

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: January 28 to February 3 2018 (week 5)

Summary:

In New Brunswick, most influenza indicators remained elevated in week 5

New Brunswick:

- There have been 145 positive influenza detections in week 5. To date this season, 883 influenza detections have been reported, 188 were influenza A (H3), 4 were influenza A (H1N1)pdm09, 406 were influenza A (unsubtyped, most likely the H3 strain) and 285 were influenza B.
- Both Influenza A(H3N2) and Influenza B are co-circulating this season.
- There have been 23 new influenza associated hospitalizations during week 5. So far this season, 238 influenza associated hospitalizations have been reported with 15 deaths. Twenty-one of the 238 hospitalizations were related to nosocomial outbreaks where patients were admitted at least 48 hours before influenza symptoms.
- The ILI consultation rate was 42.9 consultations per 1,000 patients visits in week 5. The ILI rate was within the expected levels for this time of year.
- Two new ILI outbreaks were reported in week 5. So far this season, 16 outbreaks were reported in total: 2 in hospitals, 7 in nursing homes, 2 in other settings (special care home and adult residential facility) and 5 ILI outbreaks in schools.

Canada:

- Overall, influenza activity in Canada remains at peak levels but there are signs that activity is starting to slow down in parts of the country.
- The total number of detections of influenza B was similar to the total number of detections of influenza A.
- To date this season, the majority of lab confirmations, hospitalizations and deaths have been among adults aged 65+.
- An increasing proportion of weekly pediatric hospitalizations reported by the IMPACT network are due to influenza B. In week 05, influenza A and B accounted for an equal proportion of hospitalizations.
- [Canadian mid-season estimate](#) of influenza vaccine effectiveness (VE) was low at 17% against the A(H3N2) strain and moderate at 55% against influenza B, which is circulating at high levels in Canada this season. The overall VE against any influenza A and B combined was 42%.

International:

Seasonal influenza:

- Influenza activity remained high in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity was at inter-seasonal levels. Worldwide, influenza A accounted still for the majority of influenza detections but influenza B (mostly from the Yamagata lineage) increased in recent weeks. Up to now, the majority of countries which are in the influenza season, reported influenza like illness reaching moderate levels in comparison with previous years, with few reaching levels exceeding those of previous years. Some countries however have reported levels of hospitalization and ICU admissions reaching or exceeding peak levels of previous influenza seasons.

Effectiveness of 2017-2018 influenza vaccine for influenza A(H3N2):

- In September 2017, the [WHO indicated](#) that the effectiveness of vaccines containing A/Hong Kong/4801/2014 was suboptimal in the 2017 southern hemisphere season, in regions where A(H3N2) viruses predominated. If influenza A(H3N2) viruses predominate in the 2017/2018 northern hemisphere season, it is likely that vaccine effectiveness would be suboptimal for the A(H3N2) virus; however, the vaccine should provide good protection for influenza A(H1N1)pdm09 and influenza B virus infection
- In the context of a potentially reduced influenza VE for the 2017-18 season, the Association of Medical Microbiology and Infectious Disease (AMMI Canada) has posted an updated [guidance on the use of antiviral medication](#).

Emerging Respiratory Viruses:

- MERS CoV:
 - WHO: http://www.who.int/csr/disease/coronavirus_infections/en/
 - CDC: <http://www.cdc.gov/coronavirus/mers/>

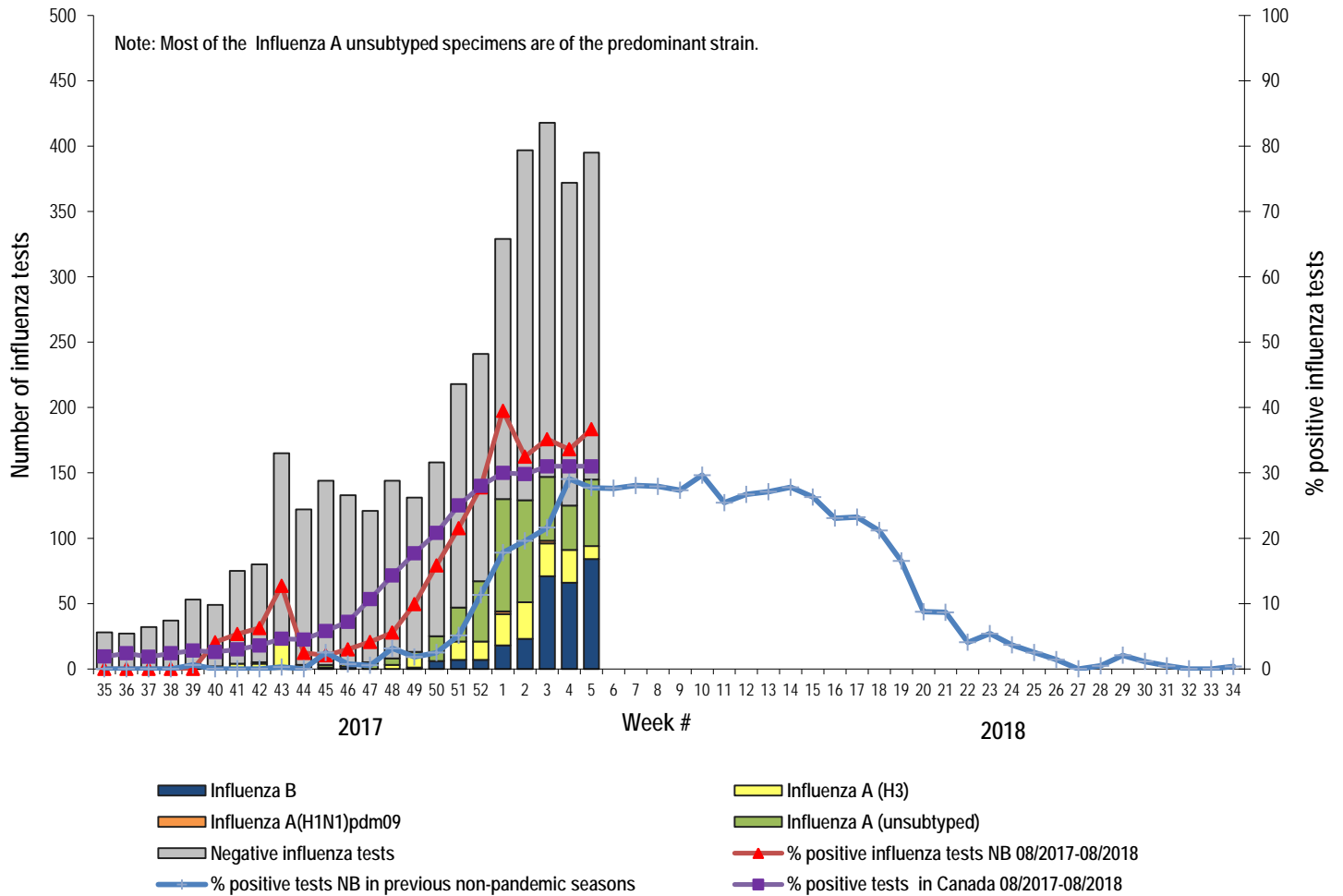
1) Influenza Laboratory Data¹

- Most influenza indicators remained elevated in week 5.
- One-hundred-forty-five influenza detections were reported during week 5.

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.

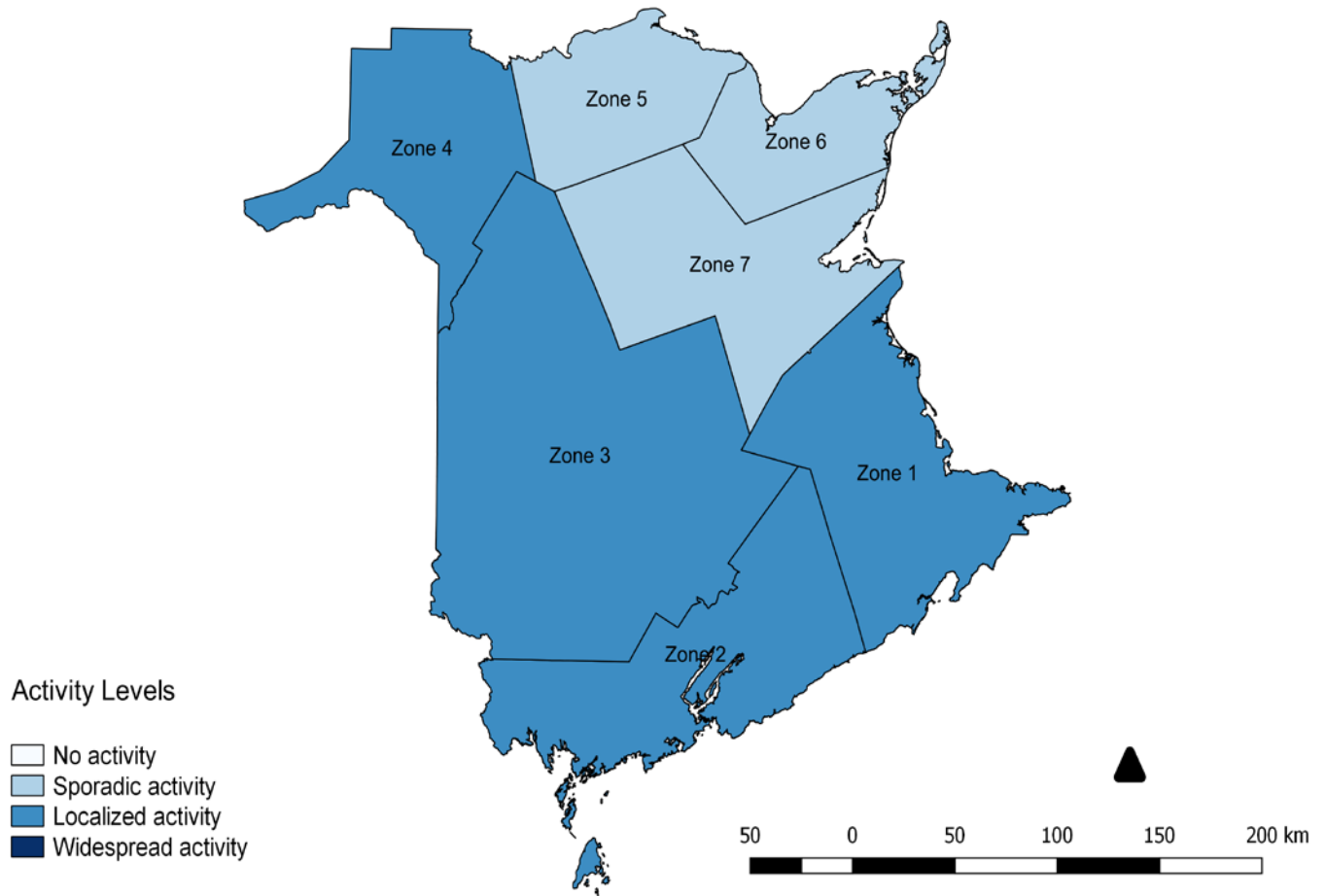
- Since the beginning of the season, 883 influenza detections were reported, 188 were influenza A (H3), 4 influenza A(H1N1)pdm09, 406 were influenza A (unsubtyped)² and 285 were influenza B.

Graph 1: Number and percent of positive influenza specimens in New Brunswick by week, up to February 3 2018 (data source: G. Dumont Lab results)



² The influenza A (unsubtyped) detections are most likely of the predominant strain (H3).

Figure 2: Influenza/ILI activity levels³ by Health Zones, in New Brunswick, for reporting week, season 2017/2018.



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.

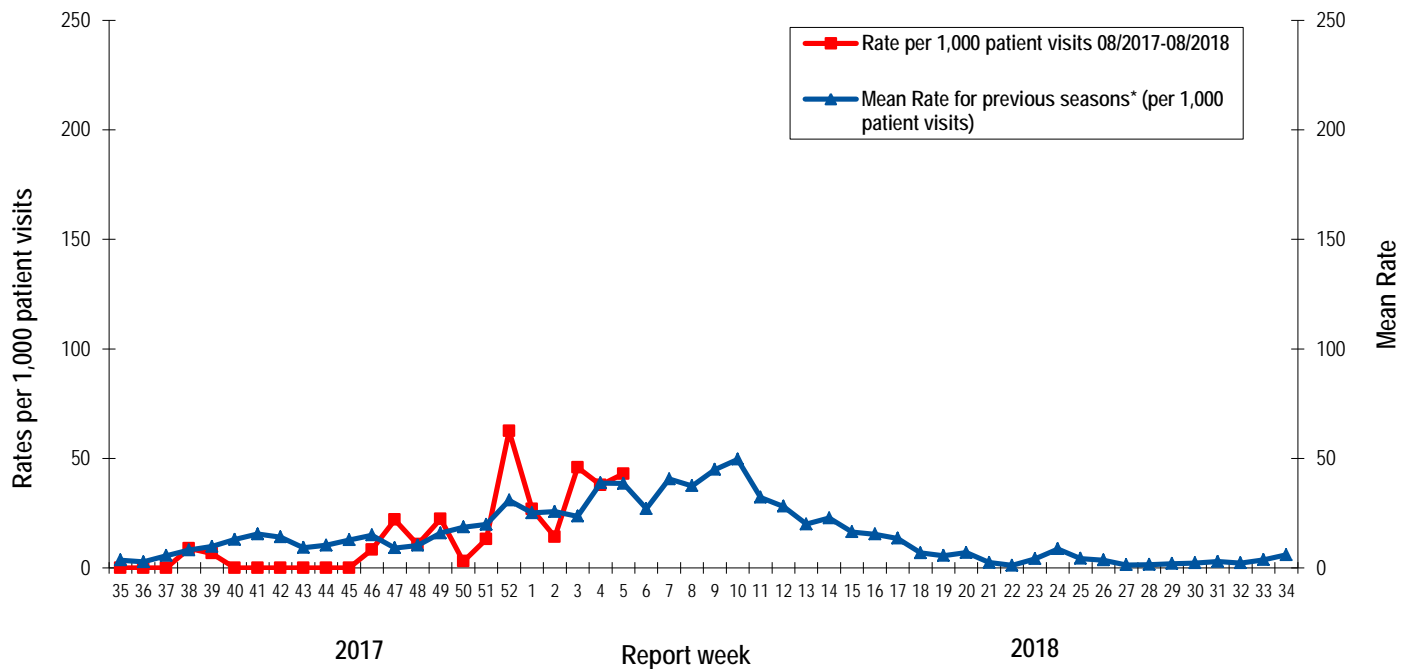
Table 1: Positive influenza test results by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to February 3 2018)

Zone	Reporting period: January/28/2018–February/03/2018					Cumulative: (2017/2018 season) Aug./27/2017 –Feb./03/2018					Cumulative: (2016/2017 season) Aug./28/2016 – Aug./26/2017				
	A				B	A				B	A				B
	A(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total	A(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total	(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total
Zone 1	5	0	28	33	59	67	2	256	325	202	76	0	504	580	90
Zone 2	1	0	4	5	3	13	1	12	26	11	21	1	77	99	8
Zone 3	1	0	8	9	4	39	0	36	75	18	25	0	117	142	23
Zone 4	0	0	3	3	10	12	0	7	19	23	18	0	32	50	6
Zone 5	0	0	3	3	0	8	0	4	12	2	2	0	3	5	6
Zone 6	2	0	4	6	5	36	0	55	91	13	27	0	62	89	11
Zone 7	1	0	1	2	3	13	1	36	50	16	21	0	52	73	16
Total NB	10	0	51	61	84	188	4	406	598	285	190	1	847	1038	160

2) ILI Consultation Rates⁴

- During week 5, the ILI consultation rate was 42.9 consultations per 1,000 patients visits. The ILI rate was within the expected levels for this time of year.
- During week 5, 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 2017/18 compared to previous seasons*



* The mean rate was based on data from the 1996/97 to 2016/2017 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.

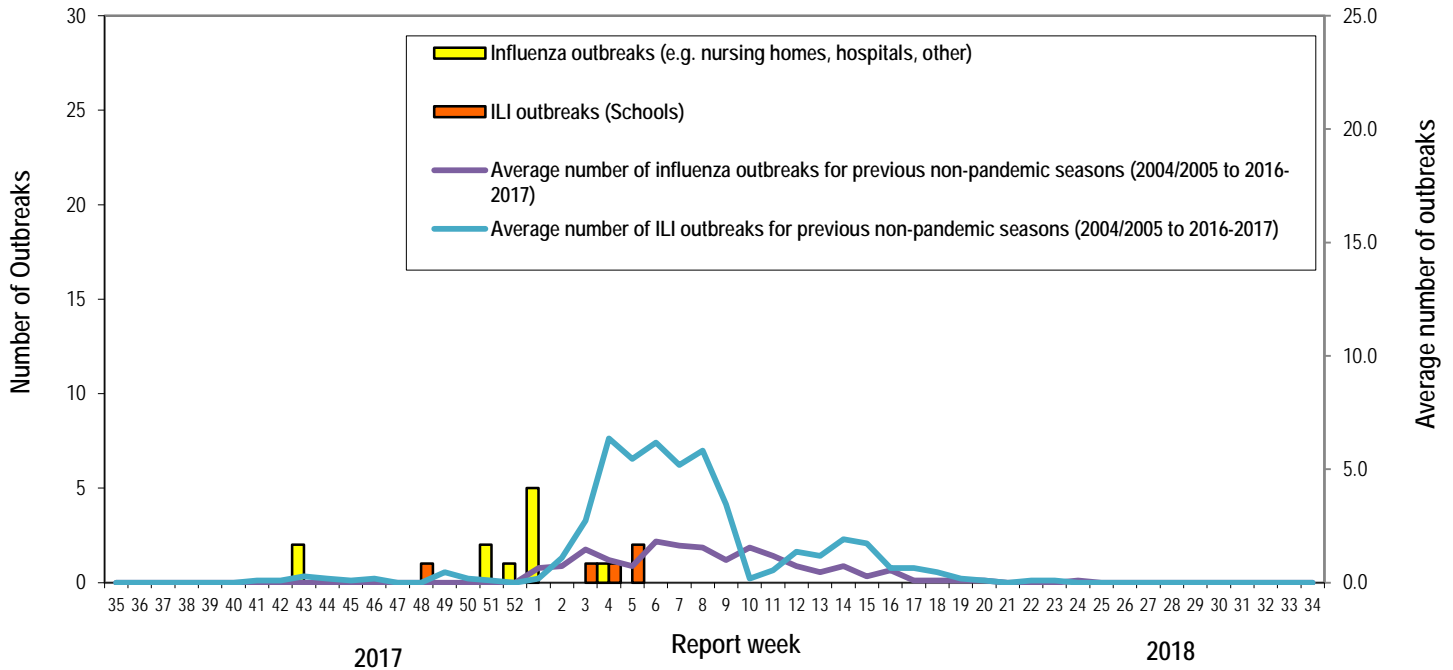
	Reporting period: January/28/2018–February/03/2018			Cumulative # of outbreaks season 2017-2018	Cumulative # of outbreaks season 2016-2017
	Lab-confirmed outbreaks in Nursing homes ⁵	ILI school outbreaks ⁶	Lab-confirmed outbreaks in Other settings ⁴		
Zone 1	0 out of 13	0 out of 74	0	2	3
Zone 2	0 out of 16	1 out of 81	0	2	5
Zone 3	0 out of 14	0 out of 95	0	7	14
Zone 4	0 out of 6	1 out of 22	0	1	0
Zone 5	0 out of 2	0 out of 18	0	0	1
Zone 6	0 out of 9	0 out of 35	0	3	0
Zone 7	0 out of 4	0 out of 27	0	1	2
Total NB	0 out of 64	2 out of 352	0	16	25

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.

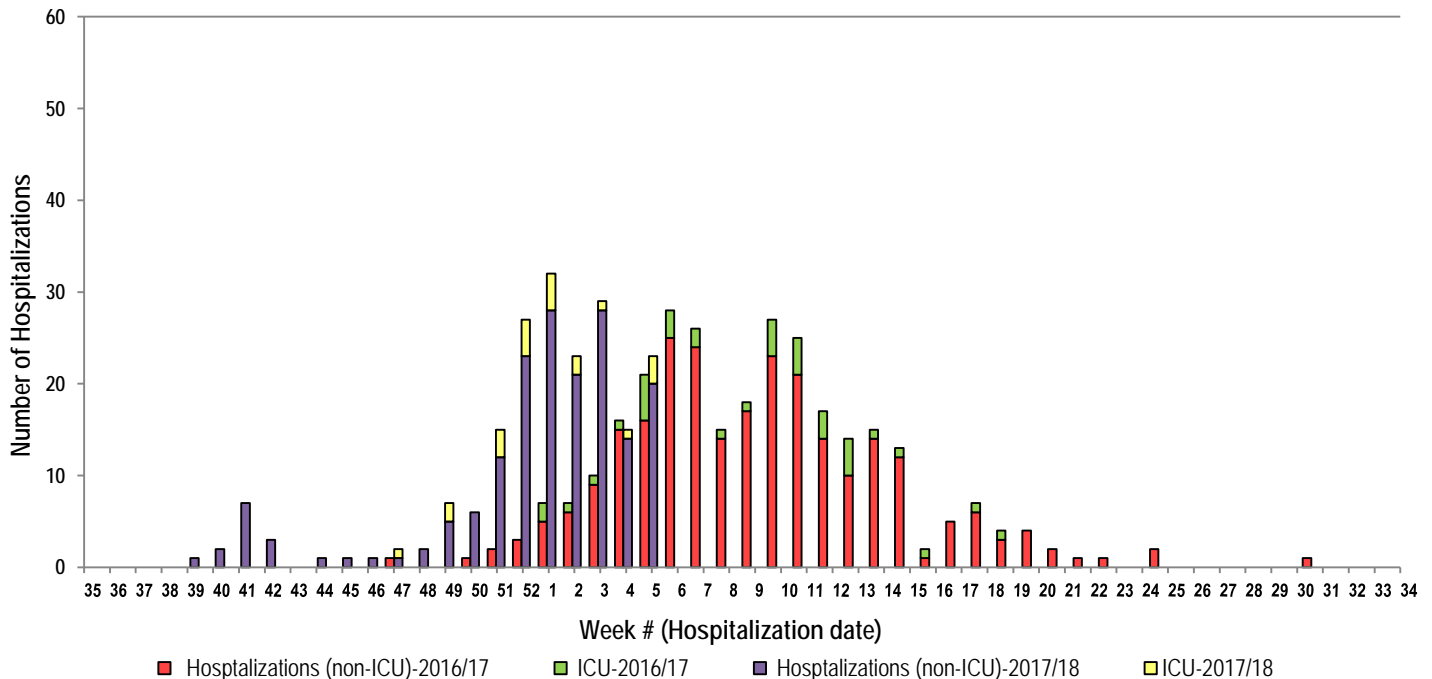
⁶ Schools reporting greater than 10% absenteeism which is likely due to ILI.

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 2017/18.



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

** Fifteen deaths have been reported so far in season 2017-2018.

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/

Prepared by the Communicable Disease Control Unit
Office of the Chief Medical Officer of Health, Tel: (506) 444-3044