

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: December 31 2017 to January 6 2018 (week 1)

Summary:

In New Brunswick, influenza activity continued to increase in week 1

New Brunswick:

- There have been 130 positive influenza detections in week 1. To date this season, 337 influenza detections have been reported, 100 were influenza A (H3), 2 were influenza A (H1N1)pdm09, 194 were influenza A (unsubtyped, most likely the H3 strain) and 41 were influenza B.
- There have been 25 new influenza associated hospitalizations during week 1. So far this season, 120 influenza associated hospitalizations have been reported with 5 deaths. Twenty-one of the 120 hospitalizations were related to nosocomial outbreaks where patients were admitted at least 48 hours before influenza symptoms.
- The ILI consultation rate was 26.8 consultations per 1,000 patients visits in week 1. The ILI rate was within the expected levels for this time of year.
- Five new influenza outbreaks were reported in week 1. So far this season, 11 outbreaks were reported in total: 2 in hospitals, 6 in nursing homes, 2 in other settings (special care home and adult residential facility) and 1 ILI outbreak in a school.

Canada:

- Overall, influenza activity in Canada is high and continues to increase. Most indicators of influenza activity increased in week 1, and are in the higher 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 continued to increase in week 1.
- One-hundred-thirty influenza detections were reported during week 1.
- Since the beginning of the season, 337 influenza detections were reported, 100 were influenza A (H3), 2 influenza A(H1N1)pdm09, 194 were influenza A (unsubtyped)² and 41 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.

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

Graph 1: Number and percent of positive influenza specimens in New Brunswick by week, up to January 6 2018
 (data source: G. Dumont Lab results)

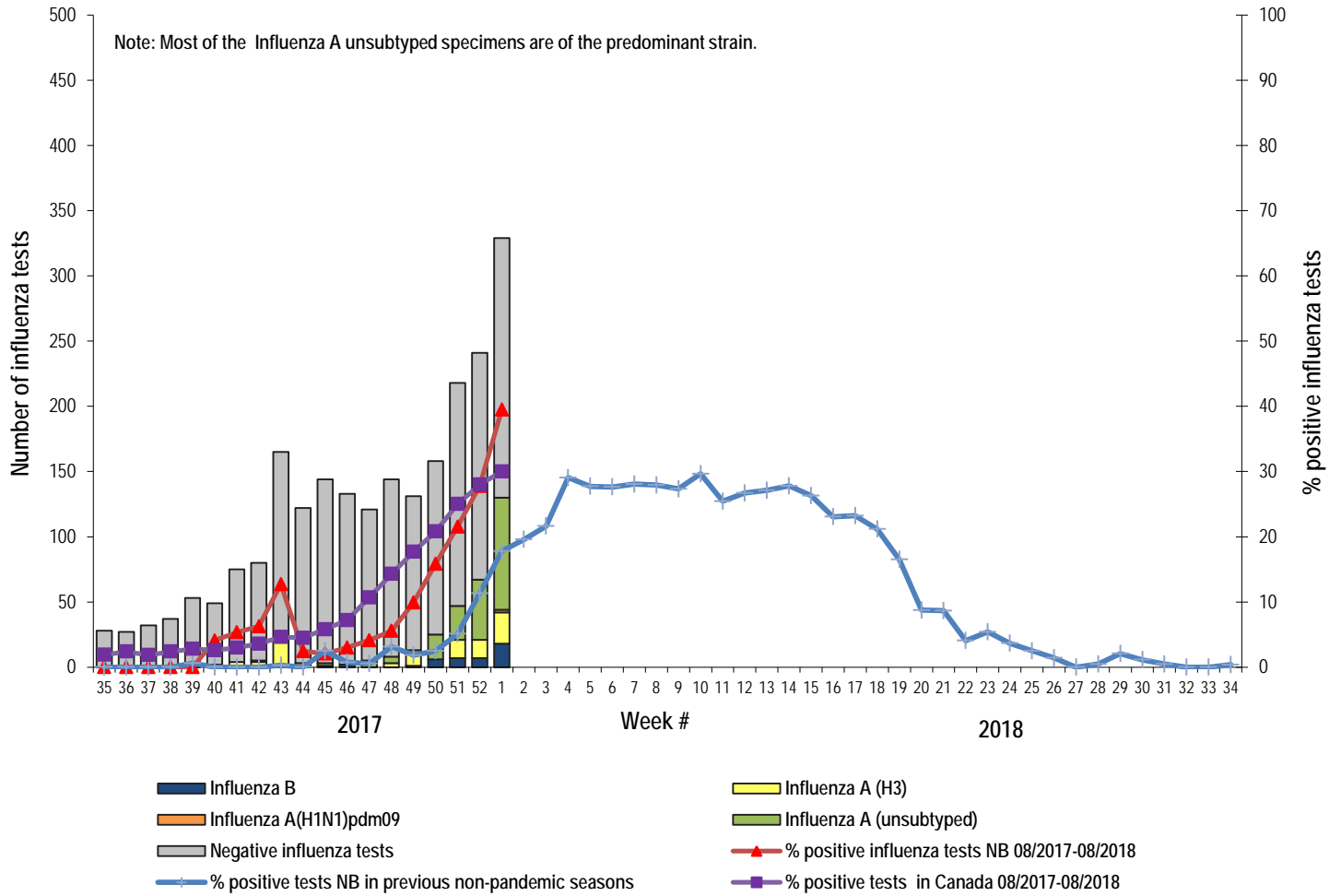
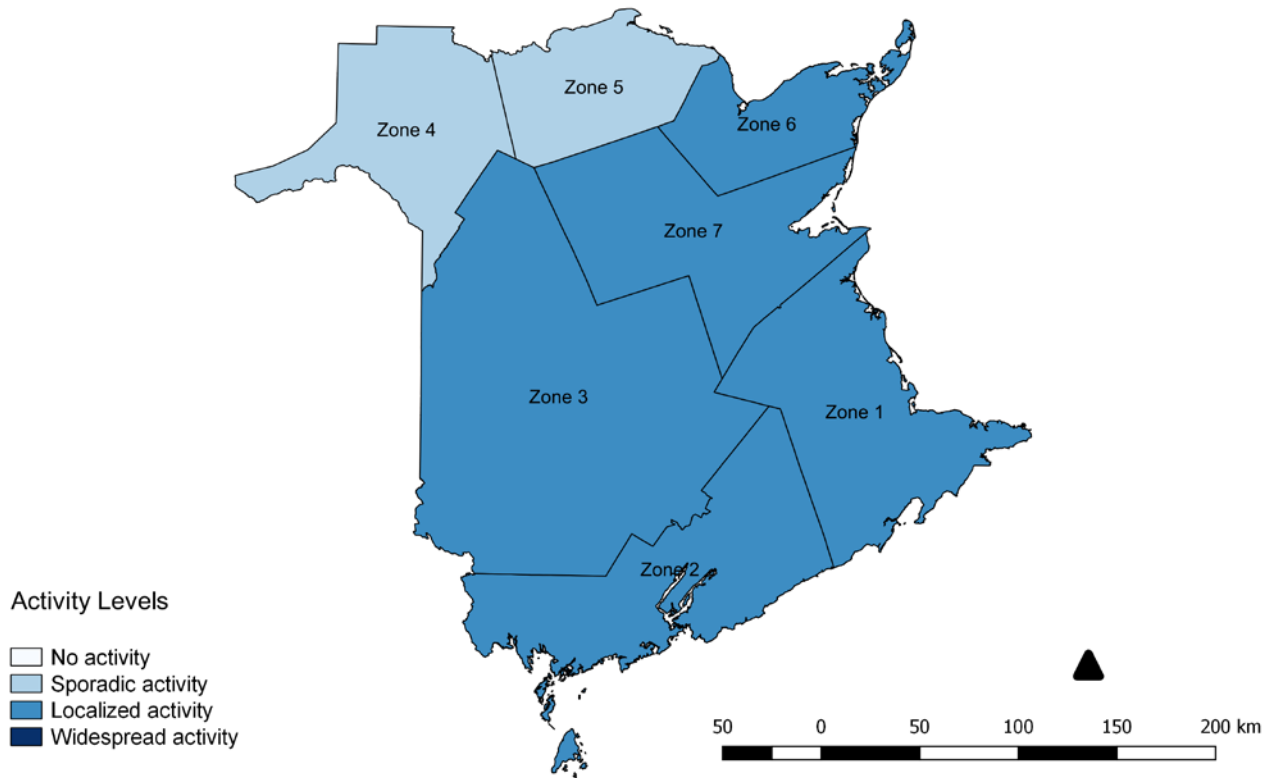


Figure 2: Influenza/ILI activity levels³ by Health Zones, in New Brunswick, for reporting week, season 2017/2018.



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.

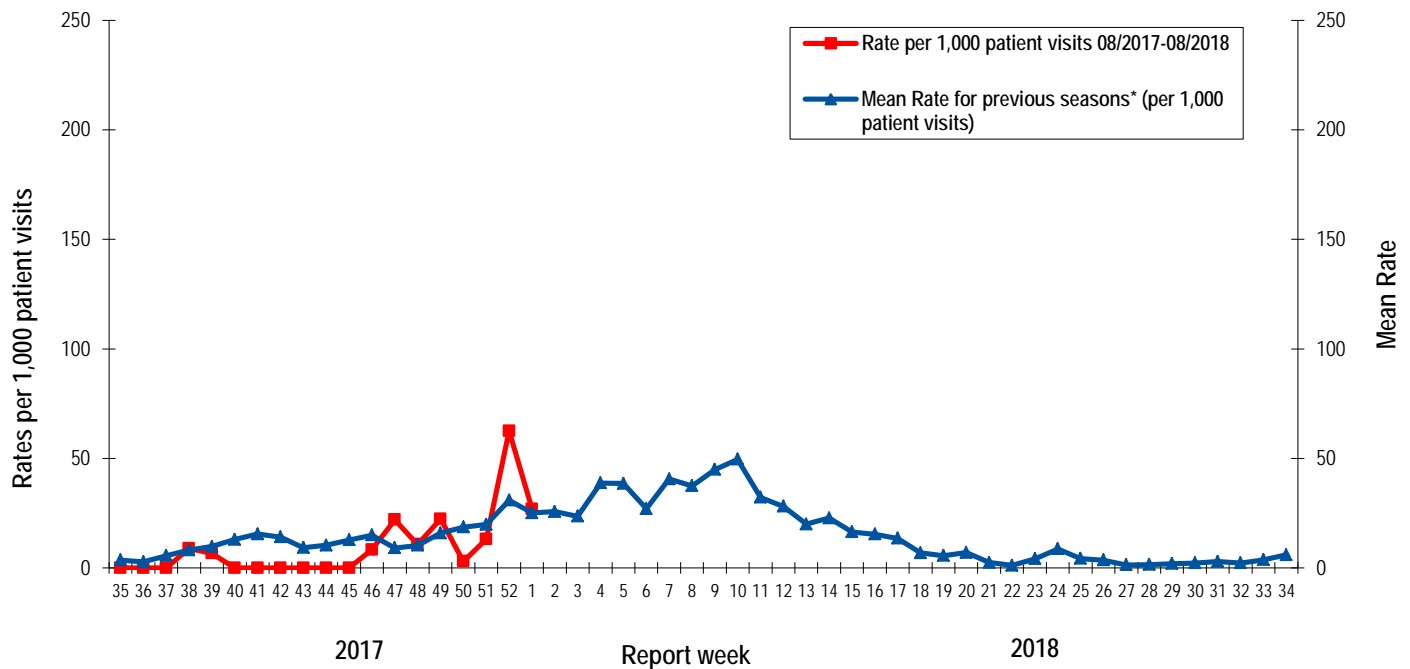
Table 1: Positive influenza test results by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to January 6 2018)

Zone	Reporting period: December/31/2017–January/06/2018					Cumulative: (2017/2018 season) Aug./27/2017 –Jan./06/2018					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	9	1	51	61	13	35	1	116	152	30	76	0	504	580	90
Zone 2	2	0	4	6	0	3	0	5	8	1	21	1	77	99	8
Zone 3	3	0	10	13	2	27	0	11	38	3	25	0	117	142	23
Zone 4	1	0	1	3	1	3	0	1	4	1	18	0	32	50	6
Zone 5	3	0	0	3	0	3	0	0	3	1	2	0	3	5	6
Zone 6	5	0	13	18	0	22	0	39	61	3	27	0	62	89	11
Zone 7	1	1	7	9	2	7	1	22	30	2	21	0	52	73	16
Total NB	24	2	86	112	18	100	2	194	296	41	190	1	847	1038	160

2) ILI Consultation Rates⁴

- During week 1, the ILI consultation rate was 26.8 consultations per 1,000 patients visits. The ILI rate was within the expected levels for this time of year.
- During week 1, the sentinel response rate was 36%, 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.

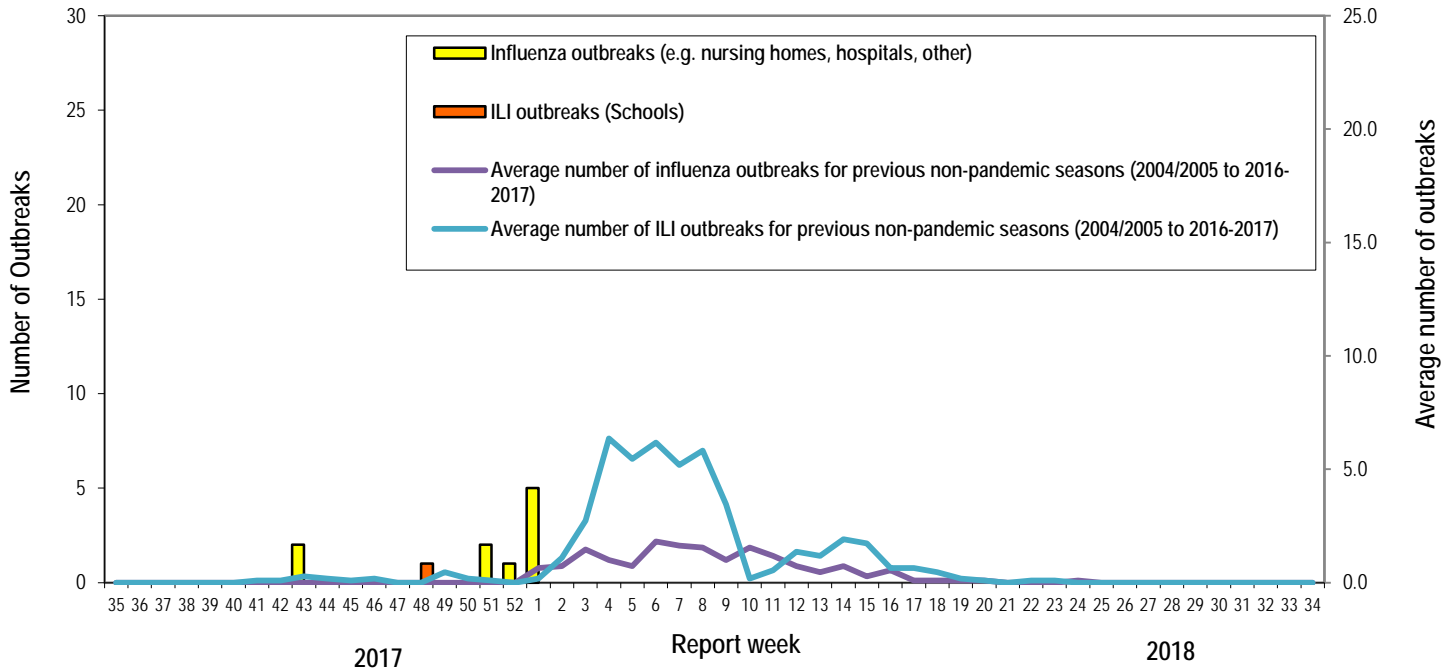
	Reporting period: December/31/2017–January/06/2018			Cumulative # of outbreaks season 2017-2018	Cumulative # of outbreaks season 2016-2017
	Lab-confirmed outbreaks in Nursing homes ⁵	ILI school outbreaks ⁶	Lab-confirmed outbreaks in Other settings ⁴		
Zone 1	1 out of 13	0 out of 74	0	1	3
Zone 2	1 out of 16	0 out of 81	0	1	5
Zone 3	0 out of 14	0 out of 95	0	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	1	3	0
Zone 7	1 out of 4	0 out of 27	0	1	2
Total NB	4 out of 64	0 out of 352	1	11	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.

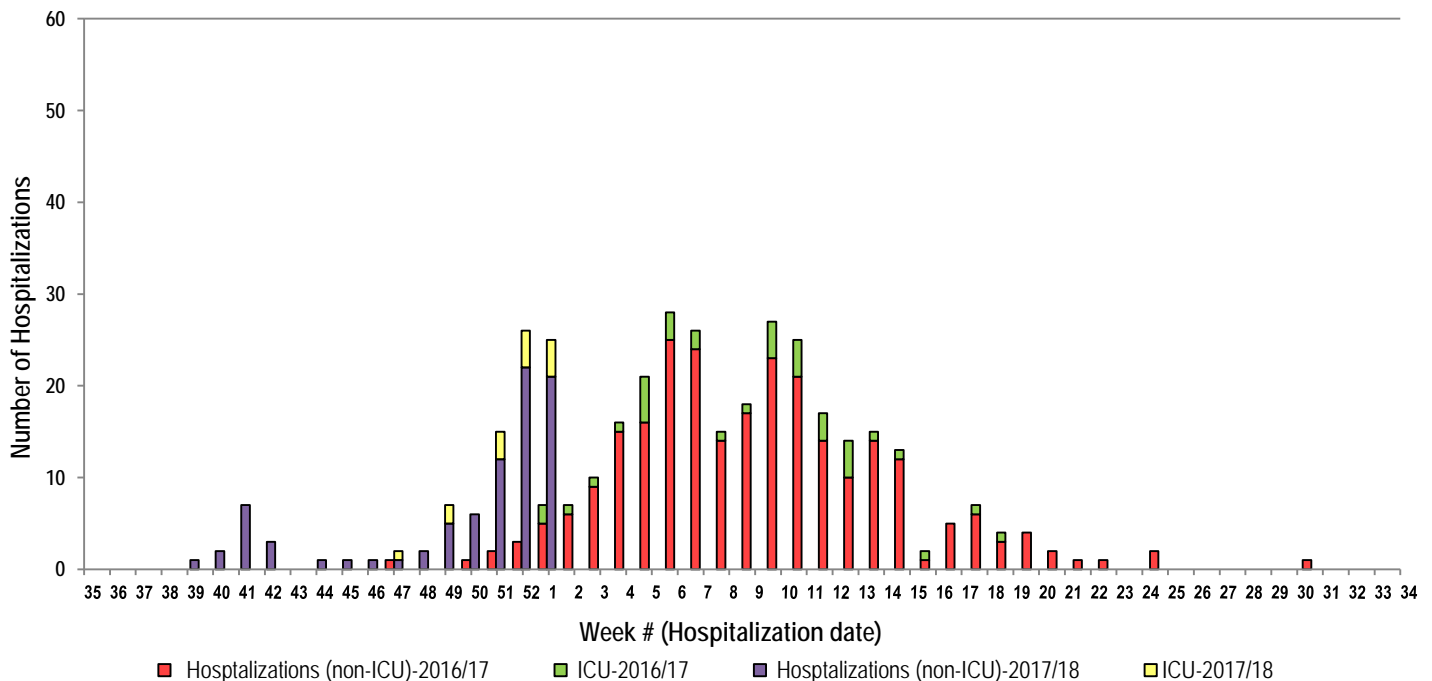
⁶ Schools reporting greater than 10% absenteeism which is likely due to ILI.

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

** Five 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