

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: December 17 to December 30 2017 (weeks 51 & 52)

Summary:

In New Brunswick, influenza activity increased in weeks 51 & 52

New Brunswick:

- There have been 114 positive influenza detections in weeks 51 & 52. To date this season, 207 influenza detections have been reported, 77 were influenza A (H3), 107 were influenza A (unsubtyped) and 23 were influenza B.
- There have been 21 new influenza associated hospitalizations during weeks 51 & 52. So far this season, 71 influenza associated hospitalizations have been reported with 2 deaths. Twenty-one of the 71 hospitalizations were related to nosocomial outbreaks where patients were admitted at least 48 hours before influenza symptoms.
- The ILI consultation rate was 13.1 and 62.5 consultations per 1,000 patients visits in weeks 51 & 52, respectively. The ILI rate for week 51 was below the expected levels for this time of year.
- Three new influenza outbreaks were reported in weeks 51 & 52. So far this season, 6 outbreaks were reported in total: 2 in hospitals, 2 in nursing homes, 1 in a special care home and 1 ILI outbreak in a school.

Canada:

- Overall, influenza activity continues to increase across Canada. All indicators of influenza activity increased in week 51 and 52, but are within the range of expected levels for this time of year.
- The majority of influenza detections continue to be A(H3N2), although the proportion of detections that are influenza B has been increasing steadily.
- Influenza B is circulating much earlier than usual this season. The number of influenza B detections remains substantially greater this season compared to previous years.
- To date this season, the majority of lab confirmations, hospitalizations and deaths have been among adults aged 65+.

International:

Seasonal influenza:

- Influenza activity continued to increase 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(H3N2) and B viruses accounted for the majority of influenza detections although influenza A(H1N1)pdm09 viruses were predominant in some countries.

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

- The [WHO has stated](#) that, given the suboptimal effectiveness of vaccines containing A/Hong Kong/4801/2014 in the 2017 southern hemisphere season, a suboptimal vaccine effectiveness (VE) is likely to occur in the 2017/2018 northern hemisphere season if influenza A(H3N2) viruses predominate. 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 upcoming 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/>
- Avian Influenza:
 - WHO: www.who.int/csr/disease/avian_influenza/en/index.html

1) Influenza Laboratory Data¹

- Influenza activity increased in weeks 51 & 52.
- One-hundred-fourteen influenza detections were reported during weeks 51 & 52.
- Since the beginning of the season, 207 influenza detections were reported, 77 were influenza A (H3), 107 were influenza A (unsubtyped) and 23 were influenza B.

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.

Graph 1: Number and percent of positive influenza specimens in New Brunswick by week, up to December 30 2017 (data source: G. Dumont Lab results)

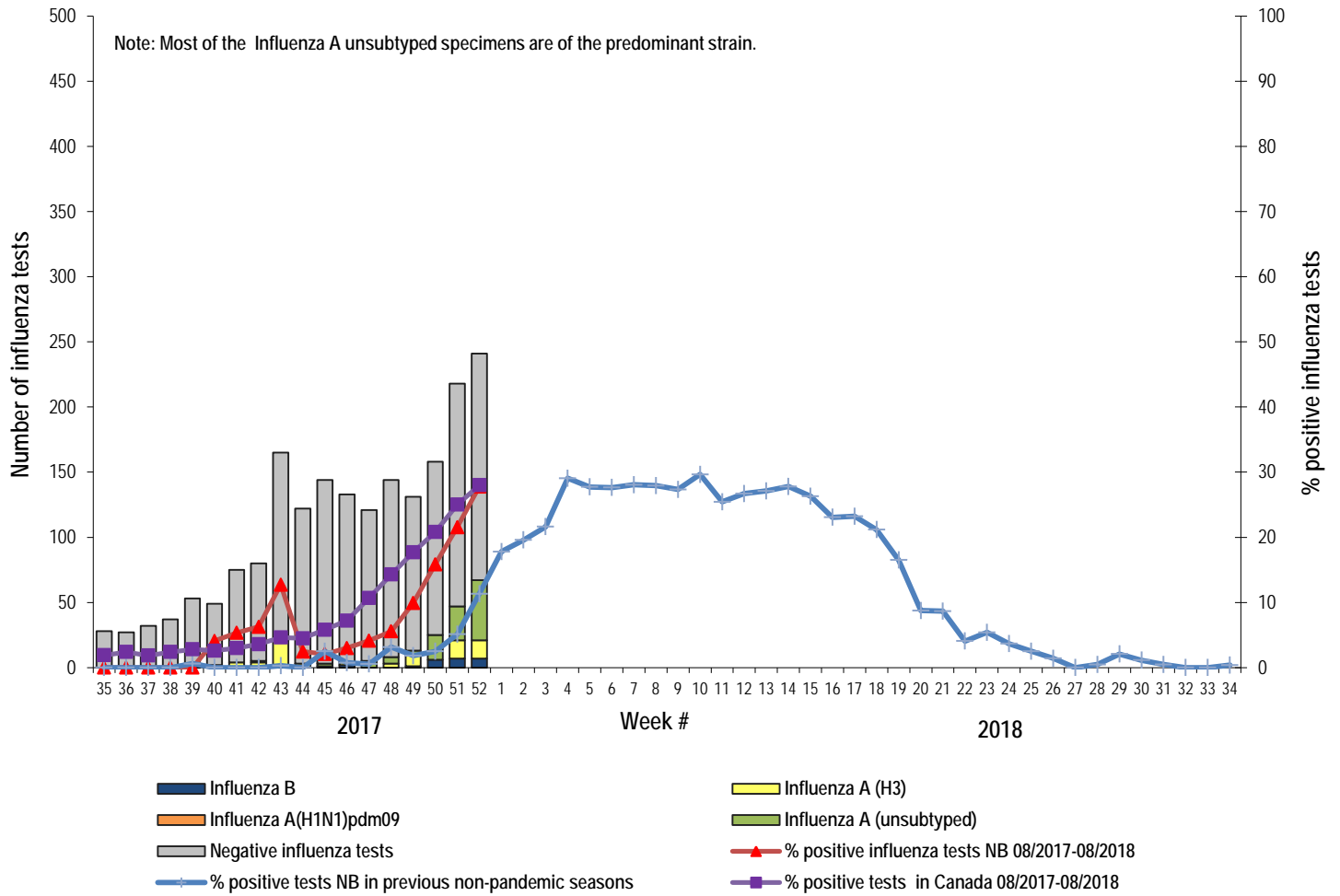
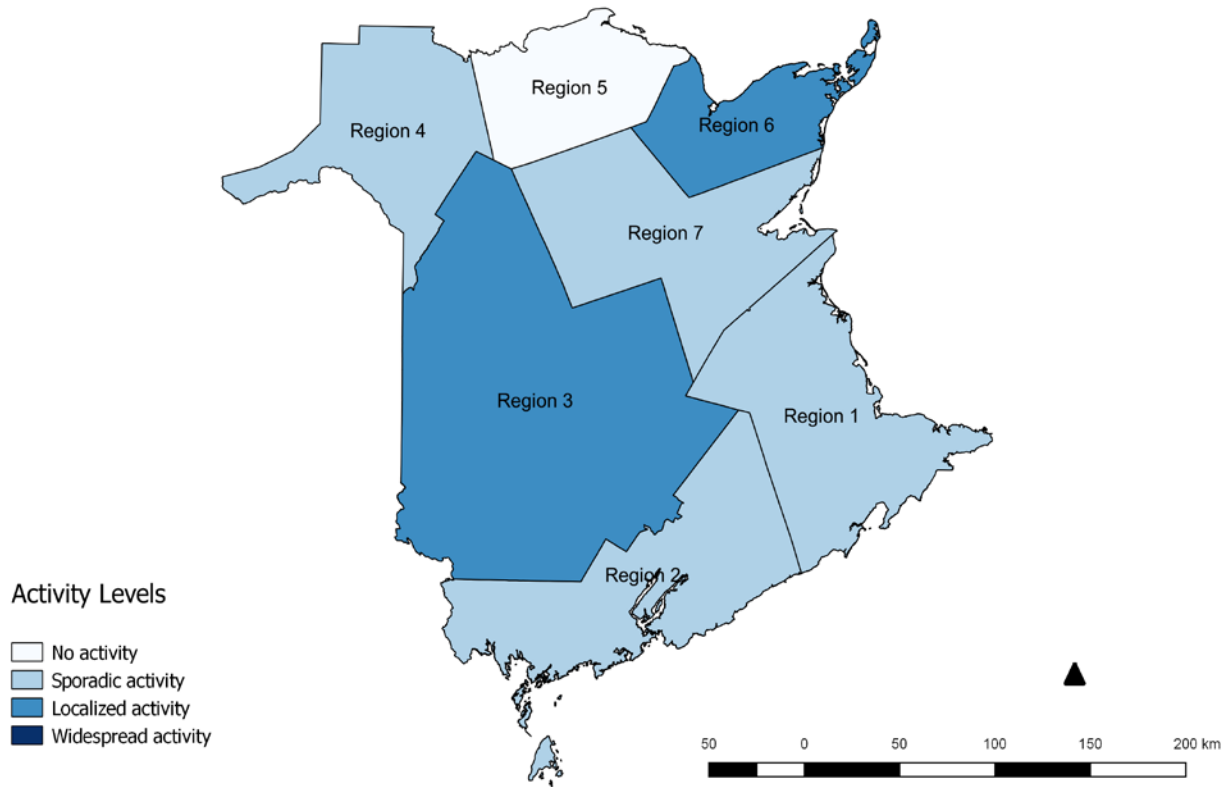


Figure 2: Influenza/ILI activity levels² by Health Zones, in New Brunswick, for reporting weeks, season 2017/2018.



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.

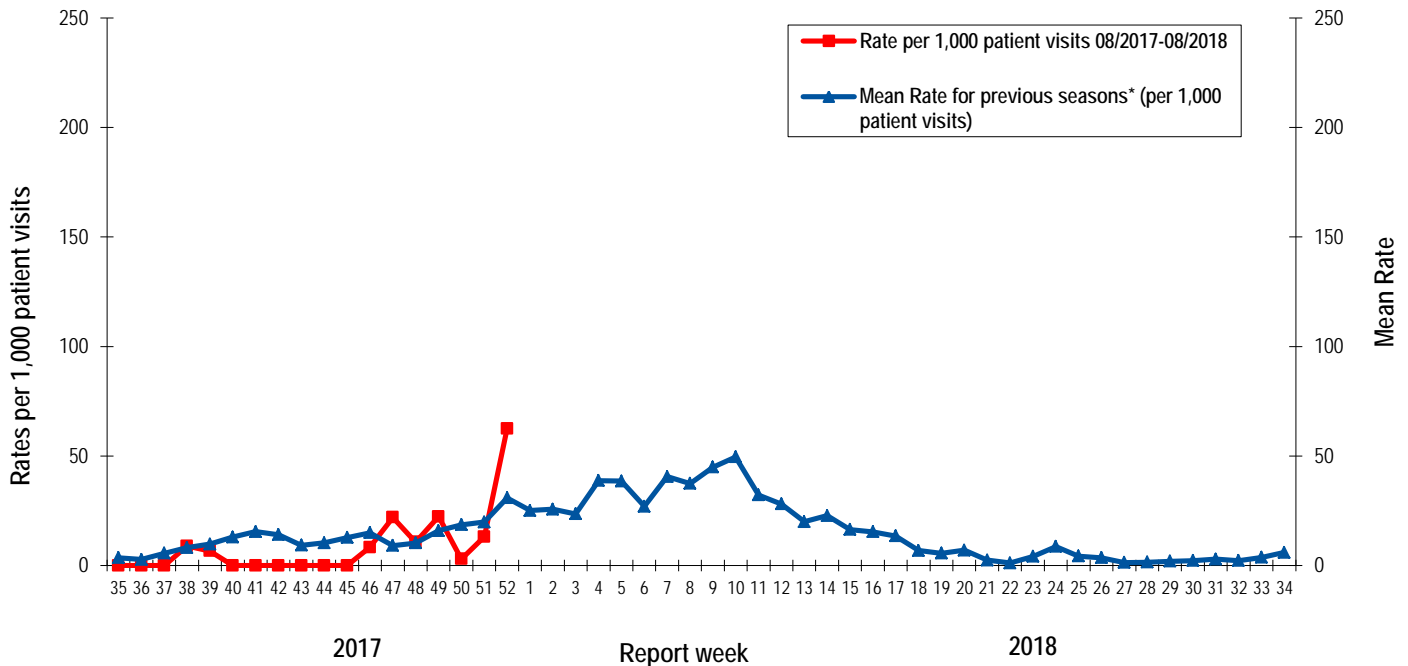
Table 1: Positive influenza test results by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to December 30 2017)

Zone	Reporting period: December/17/2017–December/30/2017					Cumulative: (2017/2018 season) Aug./27/2017 –Dec./30/2017					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	9	0	43	52	10	27	0	64	91	17	76	0	504	580	90
Zone 2	1	0	0	1	0	1	0	1	2	1	21	1	77	99	8
Zone 3	1	0	0	1	1	24	0	1	25	1	25	0	117	142	23
Zone 4	2	0	0	2	0	2	0	0	2	0	18	0	32	50	6
Zone 5	0	0	0	0	0	0	0	0	0	1	2	0	3	5	6
Zone 6	12	0	20	32	3	17	0	26	43	3	27	0	62	89	11
Zone 7	3	0	9	12	0	6	0	15	21	0	21	0	52	73	16
Total NB	28	0	72	100	14	77	0	107	184	23	190	1	847	1038	160

2) ILI Consultation Rates³

- During weeks 51 & 52, the ILI consultation rate was 13.1 and 62.5 consultations per 1,000 patients visits, respectively. The ILI rate for week 51 was lower than the expected levels for this time of year.
- During weeks 51 & 52, the sentinel response rate was 29% and 14%, respectively, 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.

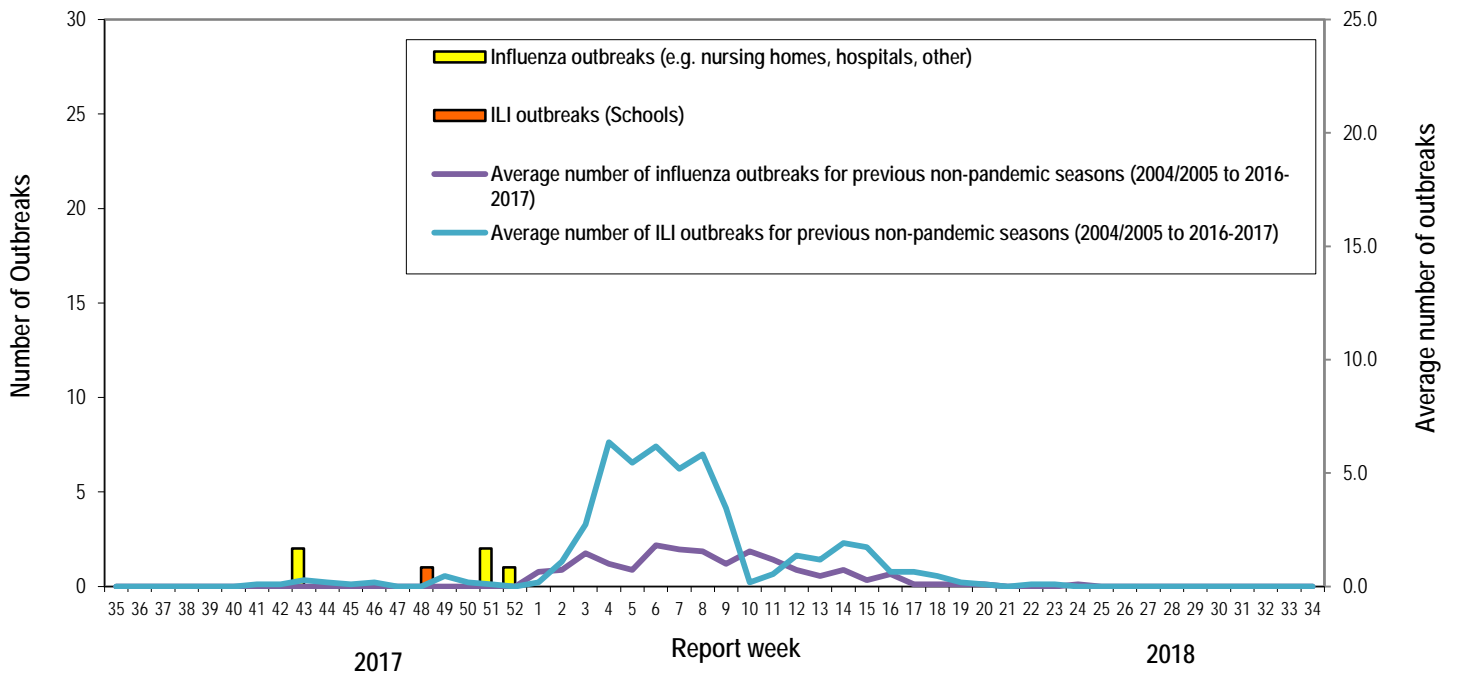
	Reporting period: December/17/2017–December/30/2017			Cumulative # of outbreaks season 2017-2018	Cumulative # of outbreaks season 2016-2017
	Lab-confirmed outbreaks in Nursing homes ⁴	ILI school outbreaks ⁵	Lab-confirmed outbreaks in Other settings ⁴		
Zone 1	0 out of 13	0 out of 74	0	0	3
Zone 2	0 out of 16	0 out of 81	0	0	5
Zone 3	1 out of 14	0 out of 95	1	5	14
Zone 4	0 out of 6	0 out of 22	0	0	0
Zone 5	0 out of 2	0 out of 18	0	0	1
Zone 6	1 out of 9	0 out of 35	0	1	0
Zone 7	0 out of 4	0 out of 27	0	0	2
Total NB	2 out of 64	0 out of 352	1	6	25

³ 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.

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.

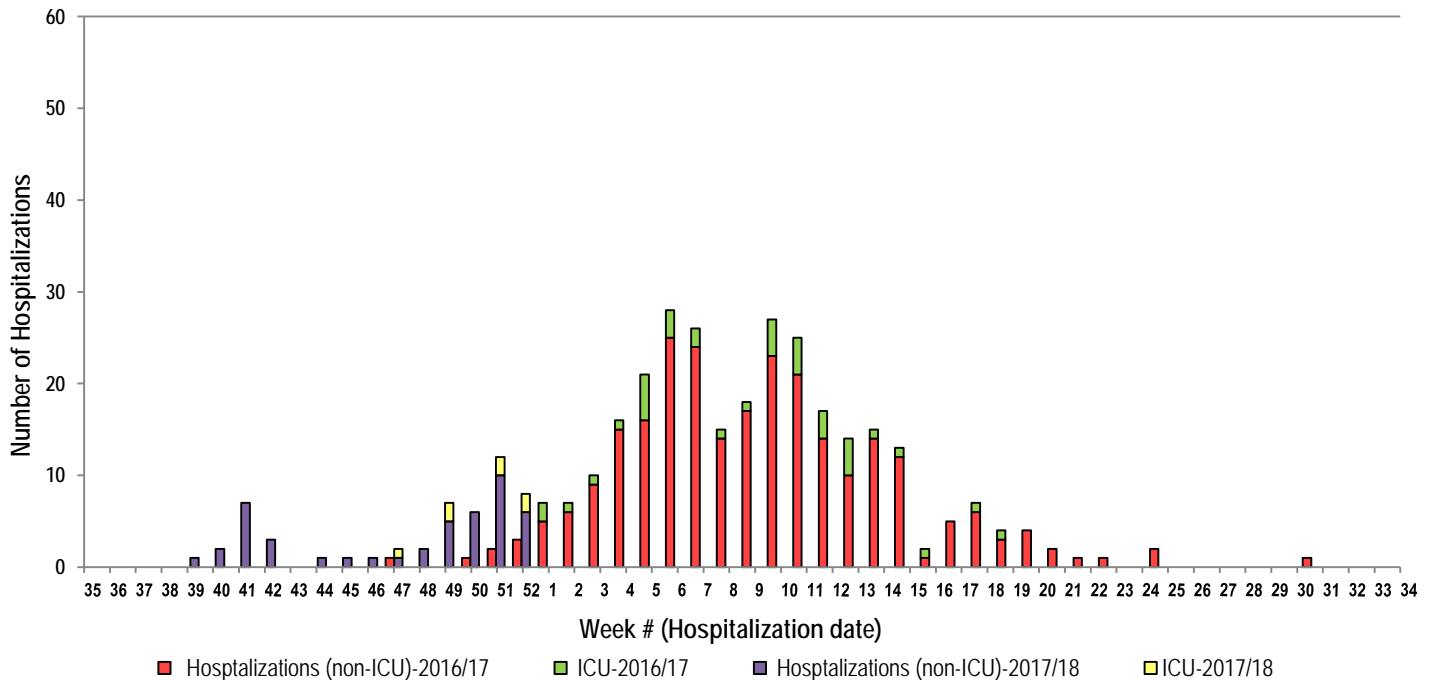
⁵ Schools reporting greater than 10% absenteeism which is likely due to ILI.

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 Hospitalization⁶ and Death⁷ Surveillance⁸

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

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

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.

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