

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: January 11 to January 17 2015 (week 2)

Summary:

In New Brunswick, continued increase of overall influenza activity but remains within expected levels

New Brunswick:

- There have been 58 positive influenza detections during week 2, 25 A (H3) viruses, 30 A (unsubtyped) and 3 B.
- The ILI consultation rate was 43.2 consultations per 1,000 patients visits and was above the expected level for this time of year.
- Nine influenza outbreaks were reported (6 new and 3 ongoing), all in nursing homes.

Canada:

- Influenza activity levels decreased slightly from the previous week with fewer regions reporting widespread activity. Many regions continued to report localized and sporadic influenza activity.
- Several indicators such as lab detections, outbreaks and hospitalizations and ILI consultations rate have decreased, indicating that the peak of the influenza season may have passed. RSV is the second most frequently detected virus after influenza.
- Influenza A (H3N2) continues to be the most common type of influenza affecting Canadians. Among laboratory detections, hospitalizations and deaths, the majority of cases have been among seniors 65 years of age and over.
- 3,761 laboratory detections of influenza were reported and the percentage of laboratory tests positive for influenza was 29.5% for week 2.
- The national ILI consultation rate was 37.7 consultations per 1,000 patients' visits, which is within the expected levels for week 2.
- One hundred and forty-five new influenza outbreaks were reported; 118 were in long-term care facilities, 8 in hospitals and 19 in other settings. The number of outbreaks reported so far is similar to the number of outbreaks reported during the 2012-2013 season.
- Antigenic characterization: NML has antigenically characterized 62 H3N2 viruses, 56 of which showed suboptimal match to the vaccine strain, 2 A (H1N1)pdm09 that were a match to the vaccine strain and 42 B viruses, 38 of which were a match to the vaccine strain.

International:

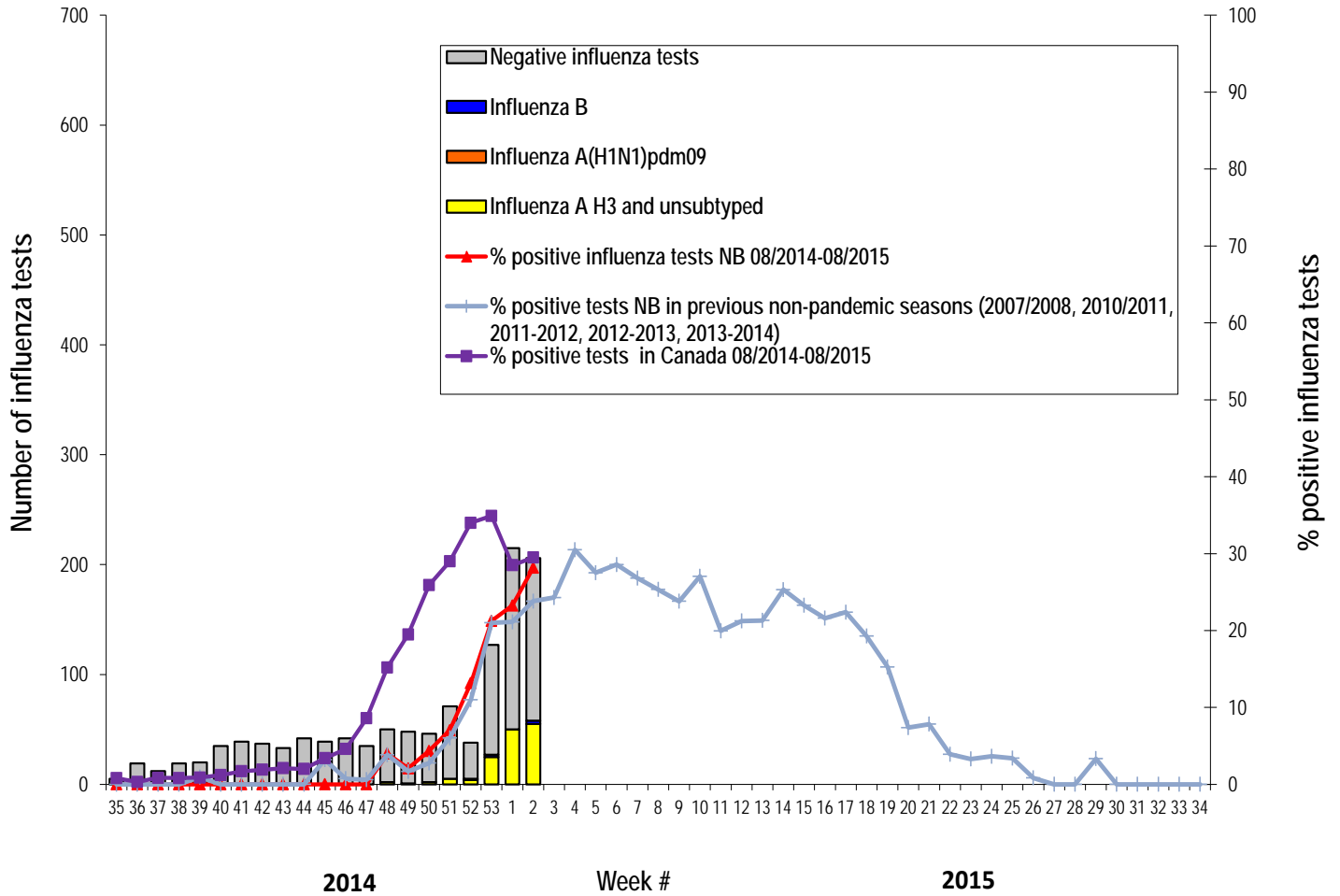
- Globally, influenza activity was high in the northern hemisphere with influenza A (H3N2) predominating so far this season. The antigenic characterization of most recent A(H3N2) viruses so far indicated differences from the A(H3N2) virus used in the influenza vaccines for the northern hemisphere 2014-2015. Based on tests to date, the influenza A (H3N2) viruses are expected to be sensitive to neuraminidase inhibitors.
- Human infection with Avian Influenza: As of January 22 2015, a total of 485 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 185 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. One confirmed case of human infection with influenza A (H7N9) has been reported by British Columbia. The individual recently returned to Canada from China. This is the first documented case of H7N9 infection in a human in North America. Results are also pending for one probable case of H7N9 in BC.
- Other Respiratory Viruses:
 - MERS-CoV: From April 2012 to January 22 2015, 956 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 956 cases, 351 were fatal. Investigations to identify the source of infection and routes of exposure are still ongoing. The number of MERS-CoV cases in September and October 2014 has been slightly higher than in July and August 2014. This pattern was also observed previously.

1) Influenza Laboratory Data¹

- Continued increase of overall influenza activity but remains within expected levels.
- 58 influenza detections were reported during the reporting period; 25 A (H3) viruses, 30 A (unsubtyped) and 3 B.
- Since the beginning of the season, 145 positive influenza detections were reported, 70 were A (H3), 70 were A (unsubtyped) and 5 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 January 17 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 January 17 2015)

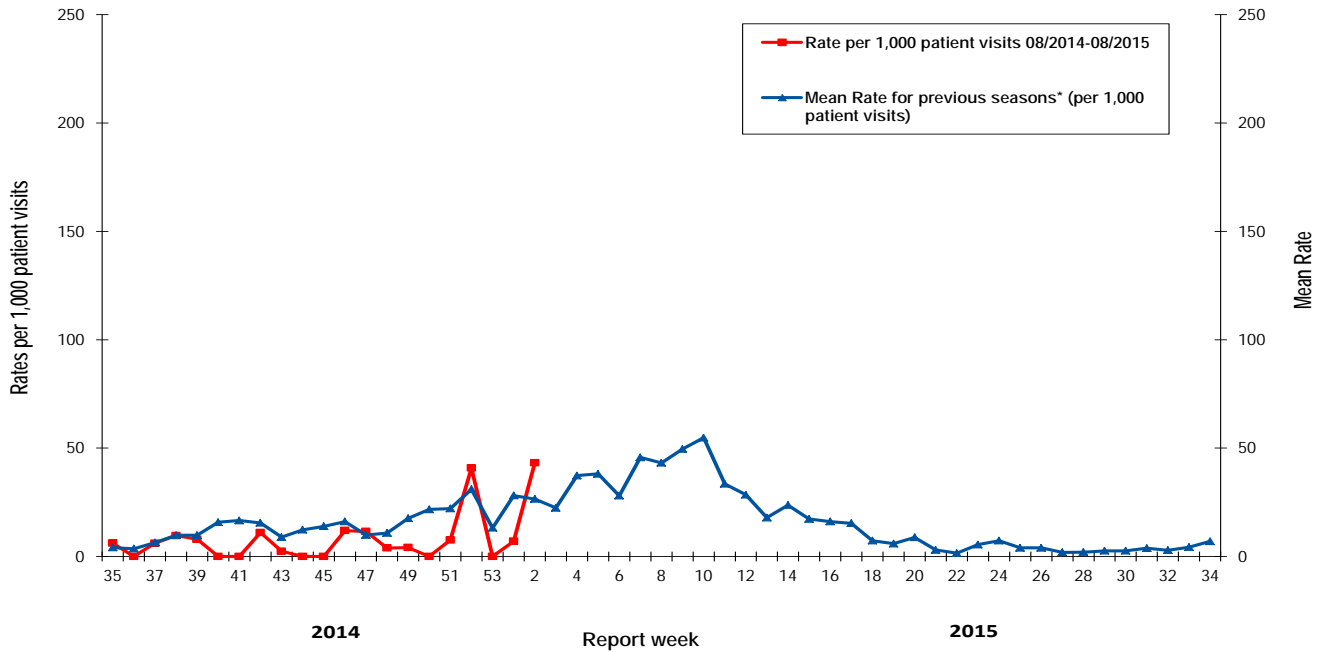
Region	Reporting period: January/11/2015–January/17/2015						Cumulative: (2014/2015 season) Aug./24/2014 –Jan./17/2015					Cumulative: (2013/2014 season) Aug./25/2013 – Aug./23/2014				
	Activity level ²	A				B	A				B	A				B
		A(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total	A(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total	(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total
Region 1	Sporadic	5	0	10	15	2	20	0	20	40	4	2	205	442	649	39
Region 2	Localized	2	0	4	6	0	10	0	14	24	0	0	86	219	305	2
Region 3	Localized	2	0	5	7	1	4	0	7	11	1	0	41	80	121	4
Region 4	Localized	7	0	2	9	0	14	0	7	21	0	0	52	61	113	49
Region 5	Localized	0	0	1	1	0	1	0	6	7	0	0	10	23	33	6
Region 6	Localized	9	0	6	15	0	20	0	14	34	0	0	42	49	91	25
Region 7	Localized	0	0	2	2	0	1	0	2	3	0	0	4	11	15	3
Total NB		25	0	30	55	3	70	0	70	140	5	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 2, the ILI consultation rate was 43.2 consultations per 1,000 patient visits which was above the expected levels for this time of year.
- During week 2, 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 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.

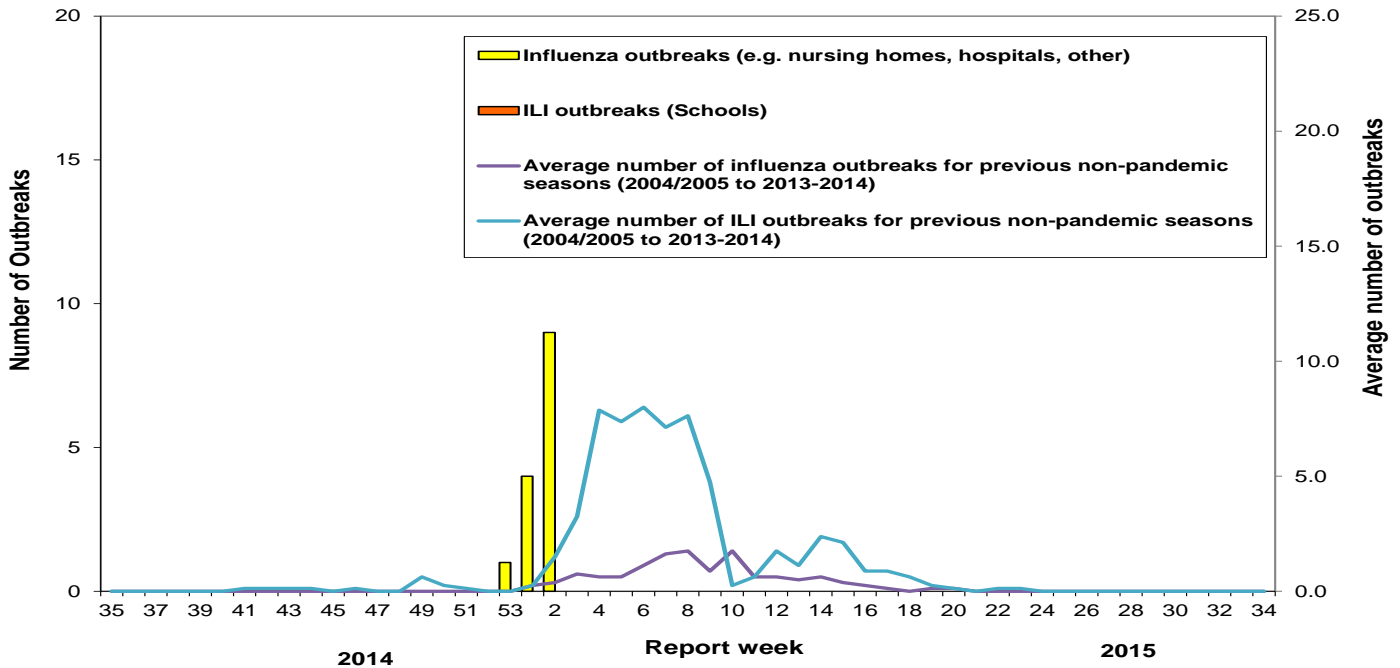
	Reporting period: January/11/2015–January/17/2015			Cumulative # of outbreaks season 2014-2015	Cumulative # of outbreaks season 2013-2014
	Lab-confirmed outbreaks in Nursing homes	ILI school outbreaks	Lab-confirmed outbreaks in Other settings		
Region 1	0 out of 13	0 out of 74	0	0	3
Region 2	1 out of 15	0 out of 81	0	3	2
Region 3	3 out of 14	0 out of 95	0	4	4
Region 4	1 out of 6	0 out of 22	0	1	1
Region 5	1 out of 2	0 out of 18	0	1	0
Region 6	1 out of 9	0 out of 35	0	2	3
Region 7	2 out of 4	0 out of 27	0	3	2
Total NB	9 out of 63	0 out of 352	0	14	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.

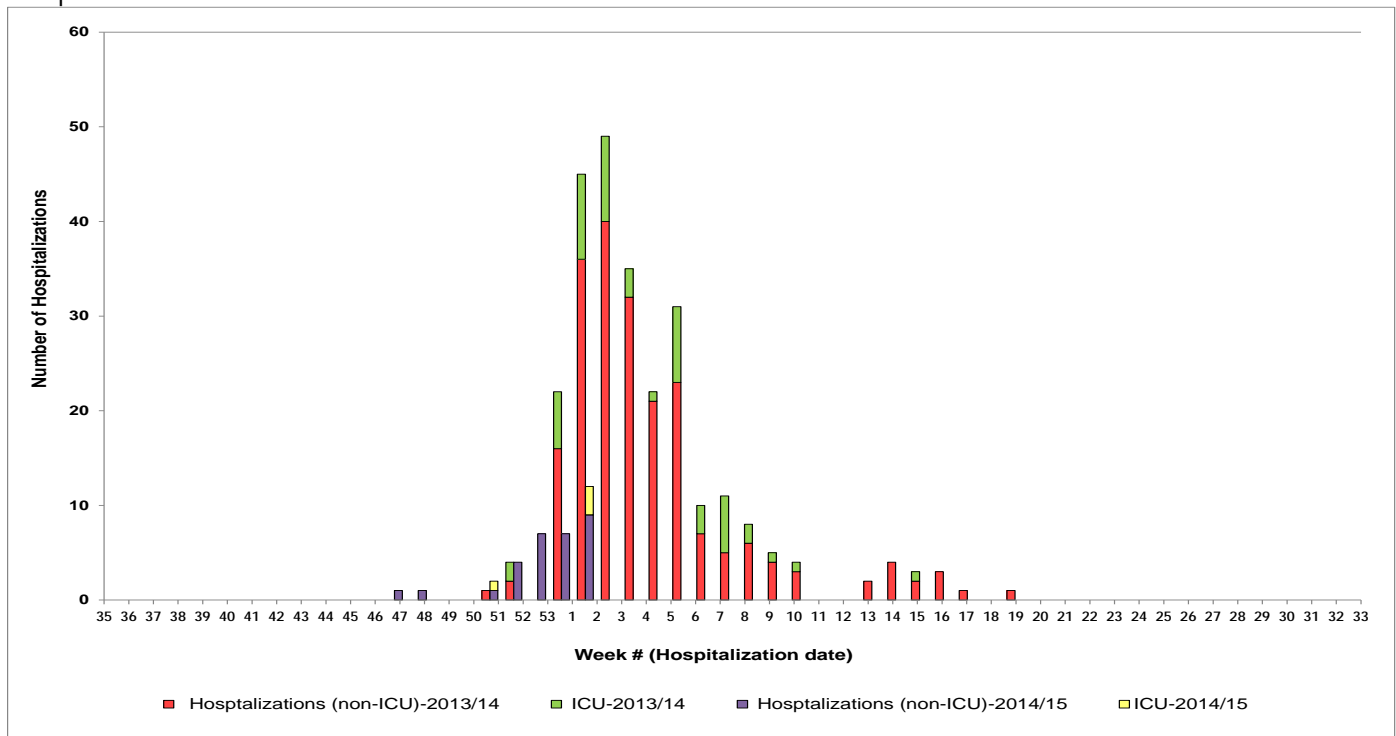
³ A total of 31 practitioner sites (18 FluWatch sentinel physicians and 13 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

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

** Five 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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