

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: March 22 to March 28 2015 (week 12)

Summary:

In New Brunswick, a steady increase has been observed in influenza B detections since week 6

New Brunswick:

- There have been 76 positive influenza detections during week 12, 5 A (H3) viruses, 15 A (unsubtyped) and 56 B.
- The ILI consultation rate was 48.8 consultations per 1,000 patients visits and was above the expected level for this time of year.
- No new influenza outbreaks were reported, although 4 ongoing outbreaks were reported in nursing homes, as well as 1 ILI school outbreak.

Canada:

- The majority of influenza activity continues to occur in the Central and Atlantic provinces.
- Influenza B detections continue to increase steadily across Canada while detections of influenza A continues to steadily decrease. This increase in influenza B is expected as influenza B often shows up later in the influenza season.
- Influenza B is having a greater impact on adults less than 65 years of age, compared to influenza A (H3N2), which circulated earlier in the season.
- 989 laboratory detections of influenza were reported and the percentage of laboratory tests positive for influenza was 16.2% for week 12.
- The national ILI consultation rate was 20.5 consultations per 1,000 patients' visits, which is below expected levels for week 12.
- 33 new influenza outbreaks were reported; 31 were in long-term care facilities and 2 in other settings. There has been a higher number of reported influenza outbreaks to date this season compared to the same period in previous seasons.
- Antigenic characterization: NML has antigenically characterized 176 H3N2 viruses, 170 of which showed suboptimal match to the vaccine strain, 9 A (H1N1)pdm09 that were a match to the vaccine strain and 305 B viruses, 288 of which were a match to the vaccine strain.

International:

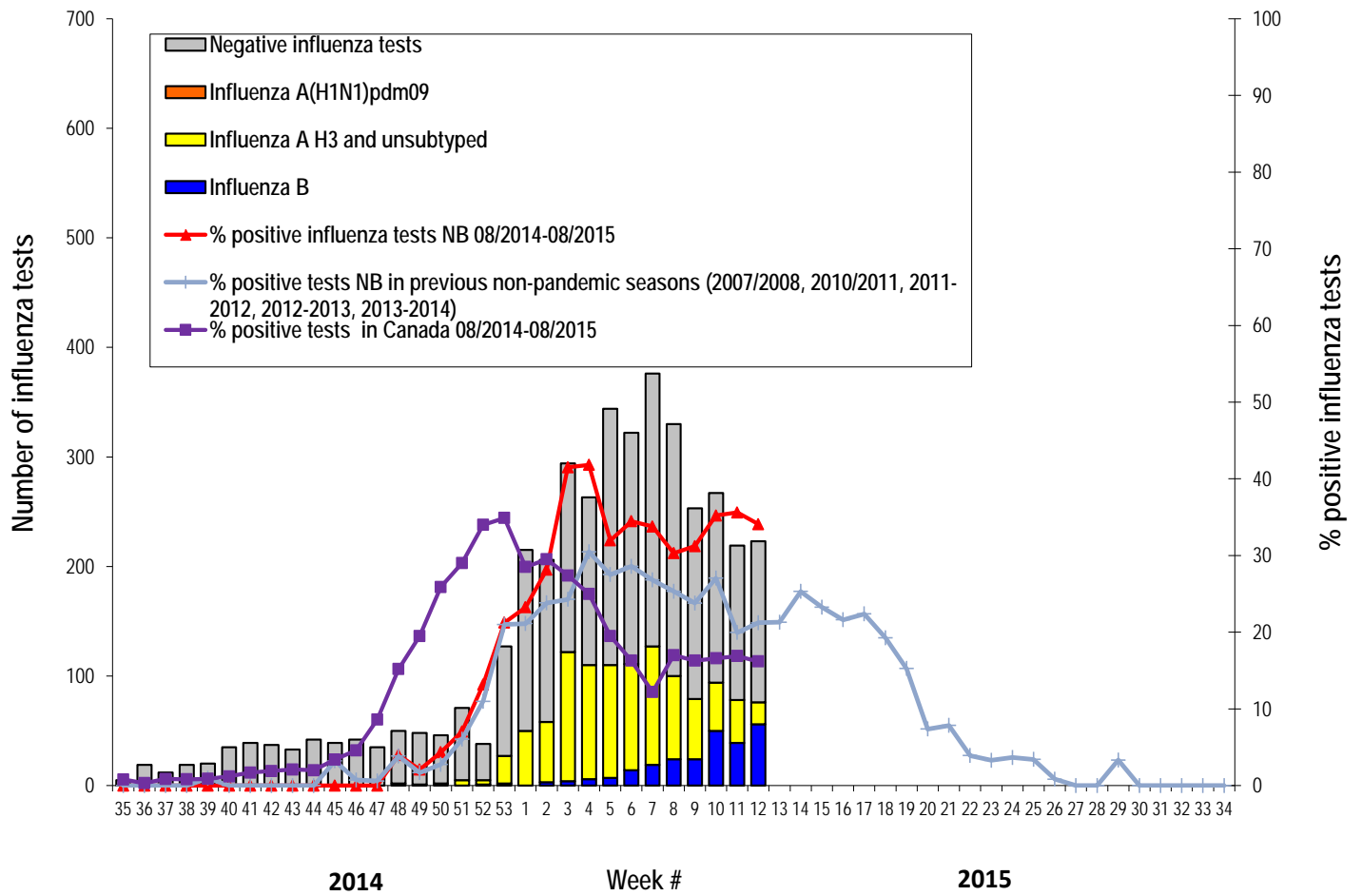
- Globally, influenza activity decreased further but remained above the seasonal threshold in the northern hemisphere. While influenza A (H3N2)viruses predominated this season, the proportion of influenza B and influenza A (H1N1)pdm09 detections increased in the last few weeks.
- Human infection with Avian Influenza: As of April 1 2015, a total of 631 laboratory-confirmed cases of human infection with an avian influenza A (H7N9) virus were reported in China (as well as in Taiwan, Hong Kong and Malaysia) including 221 deaths. The majority of cases have presented with severe acute illness, rapidly progressing to severe pneumonia. Most human cases have reported a history of exposure to poultry or live bird markets. There is currently no evidence of sustained human-to-human transmission of H7N9.
- Other Respiratory Viruses:
 - MERS-CoV: From April 2012 to April 1 2015, 1,090 laboratory-confirmed cases of MERS-CoV have been reported from 23 countries. All cases have either occurred in the Middle East or have a direct link to a primary case infected in the Middle East. Among the 1,090 cases, 412 were fatal. Investigations to identify the source of infection and routes of exposure are still ongoing. The increase in cases since December 2014 warrants close monitoring considering the surge in cases that was seen in the spring of 2014.

1) Influenza Laboratory Data¹

- A steady increase has been observed in influenza B detections since week 6.
- 76 influenza detections were reported during the reporting period; 5 A (H3) viruses, 15 A (unsubtyped) and 56 B.
- Since the beginning of the season, 1151 positive influenza detections were reported, 267 were A (H3), 636 were A (unsubtyped) and 248 were B viruses.

¹ Surveillance specimens are submitted by recruited New Brunswick Sentinel Practitioner Influenza Network (NB SPIN)practitioners, which are comprised of 8 sites in Emergency Rooms, 2 sites in Family Practice, 2 sites in First Nations communities, 1 site in a Nursing Home, 2 sites in Universities and 8 sites 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 March 28 2015
 (data source: G. Dumont Lab results)



Note: Most of the Influenza A untyped specimens are of the predominant strain.

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 March 28 2015)

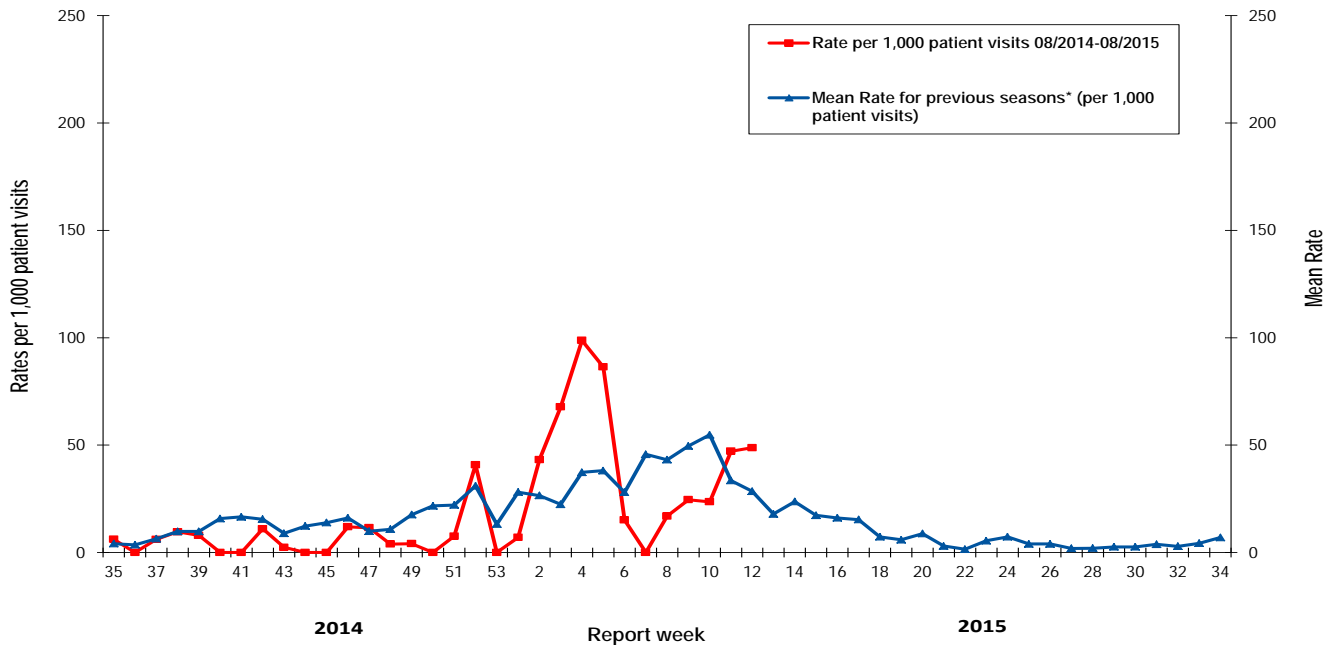
| Region | Reporting period: March/22/2015–March/28/2015 | | | | | | Cumulative: (2014/2015 season) Aug./24/2014 –Mar./28/2015 | | | | | Cumulative: (2013/2014 season) Aug./25/2013 – Aug./23/2014 | | | | |
|-----------------|--|----------|--------------|--------------------|-----------|-----------|--|--------------|--------------------|------------|------------|---|--------------|--------------------|-------------|------------|
| | Activity level ² | 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 |
| Region 1 | Localized | 1 | 0 | 8 | 9 | 32 | 80 | 0 | 340 | 420 | 153 | 2 | 205 | 442 | 649 | 39 |
| Region 2 | Localized | 0 | 0 | 1 | 1 | 3 | 18 | 0 | 67 | 85 | 20 | 0 | 86 | 219 | 305 | 2 |
| Region 3 | Localized | 1 | 0 | 3 | 4 | 12 | 17 | 0 | 69 | 86 | 34 | 0 | 41 | 80 | 121 | 4 |
| Region 4 | Sporadic | 0 | 0 | 1 | 1 | 3 | 56 | 0 | 31 | 87 | 12 | 0 | 52 | 61 | 113 | 49 |
| Region 5 | Sporadic | 1 | 0 | 1 | 2 | 0 | 8 | 0 | 13 | 21 | 2 | 0 | 10 | 23 | 33 | 6 |
| Region 6 | Sporadic | 1 | 0 | 1 | 2 | 3 | 79 | 0 | 93 | 172 | 15 | 0 | 42 | 49 | 91 | 25 |
| Region 7 | Sporadic | 1 | 0 | 0 | 1 | 3 | 9 | 0 | 23 | 32 | 12 | 0 | 4 | 11 | 15 | 3 |
| Total NB | | 5 | 0 | 15 | 20 | 56 | 267 | 0 | 636 | 903 | 248 | 2 | 440 | 885 | 1327 | 128 |

² Influenza activity level definition is available on the PHAC FluWatch website: <http://www.phac-aspc.gc.ca/fluwatch/14-15/def14-15-eng.php>

2) ILI Consultation Rates³

- During week 12, the ILI consultation rate was 48.8 consultations per 1,000 patient visits which was above the expected levels for this time of year.
- During week 12, the sentinel response rate was 23%, for both the FluWatch sentinel physicians and the NB SPIN practitioners.

Graph 2: ILI Consultation Rates in New Brunswick, by report week, season 2014/15 compared to previous seasons*



* The mean rate was based on data from the 1996/97 to 2013/2014 seasons and excludes the Pandemic season (2009-2010).

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.

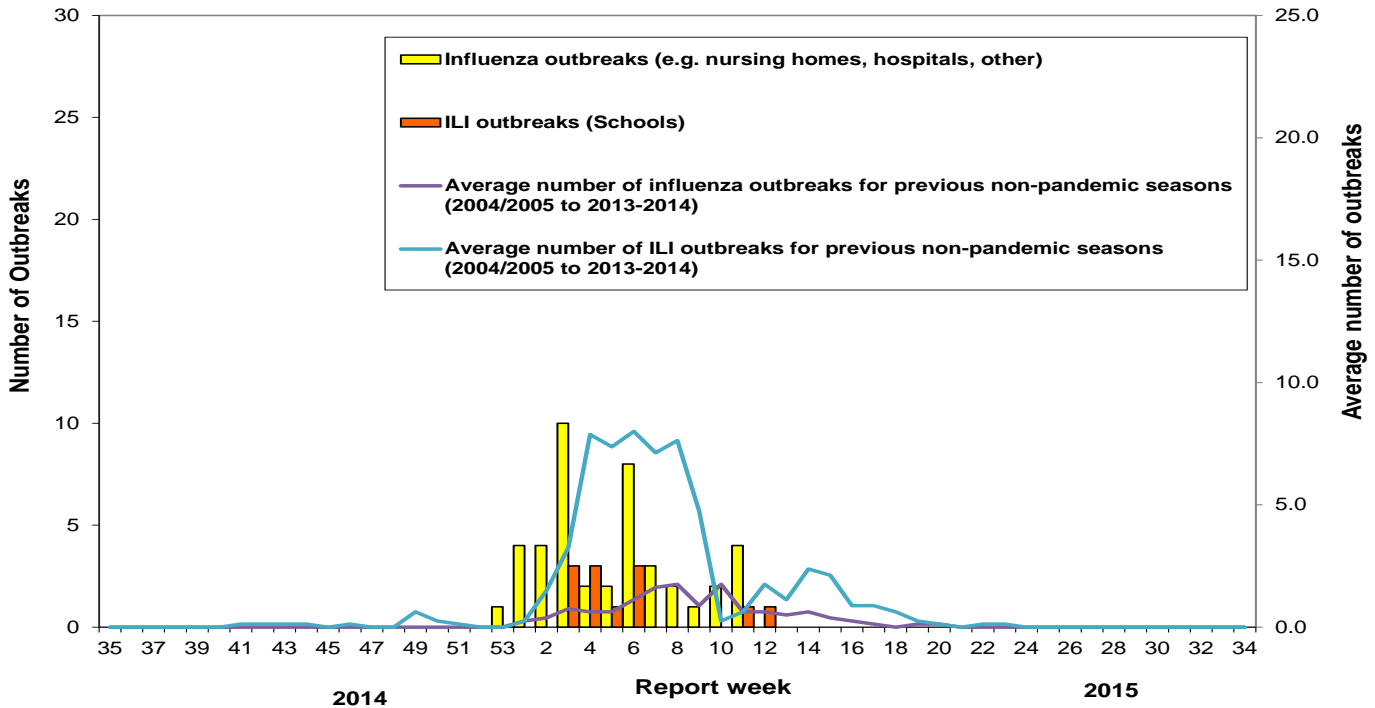
| | Reporting period: March/22/2015–March/28/2015 | | | Cumulative # of outbreaks season 2014-2015 | Cumulative # of outbreaks season 2013-2014 |
|-----------------|--|----------------------|---|---|---|
| | Lab-confirmed outbreaks in Nursing homes | ILI school outbreaks | Lab-confirmed outbreaks in Other settings | | |
| Region 1 | 0 out of 13 | 0 out of 74 | 0 | 13 | 3 |
| Region 2 | 0 out of 15 | 1 out of 81 | 0 | 10 | 2 |
| Region 3 | 0 out of 14 | 0 out of 95 | 0 | 9 | 4 |
| Region 4 | 0 out of 6 | 0 out of 22 | 0 | 6 | 1 |
| Region 5 | 0 out of 2 | 0 out of 18 | 0 | 4 | 0 |
| Region 6 | 0 out of 9 | 0 out of 35 | 0 | 5 | 3 |
| Region 7 | 0 out of 4 | 0 out of 27 | 0 | 8 | 2 |
| Total NB | 0 out of 63 | 1 out of 352 | 0 | 55 | 15 |

*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.

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

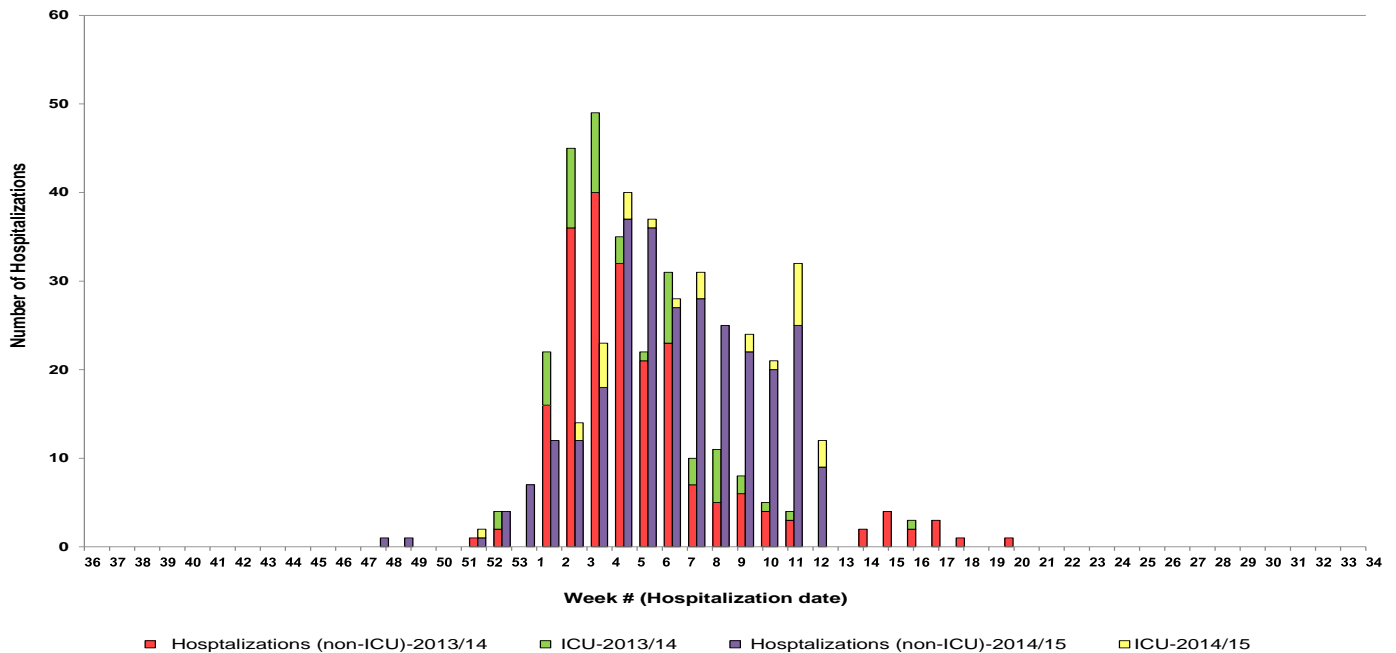
³ A total of 31 practitioner sites (18 FluWatch sentinel physicians and 13 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

Graph 3: Number of Influenza Outbreaks (nursing homes, hospitals, other)⁴ and ILI Outbreaks (schools)⁵ reported to Public Health in New Brunswick, by report week, season 2014/15.



4) Influenza associated Hospitalization⁴ and Death⁵ Surveillance⁶

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

** Nineteen deaths have been reported so far in season 2014-2015.

⁴ Hospitalizations (including ICU admissions) are influenza associated; they may or may not be due to influenza.

⁵ Deaths are influenza associated; influenza may not be the direct cause of death.

⁶ 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.

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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