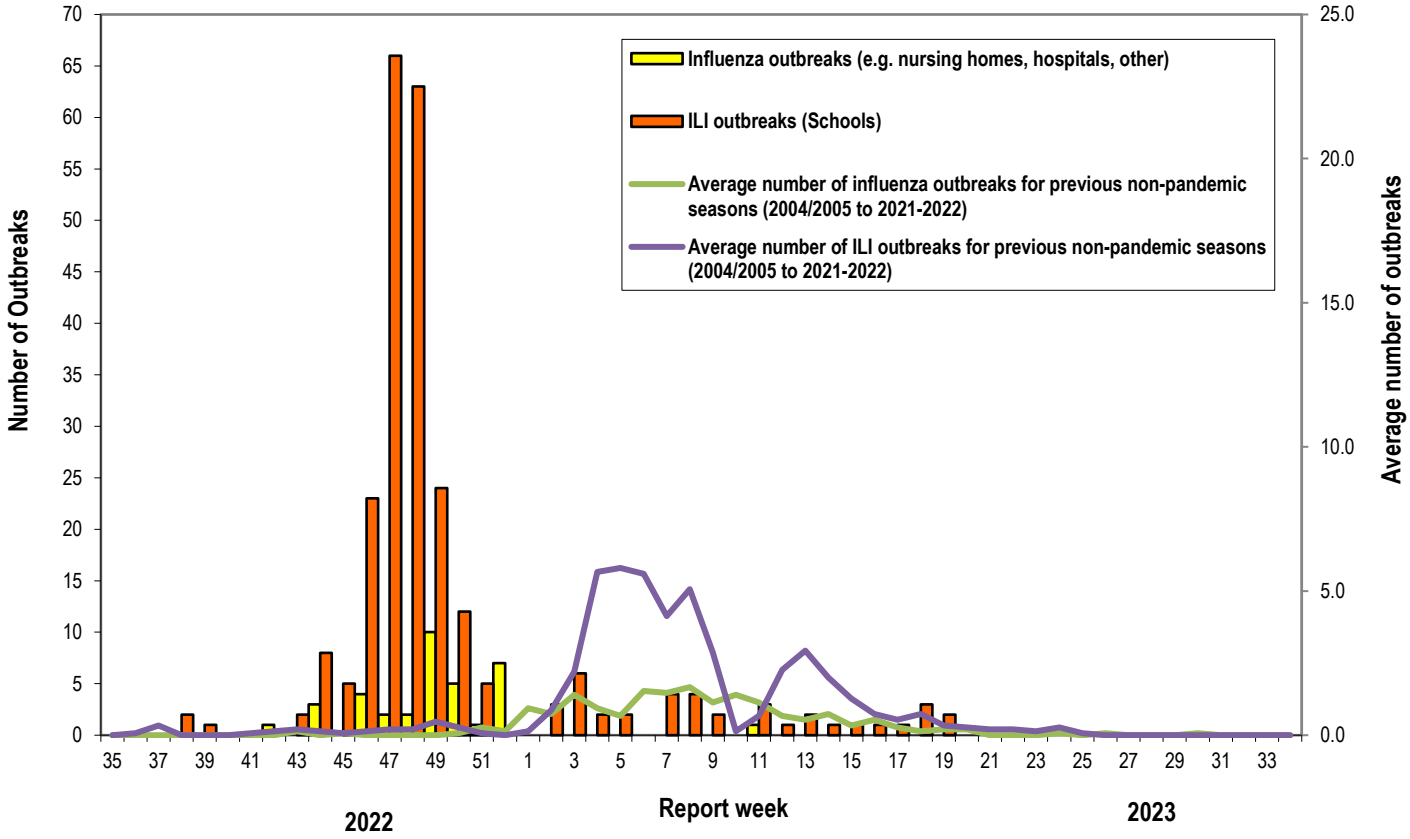
3) ILI and Laboratory-Confirmed Outbreak Data

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

	Reporting period: April/23/2023 to May/20/2023			Cumulative # of outbreaks season 2022-2023*
	Lab-confirmed outbreaks in Nursing homes[4]	ILI school outbreaks[5] *	Lab-confirmed outbreaks in Other settings[5]	
Zone 1	0 out of 15	0 out of 74	0	55
Zone 2	0 out of 16	3 out of 81	0	66
Zone 3	0 out of 16	3 out of 95	0	93
Zone 4	0 out of 5	0 out of 22	0	20
Zone 5	0 out of 2	0 out of 18	0	4
Zone 6	0 out of 9	0 out of 35	0	38
Zone 7	0 out of 5	0 out of 27	0	9
Total NB	0 out of 68	6 out of 352	0	285*

*During this influenza season, 2022-2023, the number of ILI outbreaks in school (based on greater than 10% absenteeism in school due to ILI symptoms, which for many schools cannot be determined) might be misrepresented due to the ongoing circulation of COVID-19, since distinction between influenza-like-illness and COVID-like illness is not always evident. Therefore, the number of ILI outbreaks in schools should be interpreted with caution.

Graph 3: Number of Influenza Outbreaks (nursing homes, hospitals, other)[5] and ILI Outbreaks (schools)[6] reported to Public Health in New Brunswick, by report week, season 2022/23.

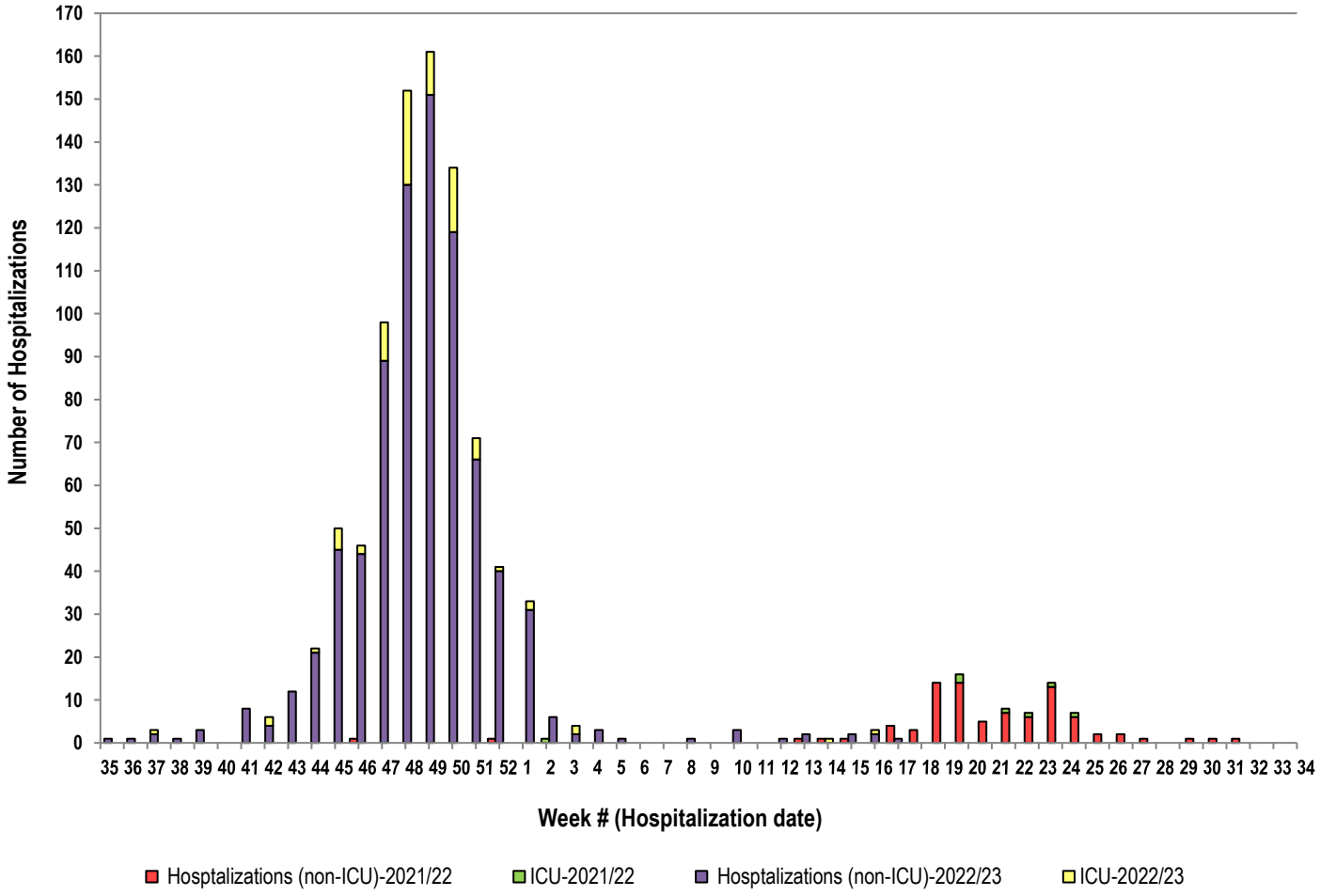


[4] Two or more ILI cases within a seven-day period, including at least one laboratory-confirmed case of influenza. Outbreaks are reported in the week when laboratory confirmation is received.

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

4) Influenza associated Hospitalization[6] and Death[7] Surveillance[8]

Graph 4: Influenza associated Hospitalizations and ICU admissions in New Brunswick, by week of hospitalization for current and past season (2022-2023).*



***Sixty-seven deaths have been reported so far in season 2022-2023.**

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-https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates
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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[6] Hospitalizations (including ICU admissions) are influenza associated; they may or may not be due to influenza.
[7] Deaths are influenza associated; influenza may not be the direct cause of death.
[8] 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.