

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: April 19 to April 25 2015 (week 16)

Summary:

In New Brunswick, overall detections have been decreasing, most are influenza B.

New Brunswick:

- There have been 42 positive influenza detections during week 16, 1 A (H3) viruses and 41 B.
- The ILI consultation rate was 17.5 consultations per 1,000 patients visits and was within the expected level for this time of year.
- Two new influenza outbreaks were reported in nursing homes (and 1 ongoing outbreak).

Canada:

- Influenza B continued to be the predominant influenza virus circulating in Canada. Detections of influenza B appeared to have peaked in week 12. Although overall influenza activity in Canada continued to decline, elevated activity was still reported in week 16 (mostly in the Central and Atlantic provinces).
- 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.
- Fewer influenza hospitalizations were reported this week compared to the previous week. The majority of hospitalizations were due to influenza A and in adults 65 years and older.
- 525 laboratory detections of influenza were reported and the percentage of laboratory tests positive for influenza was 12.6% for week 16.
- The national ILI consultation rate was 31.9 consultations per 1,000 patients' visits, which is slightly above the expected levels for week 16.
- 17 new influenza outbreaks were reported; 15 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 181 H3N2 viruses, 175 of which showed suboptimal match to the vaccine strain, 14 A (H1N1)pdm09 that were a match to the vaccine strain and 521 B viruses, 495 of which were a match to the vaccine strain.

International:

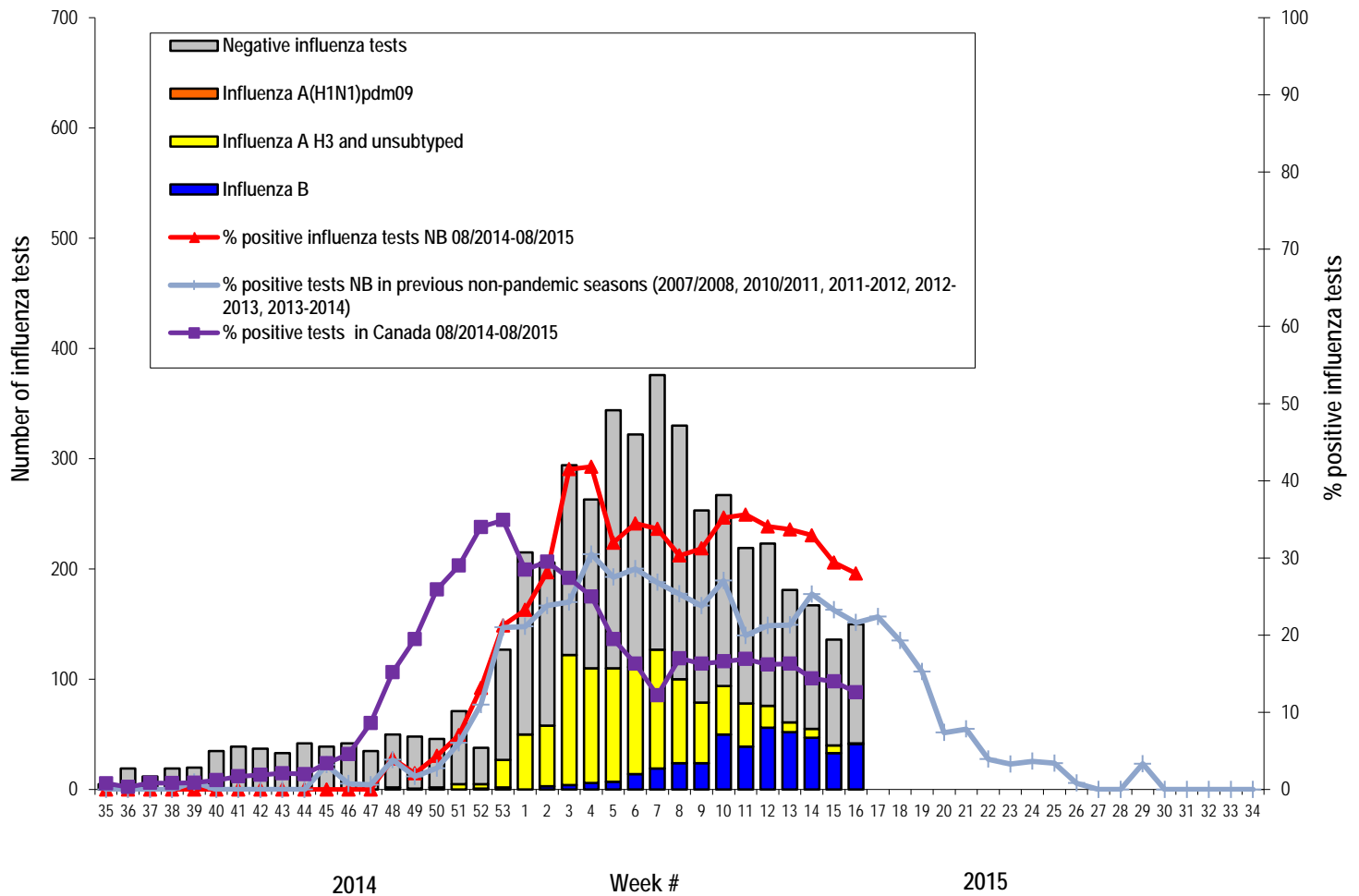
- Globally, influenza activity decreased further in the northern hemisphere and was low in most regions. While influenza A (H3N2) viruses predominated this season in the northern hemisphere, the proportion of influenza B and influenza A (H1N1)pdm09 detections increased in the last few weeks.
- Human infection with Avian Influenza: As of April 30 2015, a total of 651 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 225 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 30 2015, 1,110 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 1,110 cases, 422 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

- Overall influenza detections have been decreasing, most are influenza B.
- 42 influenza detections were reported during the reporting period; 1 A (H3) viruses and 41 B.
- Since the beginning of the season, 1351 positive influenza detections were reported, 280 were A (H3), 650 were A (unsubtyped) and 421 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 April 25 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 April 25 2015)

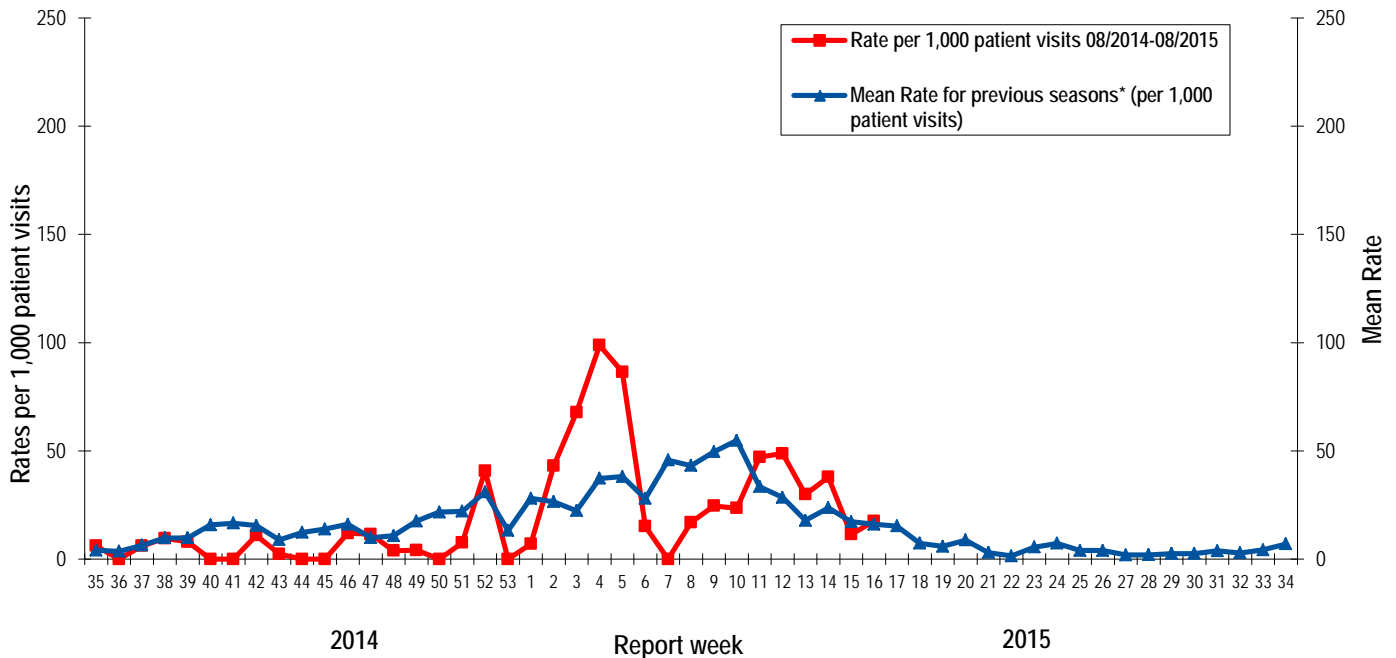
Region	Reporting period: April/19/2015–April/25/2015						Cumulative: (2014/2015 season) Aug./24/2014 –Apr./25/2015					Cumulative: (2013/2014 season) Aug./25/2013 – Aug./23/2014				
	Activity level ²	A				B	A				B	A				B
		A(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total	A(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total	(H3)	(H1N1) pdm09	Unsubtyped / Other	A Total	Total
Region 1	Sporadic	1	0	0	1	18	85	0	349	434	248	2	205	442	649	39
Region 2	Localized	0	0	0	0	6	19	0	69	88	55	0	86	219	305	2
Region 3	Localized	0	0	0	0	9	19	0	69	88	52	0	41	80	121	4
Region 4	Sporadic	0	0	0	0	5	56	0	31	87	23	0	52	61	113	49
Region 5	No activity	0	0	0	0	0	8	0	14	22	2	0	10	23	33	6
Region 6	Sporadic	0	0	0	0	2	81	0	95	176	24	0	42	49	91	25
Region 7	Sporadic	0	0	0	0	1	12	0	23	35	17	0	4	11	15	3
Total NB		1	0	0	1	41	280	0	650	930	421	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 16, the ILI consultation rate was 17.5 consultations per 1,000 patient visits which is within the expected levels for this time of year.
- During week 16, the sentinel response rate was 27%, 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.

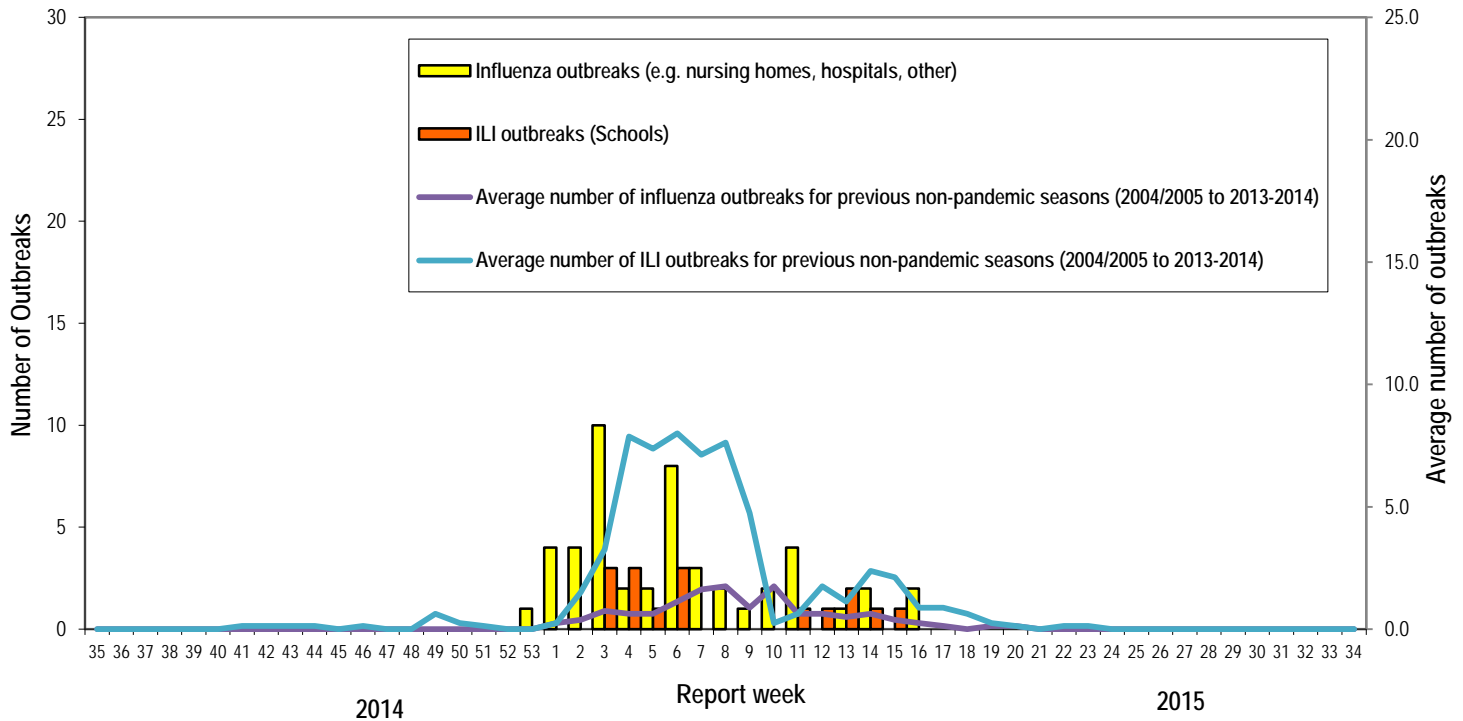
	Reporting period: April/19/2015–April/25/2015			Cumulative # of outbreaks season 2014-2015	Cumulative # of outbreaks season 2013-2014
	Lab-confirmed outbreaks in Nursing homes	ILI school outbreaks	Lab-confirmed outbreaks in Other settings		
Region 1	0 out of 13	0 out of 74	0	14	3
Region 2	0 out of 15	0 out of 81	0	15	2
Region 3	2 out of 14	0 out of 95	0	12	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	2 out of 63	0 out of 352	0	64	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.

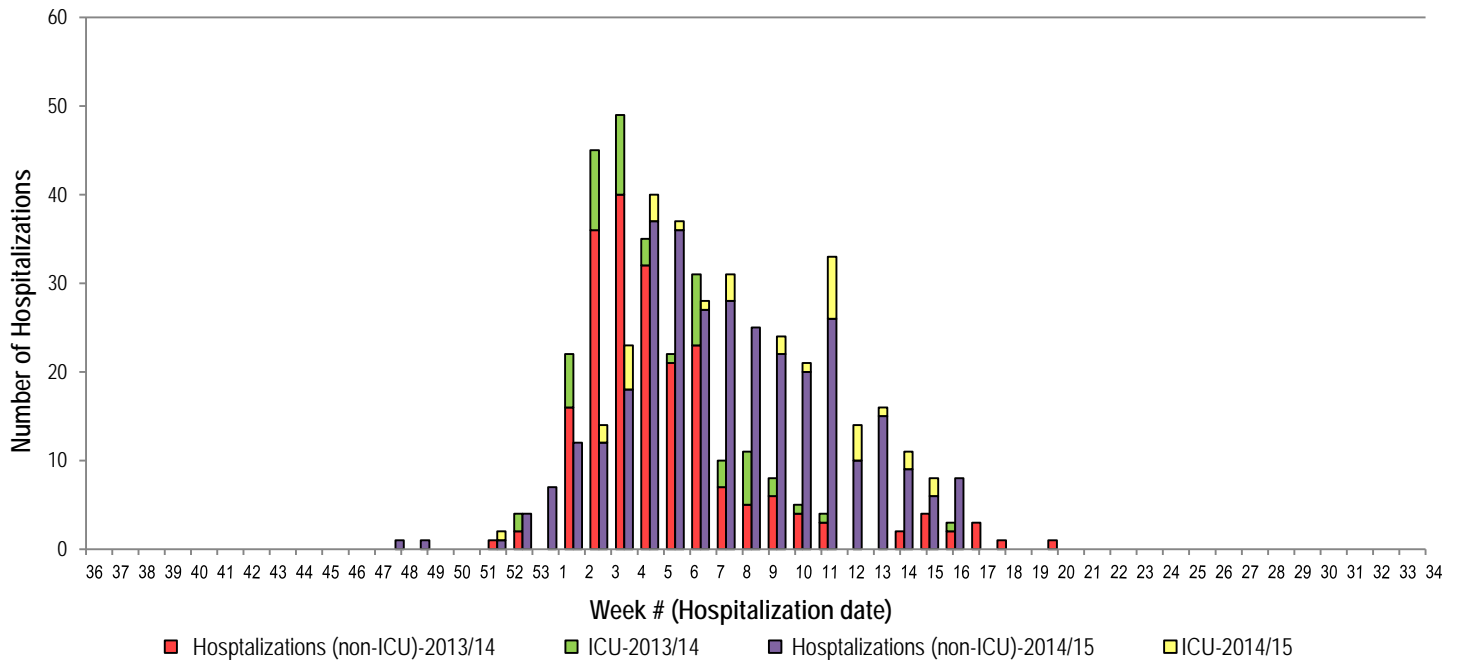
³ A total of 31 practitioner sites (18 FluWatch sentinel physicians and 13 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.

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

** Twenty-two 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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