

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: March 25 to March 31 2018 (week 13)

Summary:

In New Brunswick, most influenza indicators remained elevated in week 13

New Brunswick:

- There have been 104 positive influenza cases in week 13. To date this season, 2071 cases have been reported, 233 had influenza A (H3), 12 had influenza A (H1N1)pdm09, 842 had influenza A (unsubtyped, most likely the H3 strain), 974 had influenza B and 10 had both influenza A and B simultaneously.
- Both Influenza A(H3N2) and Influenza B are co-circulating this season.
- There have been 7 new influenza associated hospitalizations during week 13. So far this season, 507 influenza associated hospitalizations have been reported with 27 deaths.
- The ILI consultation rate was 43.5 consultations per 1,000 patients visits in week 13. The ILI rate was higher than the expected levels for this time of year.
- Two new influenza outbreaks were reported in week 13. So far this season, 34 outbreaks were reported in total: 4 in hospitals, 18 in nursing homes, 4 in other settings (special care homes and adult residential facilities) and 8 ILI outbreaks in schools.

Canada:

- The influenza season peaked in mid-February, but influenza activity remains elevated in many parts of the country.
- Laboratory detections of influenza are steadily decreasing.
- Weekly pediatric hospitalizations have been on a general decline since mid-February.
- To date this season, the majority of lab confirmations, hospitalizations and deaths with influenza have been among adults aged 65 years and older.

International:

Seasonal influenza:

- Influenza activity appeared to decrease in most of the countries in the temperate zone of the northern hemisphere, with exception of Eastern Europe where activity continued to increase. In the temperate zone of the southern hemisphere, influenza activity remained at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections.

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

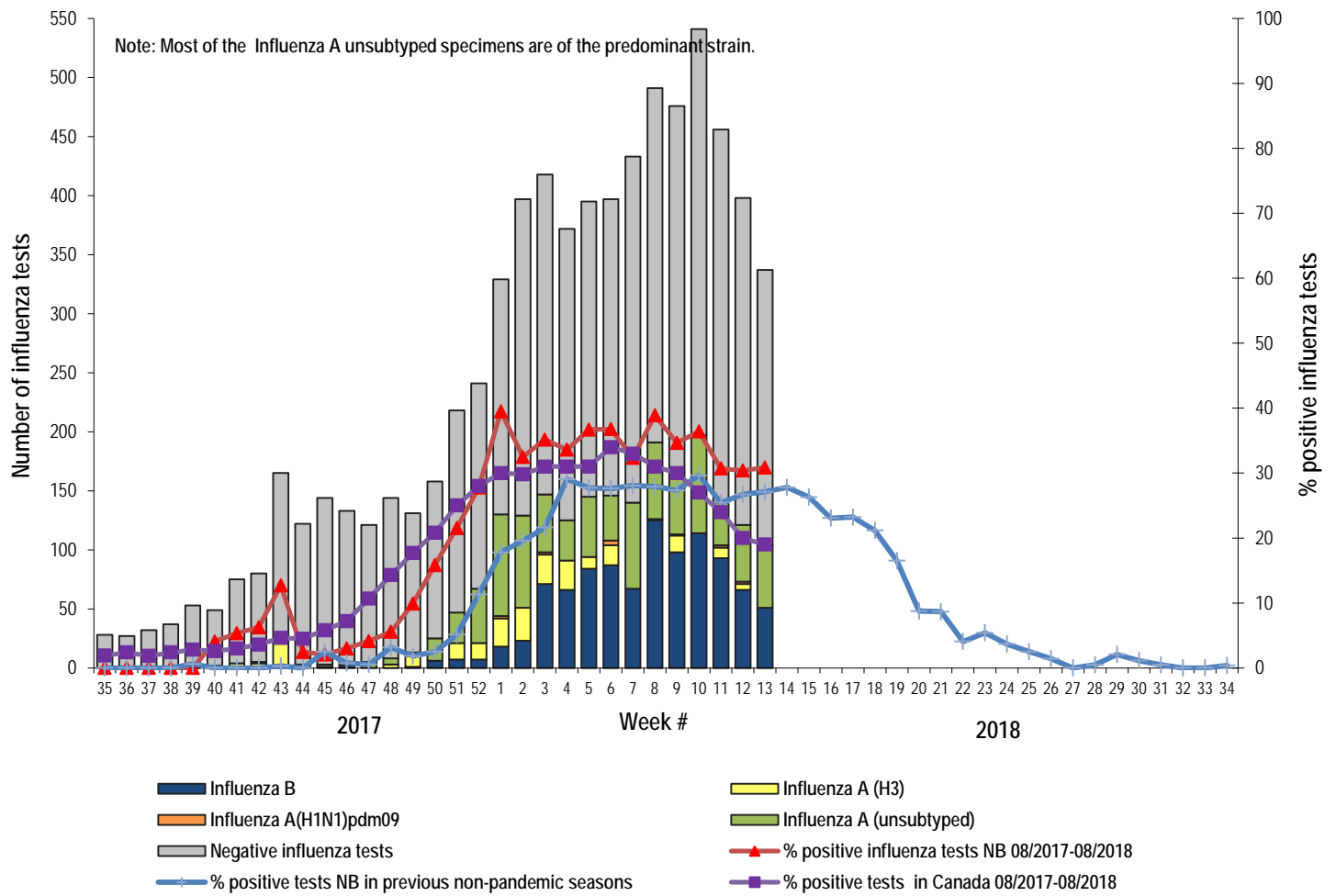
1) Influenza Laboratory Data¹

- Most influenza indicators remained elevated in week 13.
- One-hundred-four influenza cases were reported during week 13.

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, 2071 influenza cases were reported, 233 with influenza A (H3), 12 with influenza A(H1N1)pdm09, 842 with influenza A (unsubtyped)², 974 with influenza B and 10 with co-infection of influenza A & B simultaneously.

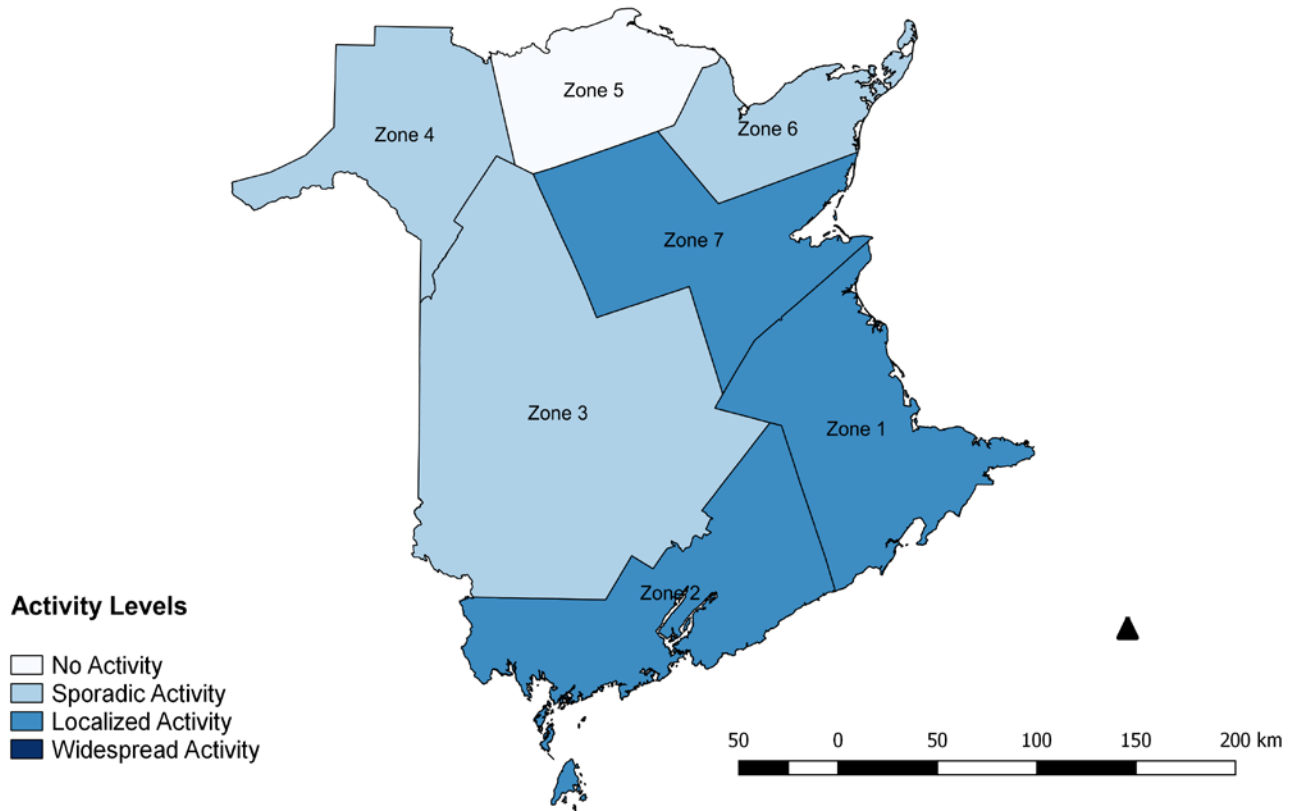
Graph 1: Number and percent of positive influenza specimens³ in New Brunswick by week, up to March 31 2018 (data source: G. Dumont Lab results)



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.

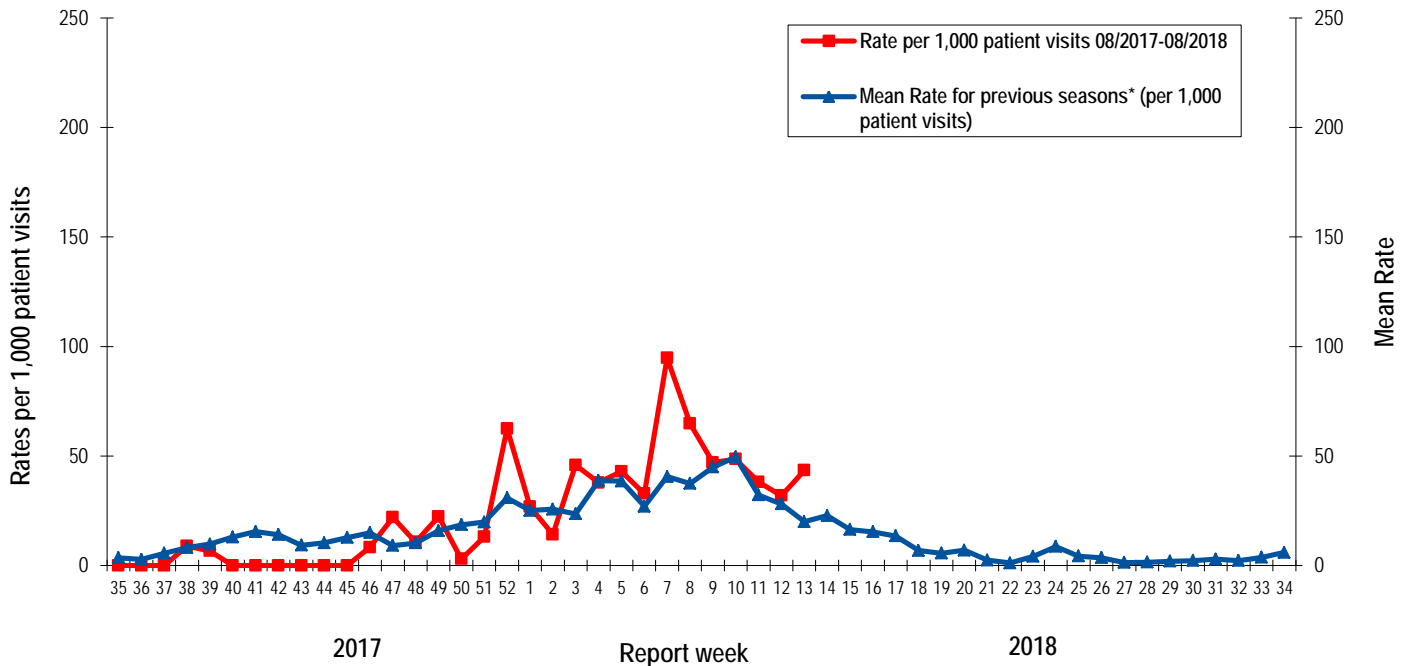
Table 1: Positive influenza cases by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
 (data source: G. Dumont lab results up to March 31 2018)

| Zone | Reporting period: March/25/2018–March/31/2018 | | | | | Cumulative: (2017/2018 season) Aug./27/2017 –Mar./31/2018 | | | | | Cumulative: (2016/20167 season) Aug./28/2016 –Aug./26/2017 | | | | | | | |
|---------------------|--|-----------------|--------------------------|------------|-----------|--|------------|-----------------|--------------------------|-------------|--|---------------------------|-------|------|-----------------|--------------------------|------------|------------------------|
| | 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 | Total | (H3) | (H1N1) pdm09 | Unsubty ped/ Other | A Total | Total |
| Zone 1 | 0 | 0 | 22 | 22 | 30 | 0 | 83 | 3 | 387 | 473 | 625 | 6 | 75 | 0 | 505 | 579 | 89 | 1 |
| Zone 2 | 0 | 0 | 7 | 7 | 5 | 0 | 24 | 1 | 98 | 123 | 110 | 1 | 21 | 1 | 77 | 99 | 8 | 0 |
| Zone 3 | 0 | 0 | 11 | 11 | 9 | 0 | 48 | 1 | 162 | 211 | 75 | 3 | 25 | 0 | 117 | 142 | 23 | 0 |
| Zone 4 | 0 | 0 | 0 | 0 | 3 | 0 | 19 | 2 | 53 | 74 | 84 | 0 | 18 | 0 | 31 | 50 | 5 | 1 |
| Zone 5 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 7 | 15 | 6 | 0 | 2 | 0 | 3 | 5 | 6 | 0 |
| Zone 6 | 0 | 0 | 2 | 2 | 3 | 0 | 37 | 3 | 73 | 113 | 41 | 0 | 27 | 0 | 62 | 89 | 11 | 0 |
| Zone 7 | 0 | 0 | 11 | 11 | 1 | 0 | 14 | 2 | 62 | 78 | 33 | 0 | 21 | 0 | 52 | 73 | 16 | 0 |
| Total NB | 0 | 0 | 53 | 53 | 51 | 0 | 233 | 12 | 842 | 1087 | 974 | 10 | 189 | 1 | 845 | 1037 | 158 | 2 |

2) ILI Consultation Rates⁵

- During week 13, the ILI consultation rate was 43.5 consultations per 1,000 patients visits. The ILI rate was higher than the expected levels for this time of year.
- During week 13, the sentinel response rate was 26%, 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.

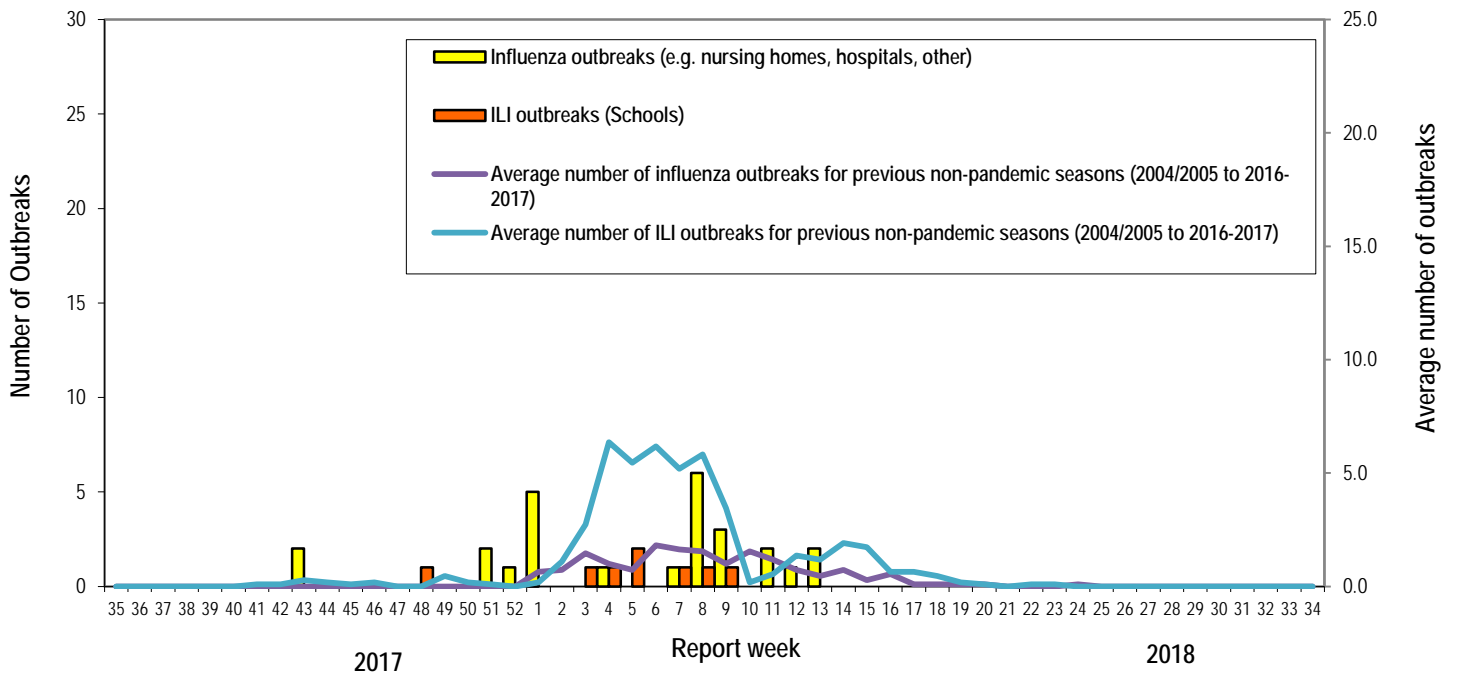
| | Reporting period: March/25/2018–March/31/2018 | | | Cumulative # of outbreaks season 2017-2018 | Cumulative # of outbreaks season 2016-2017 |
|----------|---|--------------------------------------|--|---|---|
| | Lab-confirmed outbreaks in Nursing homes ⁶ | ILI school outbreaks ⁷ | Lab-confirmed outbreaks in Other settings ⁴ | | |
| Zone 1 | 0 out of 13 | 0 out of 74 | 0 | 5 | 3 |
| Zone 2 | 1 out of 16 | 0 out of 81 | 0 | 9 | 5 |
| Zone 3 | 0 out of 14 | 0 out of 95 | 0 | 13 | 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 | 1 out of 4 | 0 out of 27 | 0 | 3 | 2 |
| Total NB | 2 out of 64 | 0 out of 352 | 0 | 34 | 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.

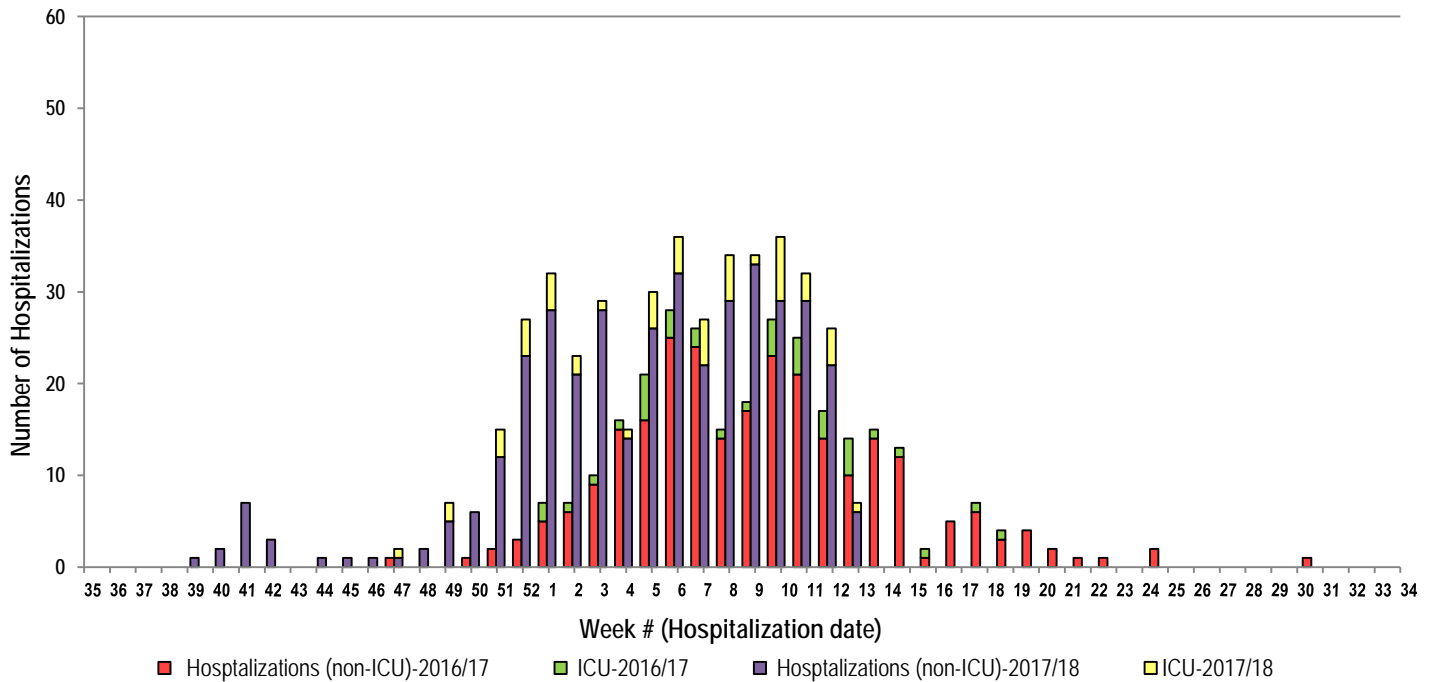
⁷ Schools reporting greater than 10% absenteeism which is likely due to ILI.

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

** Twenty-seven 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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