

WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: January 19 to January 25 2014 (week 4)

Summary:

In New Brunswick, influenza activity remains high. Positive laboratory detections remain stable for the third week in a row.

New Brunswick:

- There have been 287 positive influenza detections during week 4, 1 was A(H1N1)pdm09, 285 were A (unsubtyped) and 1 influenza B
- The ILI consultation rate increased but was below the expected levels for this time of year.
- Five new ILI outbreaks were reported in schools in Regions 2, 3, 6 and 7, and one influenza outbreak in a nursing home in Region1.

Canada:

- In week 04, overall influenza activity decreased in Canada, particularly in western Canada and Ontario which experienced an earlier start to the influenza season. Prince Edward Island was the only province reporting widespread influenza activity.
- The influenza A(H1N1) virus remains the most common influenza virus circulating this season.
- Overall influenza activity in Canada during the 2013-14 season has been similar to the 2012-13 season and is within expected levels for this time of year, although adults 20-64 years of age have been more affected by influenza this season.
- 2620 laboratory detections of influenza were reported in week 4. The percentage of laboratory tests positive for influenza was 24.3%.
- The national ILI consultation rate was 39.8.8 consultations per 1,000 patients' visits, which is within the expected range for week 4.
- Four new influenza outbreaks were reported in long-term care facilities. Also, 3 ILI outbreaks were reported in other facilities.

International:

- Human infection with Avian Influenza: As of January 30 2013, a total of 265 laboratory-confirmed cases of human infection with an avian influenza A (H7N9) virus was reported in China including 57 deaths. Following initial emergence of this virus in February 2013, a first peak in human cases occurred in March/April 2013. A quiescent summer period was followed by sporadic cases during the fall 2013 but, more recently, a second wave has become evident with more than 100 new cases of human H7N9 illness reported since October 2013. The majority 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.
- MERS-CoV: Since April 2012, 180 laboratory-confirmed cases have been reported from Saudi Arabia, Qatar, Jordan, United Arab Emirates, Kuwait, United Kingdom, Oman, France, Germany, Tunisia and Italy. Among the 180 cases, 77 were fatal. Onset of illness was between April 2012 and January 2014.
- Novel influenza A viruses:
 - Since summer 2013, the United States reported 21 new cases of human infection with variant influenza A viruses (19 H3N2v and 2 H1N1v) from Illinois, Indiana, Ohio, Michigan, Arkansas and Iowa. No human-to-human transmission has been identified. All have reported close contact with swine.
 - This week, China reported a human case of avian-origin influenza A(H10N8) in a middle-aged woman from Jiangxi, China, who had exposure to live poultry markets. This is the second reported case of H10N8 from Jiangxi Province in recent months. While human infection with other H10 subtypes, notably H10N7, has been previously reported, these are the first reports of H10N8 infection in humans, although this virus has been detected in birds and environmental samples in China.

1) Influenza Laboratory Data¹

- Percent positive lab results remained stable since week 2 and A (H1N1)pdm09 predominates.
- 287 influenza detections were reported during this current reporting period.
- Since the beginning of the season, 897 positive influenza detections were reported, 346 influenza A (H1N1)pdm09, 1 influenza A (H3), 546 influenza A (unsubtyped) and 4 influenza B.

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, 3 sites in Family Practice, 2 sites in First Nations communities, 1 site in a Nursing Home, 3 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 25 2014 (data source: G. Dumont Lab results)

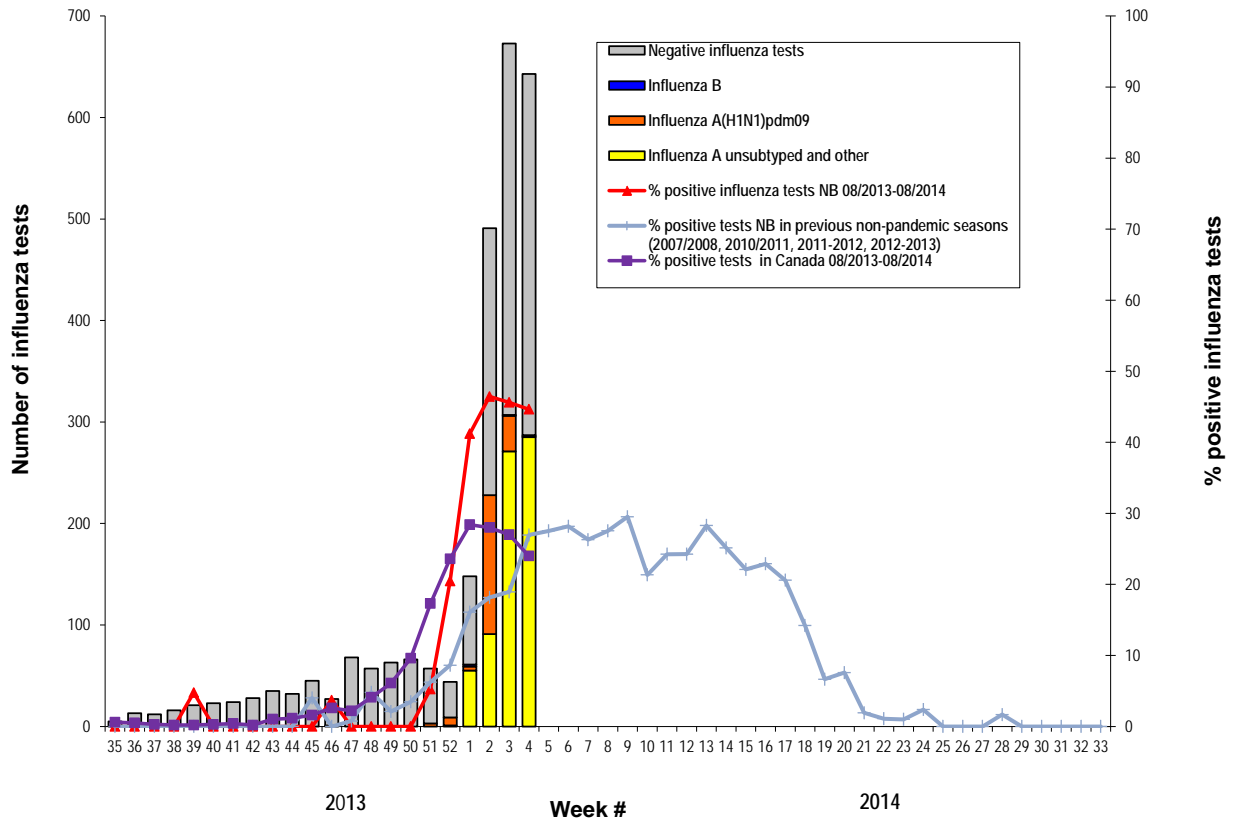


Table 1: Positive influenza test results by Health Region, in New Brunswick up to January 25 2014 (data source: G. Dumont lab results)

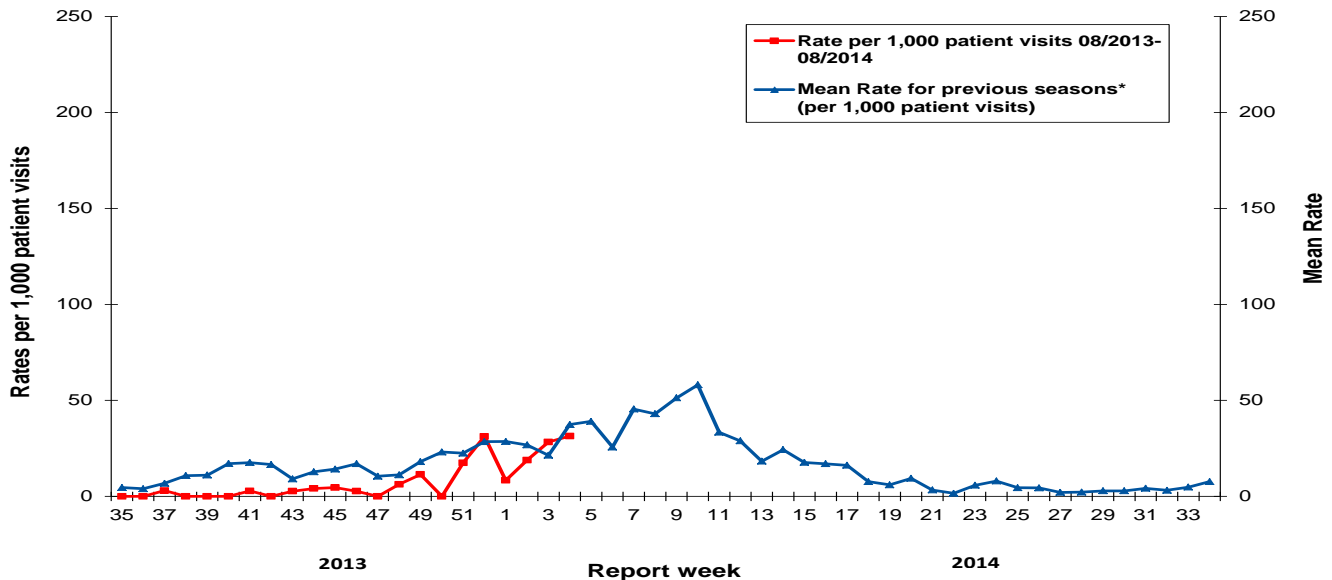
Region	Reporting period: Jan./19/2014–Jan./25/2014							Cumulative: (2013/2014 season) Aug./25/2013 –Jan./25/2014						Cumulative: (2012/2013 season) Aug./26/2012 – Aug./24/2013			
	Activity level ²	A				B	Total	A				B	Total	A		B	Total
		A(H1)	A(H3)	(H1N1) pdm09	unsubt yped			A(H1)	A(H3)	(H1N1) pdm09	unsubt yped			Non-(H1N1) pdm09	(H1N1) pdm09		
Region 1	Localized	0	0	1	155	0	156	0	1	174	270	0	445	527	13	18	558
Region 2	Localized	0	0	0	54	0	54	0	0	76	154	0	230	211	3	8	222
Region 3	Localized	0	0	0	24	0	24	0	0	30	43	0	73	85	9	1	95
Region 4	Sporadic	0	0	0	25	1	26	0	0	33	35	3	71	168	5	3	176
Region 5	Sporadic	0	0	0	6	0	6	0	0	7	14	0	21	20	1	7	28
Region 6	Localized	0	0	0	18	0	18	0	0	25	26	0	51	252	5	50	307
Region 7	Localized	0	0	0	3	0	4	0	0	1	4	1	6	89	2	11	102
Total NB		0	0	1	285	1	287	0	1	346	546	4	897	1352	38	98	1488

² Influenza activity level definition is available on the PHAC FluWatch website: <http://www.phac-aspc.gc.ca/fluwatch/13-14/def13-14-eng.php>

2) ILI Consultation Rates³

- During week 4, the ILI consultation rate was 31.4 consultations per 1,000 patient visits, and was below the expected levels for this time of year.
- During week 4, the sentinel response rate was 47% for both the FluWatch sentinel physicians and the NB SPIN practitioners.

Graph 2: ILI Consultation Rates in New Brunswick, by report week, season 2013/14 compared to previous seasons*



* The mean rate was based on data from the 1996/97 to 2012/2013 seasons and excludes the Pandemic season (2009-2010).

3) ILI and Laboratory-Confirmed Outbreak Data

Table 3: ILI activity/outbreaks in New Brunswick nursing homes and schools for the reporting week, current and previous seasons.

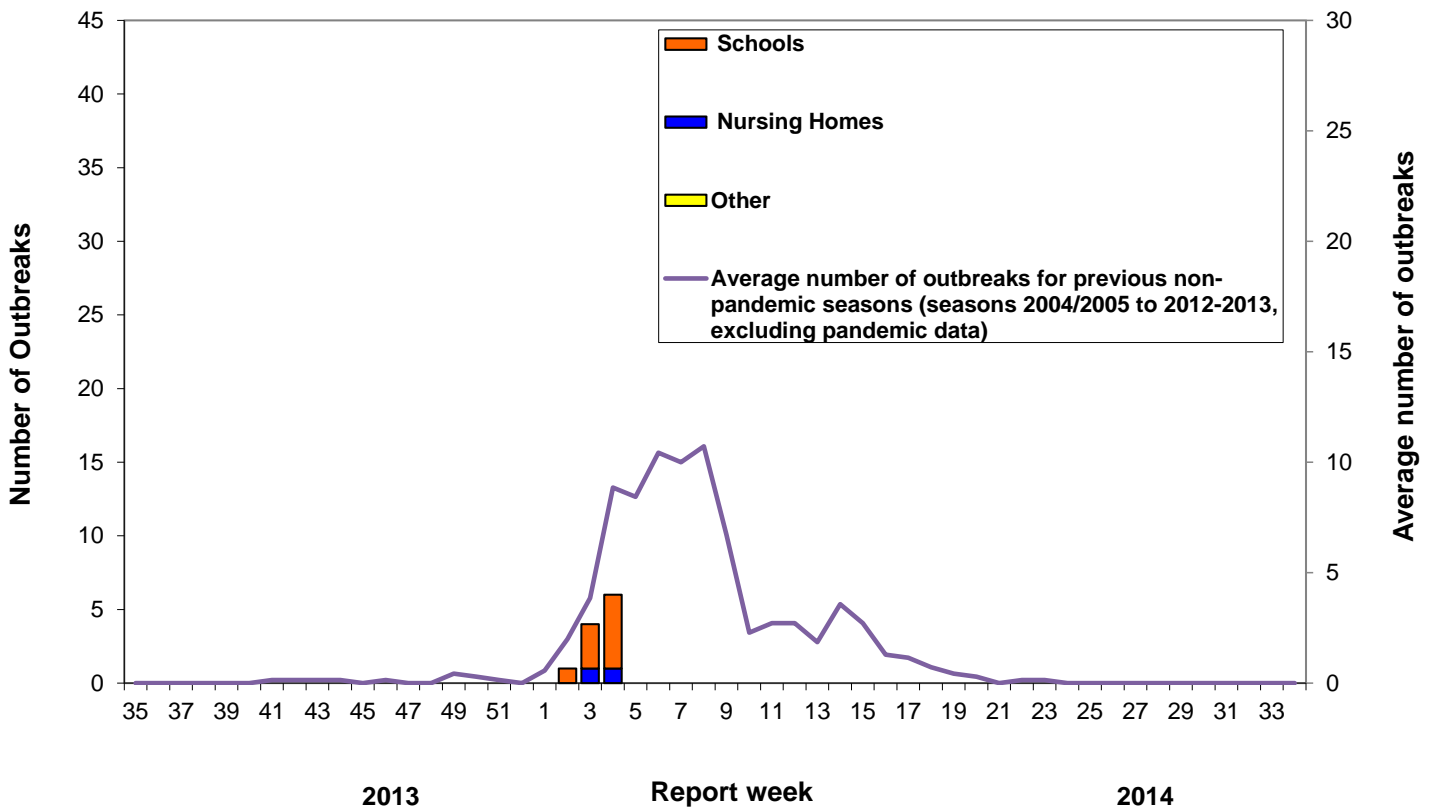
	Reporting period: Jan./19/2014–Jan./25/2014			Cumulative # of outbreaks season 2013-2014	Cumulative # of outbreaks season 2012-2013
	Lab-confirmed outbreaks in Nursing Homes*	Schools reporting ILI outbreaks**	Lab-confirmed outbreaks in Other Settings*		
Region 1	1 out of 13	0 out of 74	0	3	15
Region 2	0 out of 15	1 out of 81	0	2	38
Region 3	0 out of 14	1 out of 95	0	3	20
Region 4	0 out of 6	0 out of 22	0	0	2
Region 5	0 out of 2	0 out of 18	0	0	6
Region 6	0 out of 9	2 out of 35	0	2	23
Region 7	0 out of 4	1 out of 27	0	1	10
Total NB	1 out of 63	5 out of 352	0	11	114

*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 (or absenteeism that is higher (e.g. >5-10%) than expected level as determined by school or Public Health Authority) which is likely due to ILI.

³ A total of 34 practitioner sites (19 FluWatch sentinel physicians and 15 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 in Nursing Homes¹ and ILI Outbreaks in Schools² reported to Public Health in New Brunswick, by report week, season 2013/14.



¹ The National FluWatch definition of an outbreak in a nursing home is stated as two or more cases of ILI within a seven-day period, including at least one laboratory confirmed case.

² The National FluWatch definition of an ILI outbreak in a school is stated as absenteeism greater than 10% (or absenteeism that is higher (e.g. >5-10%) than expected level as determined by school or Public Health Authority) which is likely due to ILI.

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.euroflu.org/cgi-files/bulletin_v2.cgi and

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/