

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: February 18 to February 24 2018 (week 8)

Summary:

In New Brunswick, most influenza indicators remained elevated in week 8

New Brunswick:

- There have been 189 positive influenza cases in week 8. To date this season, 1345 cases have been reported, 206 had influenza A (H3), 7 had influenza A (H1N1)pdm09, 570 had influenza A (unsubtyped, most likely the H3 strain), 553 had influenza B and 9 had both influenza A and B simultaneously.
- Both Influenza A(H3N2) and Influenza B are co-circulating this season.
- There have been 14 new influenza associated hospitalizations during week 8. So far this season, 324 influenza associated hospitalizations have been reported with 17 deaths. Twenty-one of the 324 hospitalizations were related to nosocomial outbreaks where patients were admitted at least 48 hours before influenza symptoms.
- The ILI consultation rate was 64.8 consultations per 1,000 patients visits in week 8. The ILI rate was higher than the expected levels for this time of year.
- Seven new ILI/influenza outbreaks were reported in week 8. So far this season, 25 outbreaks were reported in total: 4 in hospitals, 11 in nursing homes, 3 in other settings (special care home and adult residential facility) and 7 ILI outbreaks in schools.

Canada:

- Overall, influenza activity in Canada remains at peak levels. Influenza activity is slowly decreasing in many parts of the country.
- The detections of influenza B were greater than those of influenza A.
- To date this season, the majority of lab confirmations, hospitalizations and deaths have been among adults aged 65 years and older.
- The World Health Organization (WHO) has released [the recommended composition](#) of the influenza vaccine for use in the 2018-2019 northern hemisphere influenza season. The recommended strain was changed for the A(H3N2) component and one of the influenza B components.

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 B-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/>
- Avian Influenza:
 - WHO: www.who.int/csr/disease/avian_influenza/en/index.html

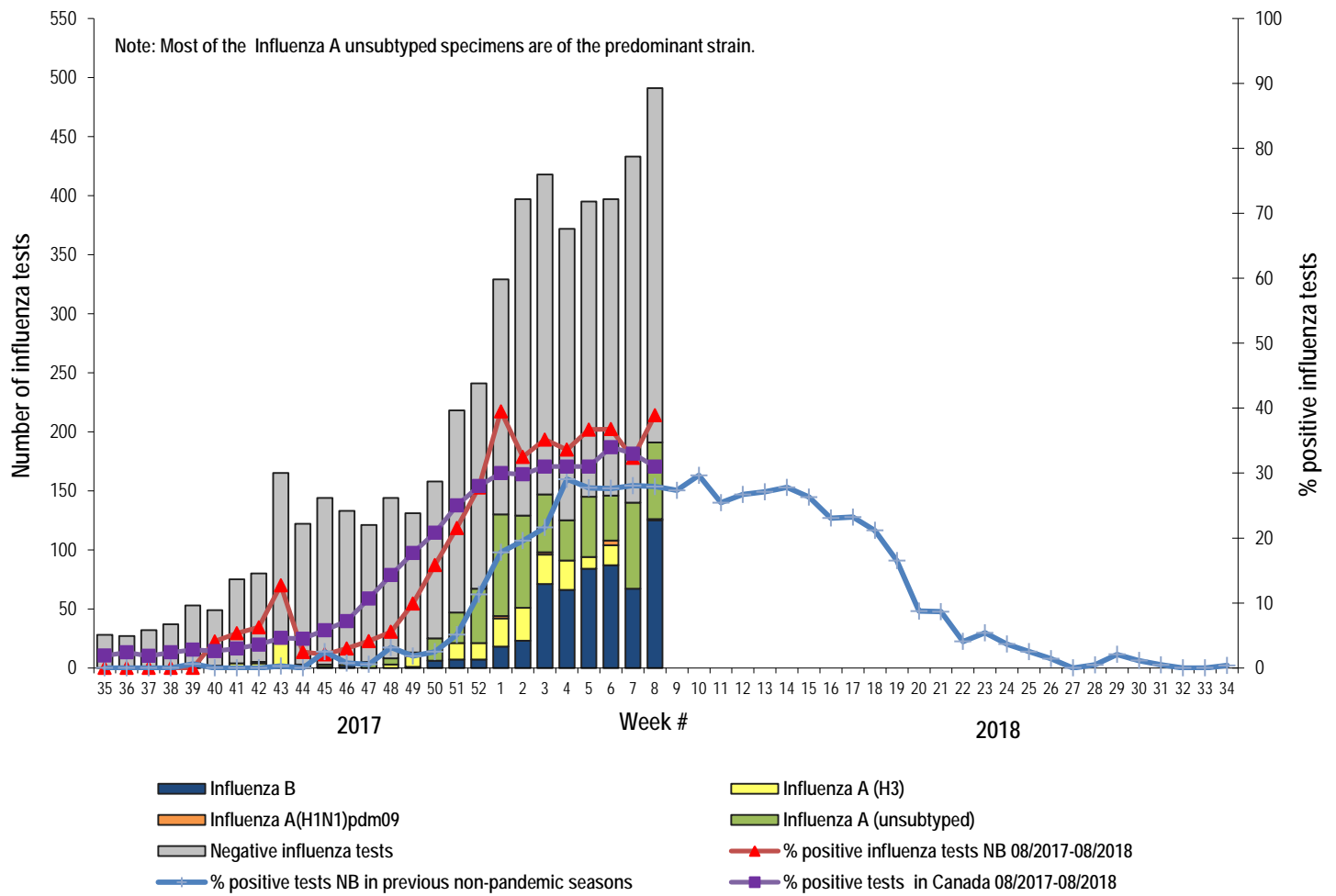
1) Influenza Laboratory Data¹

- Most influenza indicators remained elevated in week 8.
- One-hundred-eighty-nine influenza cases were reported during week 8.

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, 1345 influenza cases were reported, 206 with influenza A (H3), 7 with influenza A(H1N1)pdm09, 570 with influenza A (unsubtyped)², 553 with influenza B and 9 with co-infection of influenza A & B simultaneously.

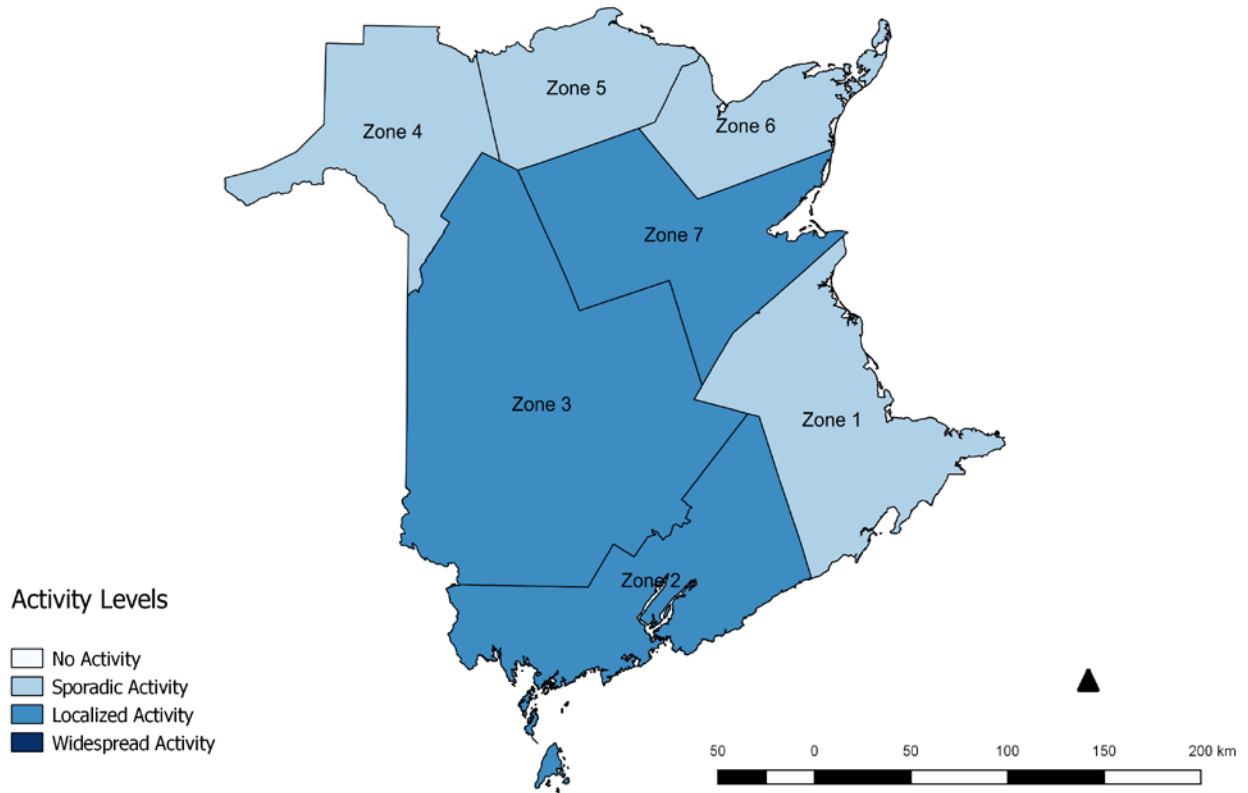
Graph 1: Number and percent of positive influenza specimens³ in New Brunswick by week, up to February 24 2018 (data source: G. Dumont Lab results)



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

³ 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 levels⁴ by Health Zones, in New Brunswick, for reporting week, season 2017/2018.



⁴ 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.

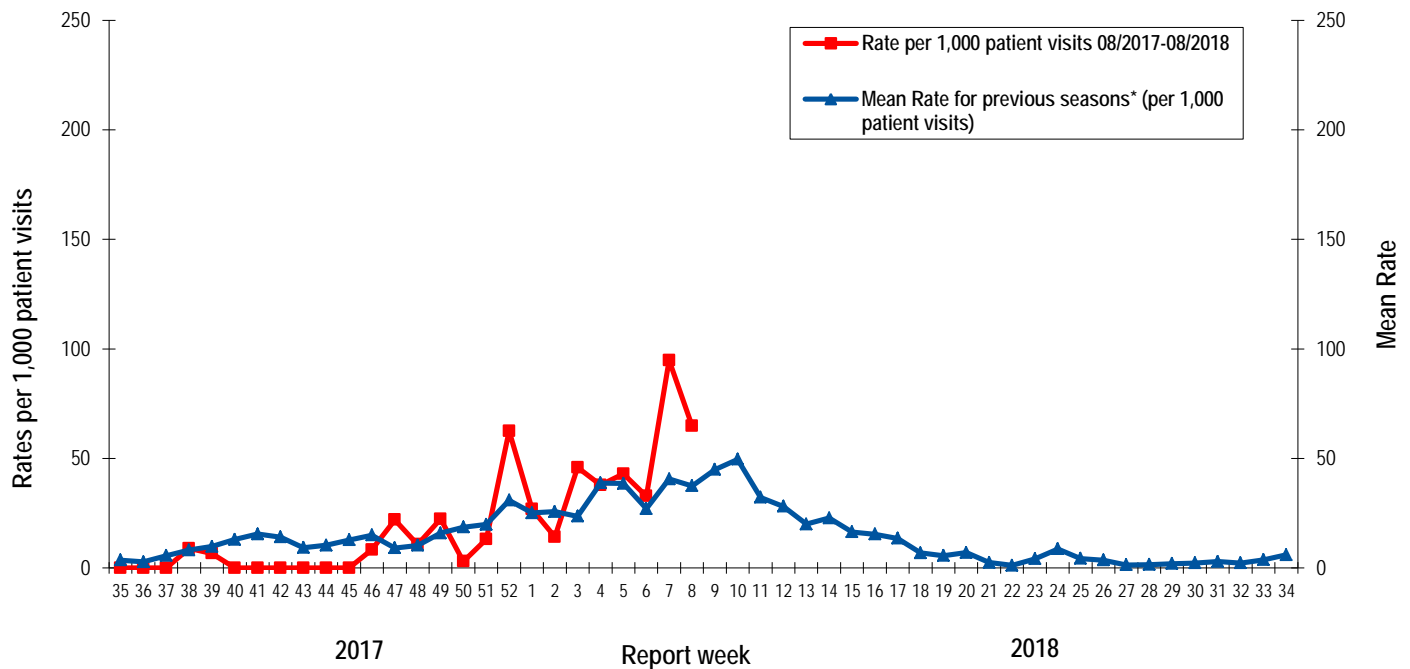
Table 1: Positive influenza cases by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to February 24 2018)

| Zone | Reporting period: | | | | | | Cumulative: (2017/2018 season) | | | | | | Cumulative: (2016/2017 season) | | | | | |
|-----------------|-----------------------------------|-----------------|-----------------------|------------|------------|----------|--------------------------------|-----------------|-----------------------|------------|------------|----------|-----------------------------------|----------|-----------------|-----------------------|------------|----------|
| | February/18/2018–February/24/2018 | | | | | | Aug./27/2017 –Feb./24/2018 | | | | | | Aug./28/2016 –Aug./26/2017 | | | | | |
| | A | | | | B | A & B | A | | | | B | A & B | A | | | | B | A & B |
| | A(H3) | (H1N1) pdm09 | Unsubtype d/ Other | A Total | Total | Total | A(H3) | (H1N1) pdm09 | Unsubtype d/ Other | A Total | Total | Total | Total | (H3) | (H1N1) pdm09 | Unsubtype d/ Other | A Total | Total |
| Zone 1 | 0 | 0 | 14 | 14 | 73 | 1 | 74 | 2 | 302 | 378 | 361 | 6 | 75 | 0 | 505 | 579 | 89 | 1 |
| Zone 2 | 0 | 0 | 17 | 17 | 20 | 0 | 18 | 1 | 44 | 63 | 47 | 0 | 21 | 1 | 77 | 99 | 8 | 0 |
| Zone 3 | 0 | 0 | 12 | 12 | 6 | 0 | 42 | 0 | 83 | 125 | 30 | 3 | 25 | 0 | 117 | 142 | 23 | 0 |
| Zone 4 | 1 | 0 | 10 | 11 | 14 | 1 | 15 | 0 | 29 | 44 | 65 | 0 | 18 | 0 | 31 | 50 | 5 | 1 |
| Zone 5 | 0 | 0 | 2 | 2 | 2 | 0 | 8 | 0 | 6 | 14 | 5 | 0 | 2 | 0 | 3 | 5 | 6 | 0 |
| Zone 6 | 0 | 0 | 4 | 4 | 3 | 0 | 36 | 2 | 63 | 101 | 23 | 0 | 27 | 0 | 62 | 89 | 11 | 0 |
| Zone 7 | 0 | 0 | 4 | 4 | 5 | 0 | 13 | 2 | 43 | 58 | 22 | 0 | 21 | 0 | 52 | 73 | 16 | 0 |
| Total NB | 1 | 0 | 63 | 64 | 123 | 2 | 206 | 7 | 570 | 783 | 553 | 9 | 189 | 1 | 845 | 1037 | 158 | 2 |

2) ILI Consultation Rates⁵

- During week 8, the ILI consultation rate was 64.8 consultations per 1,000 patients visits. The ILI rate was higher than the expected levels for this time of year.
- During week 8, 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 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.

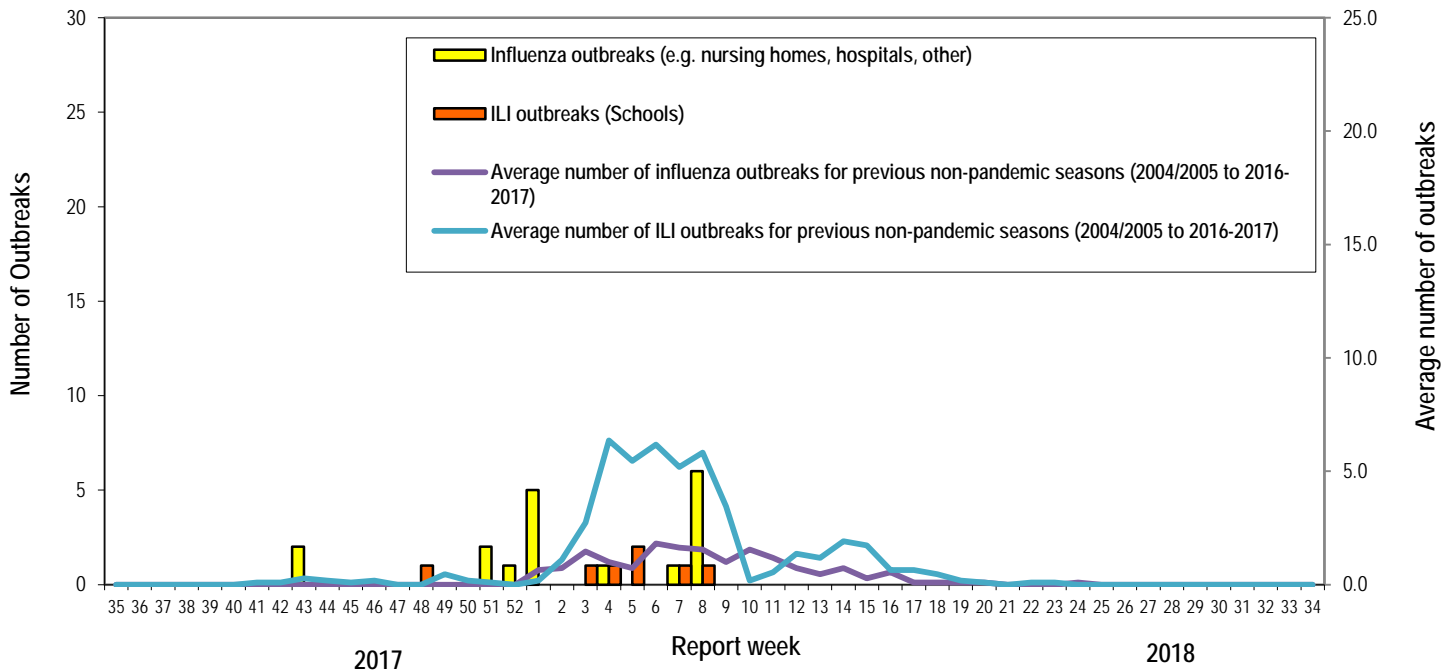
| | Reporting period: February/18/2018–February/24/2018 | | | Cumulative # of outbreaks season 2017-2018 | Cumulative # of outbreaks season 2016-2017 |
|-----------------|--|-----------------------------------|--|--|--|
| | Lab-confirmed outbreaks in Nursing homes ⁶ | ILI school outbreaks ⁷ | Lab-confirmed outbreaks in Other settings ⁴ | | |
| Zone 1 | 0 out of 13 | 0 out of 74 | 0 | 2 | 3 |
| Zone 2 | 1 out of 16 | 0 out of 81 | 2 | 6 | 5 |
| Zone 3 | 2 out of 14 | 0 out of 95 | 1 | 11 | 14 |
| Zone 4 | 0 out of 6 | 0 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 | 1 out of 27 | 0 | 2 | 2 |
| Total NB | 3 out of 64 | 1 out of 352 | 3 | 25 | 25 |

⁵ 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.

⁶ 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.

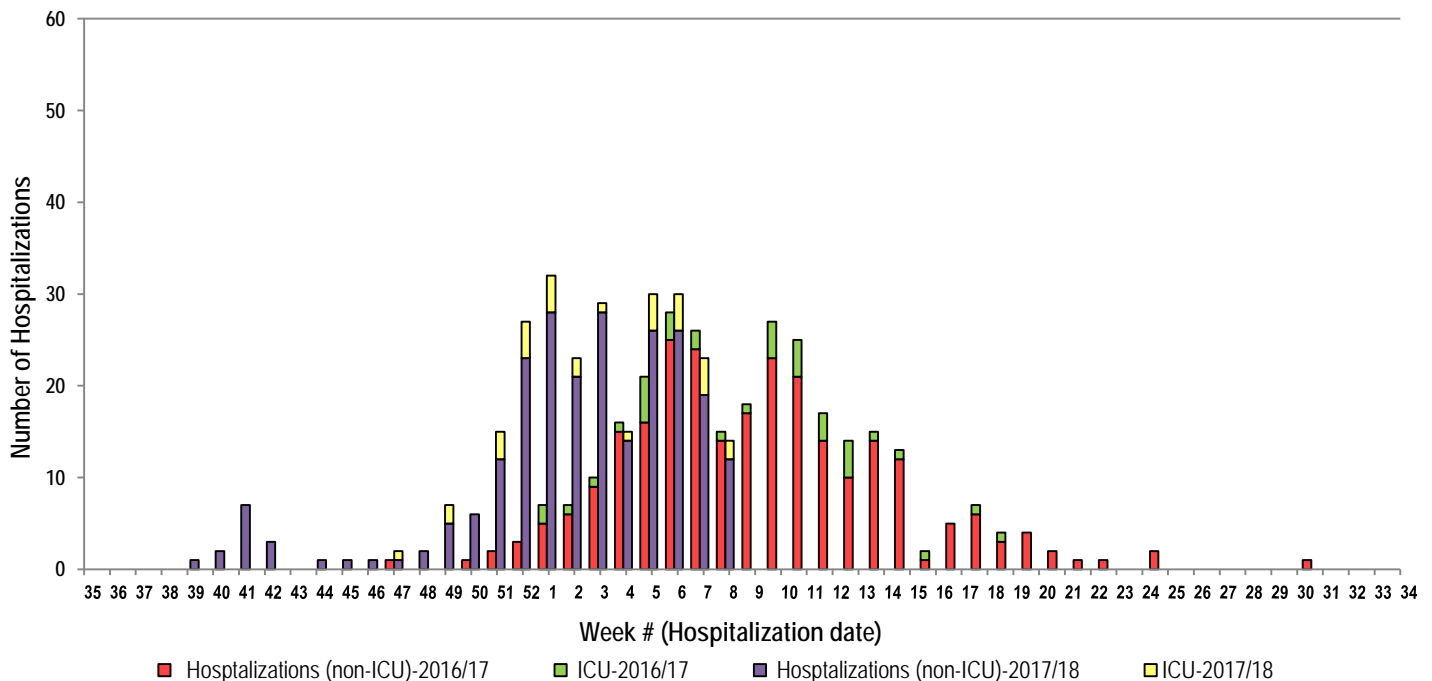
⁷ Schools reporting greater than 10% absenteeism which is likely due to ILI.

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 Hospitalization⁸ and Death⁹ Surveillance¹⁰

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

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

⁸ Hospitalizations (including ICU admissions) are influenza associated; they may or may not be due to influenza.

⁹ Deaths are influenza associated; influenza may not be the direct cause of death.

¹⁰ 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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