WEEKLY NEW BRUNSWICK INFLUENZA REPORT

Reporting period: November 26 to December 2 2017 (week 48)

Summary:

In New Brunswick, influenza activity was low in week 48

New Brunswick:

- There have been 8 positive influenza detections in week 48. To date this season, 55 influenza detections have been reported, 40 were influenza A (H3), 13 were influenza A (unsubtyped) and 2 were influenza B. Twenty-one of the 55 detections reported so far were related to two nosocomial outbreaks (where patients were admitted at least 48 hours before influenza symptoms).
- There have been 2 new influenza associated hospitalizations during week 48. So far this season, 35 influenza associated hospitalizations have been reported with 1 death. Twenty-one of the 35 hospitalizations were related to nosocomial outbreaks where patients were admitted at least 48 hours before influenza symptoms.
- The ILI consultation rate was 10.8 consultations per 1,000 patients visits in week 48. The ILI rate was within the expected levels for this time of year.
- One new ILI outbreak was reported in a school in Region 3.

Canada:

- At the national level, the influenza season began early this year. Influenza activity continues to increase sharply across Canada.
- Several indicators of influenza activity are above the expected levels for this time of year, and most similar to levels observed during the 2014-15 influenza season, when A(H3N2) was the predominant circulating subtype.
- The majority of influenza detections continue to be A(H3N2), although a substantially greater number of influenza B detections have also been reported compared to previous seasons.
- Based on data from the southern hemisphere 2017 influenza season, vaccine effectiveness for A(H3N2) is anticipated to be low this year, but good protection is expected from the A(H1N1) and influenza B components of both the trivalent and quadrivalent vaccines.

International:

Seasonal influenza:

- Influenza activity continued to increase in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity appeared to have decreased at inter-seasonal levels. In Central America and the Caribbean, influenza activity remained low. Worldwide, influenza A(H3N2) and B viruses accounted for the majority of influenza detections.

Effectiveness of 2017-2018 influenza vaccine for influenza A(H3N2):

- The WHO has stated that, given the suboptimal effectiveness of vaccines containing A/Hong Kong/4801/2014 in the 2017 southern hemisphere season, a suboptimal vaccine effectiveness (VE) is likely to occur in the 2017/2018 northern hemisphere season if influenza A(H3N2) viruses predominate. 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 upcoming 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 Data[1]

- Influenza activity was low in week 48.
- Eight influenza detections were reported during week 48.
- Since the beginning of the season, 55 influenza detections were reported, 40 were influenza A (H3), 13 were influenza A (unsubtyped) and 2 were influenza B.

[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.

Graph 1: Number and percent of positive influenza specimens in New Brunswick by week, up to December 2 2017 (data source: G. Dumont Lab results)

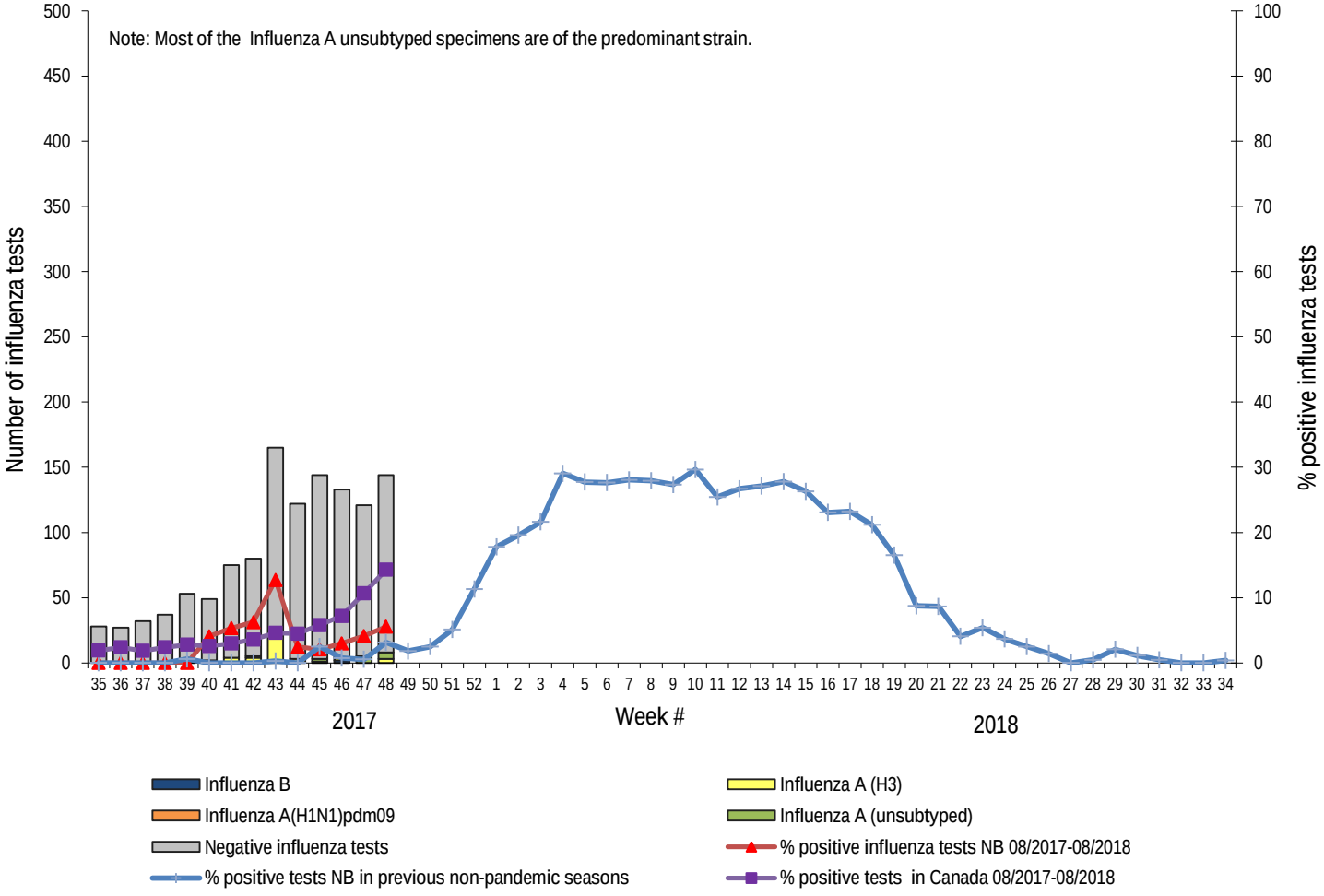


Table 1: Positive influenza test results by Health Region, in New Brunswick for reporting week, cumulative current and previous seasons.
(data source: G. Dumont lab results up to December 2 2017)

Zone	Reporting period: November/26/2017–December/02/2017						Cumulative: (2017/2018 season) Aug./27/2017 –Dec./02/2017					Cumulative: (2016/2017 season) Aug./28/2016 – Aug./26/2017				
	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
Zone 1	Sporadic activity	2	0	5	7	0	14	0	11	25	1	76	0	504	580	90
Zone 2	No activity	0	0	0	0	0	0	0	1	1	1	21	1	77	99	8
Zone 3	No activity	0	0	0	0	0	23	0	1	24	0	25	0	117	142	23
Zone 4	No activity	0	0	0	0	0	0	0	0	0	0	18	0	32	50	6
Zone 5	No activity	0	0	0	0	0	0	0	0	0	0	2	0	3	5	6
Zone 6	Sporadic activity	1	0	0	1	0	2	0	0	2	0	27	0	62	89	11
Zone 7	No activity	0	0	0	0	0	1	0	0	1	0	21	0	52	73	16
Total NB		3	0	5	8	0	40	0	13	53	2	190	1	847	1038	160

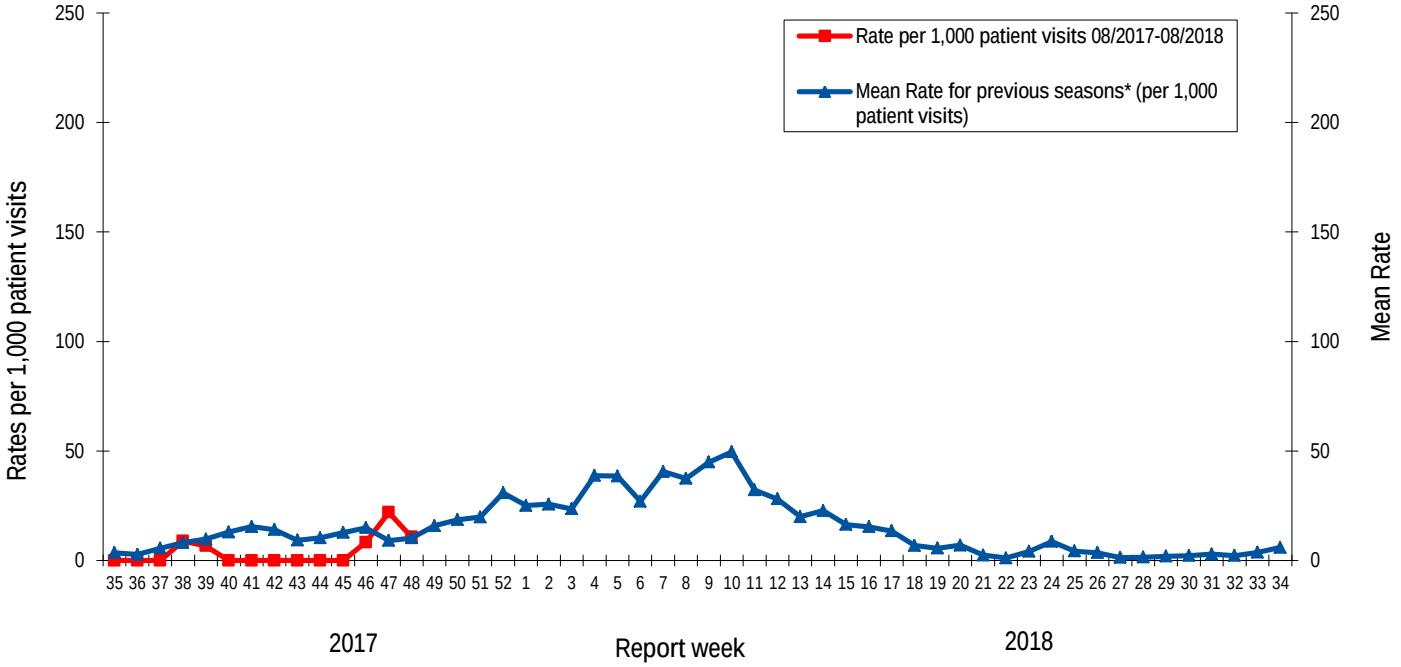
[2] Influenza activity level definition is available on the PHAC FluWatch website: http://healthycanadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/flu-grippe/surveillance/season-definitions-saison-eng.php

2) ILI Consultation Rates[3]

- During week 48, the ILI consultation rate was 10.8 consultations per 1,000 patients visits. The ILI rate was within the expected levels for this time of year.

- During week 48, the sentinel response rate was 21%, 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).

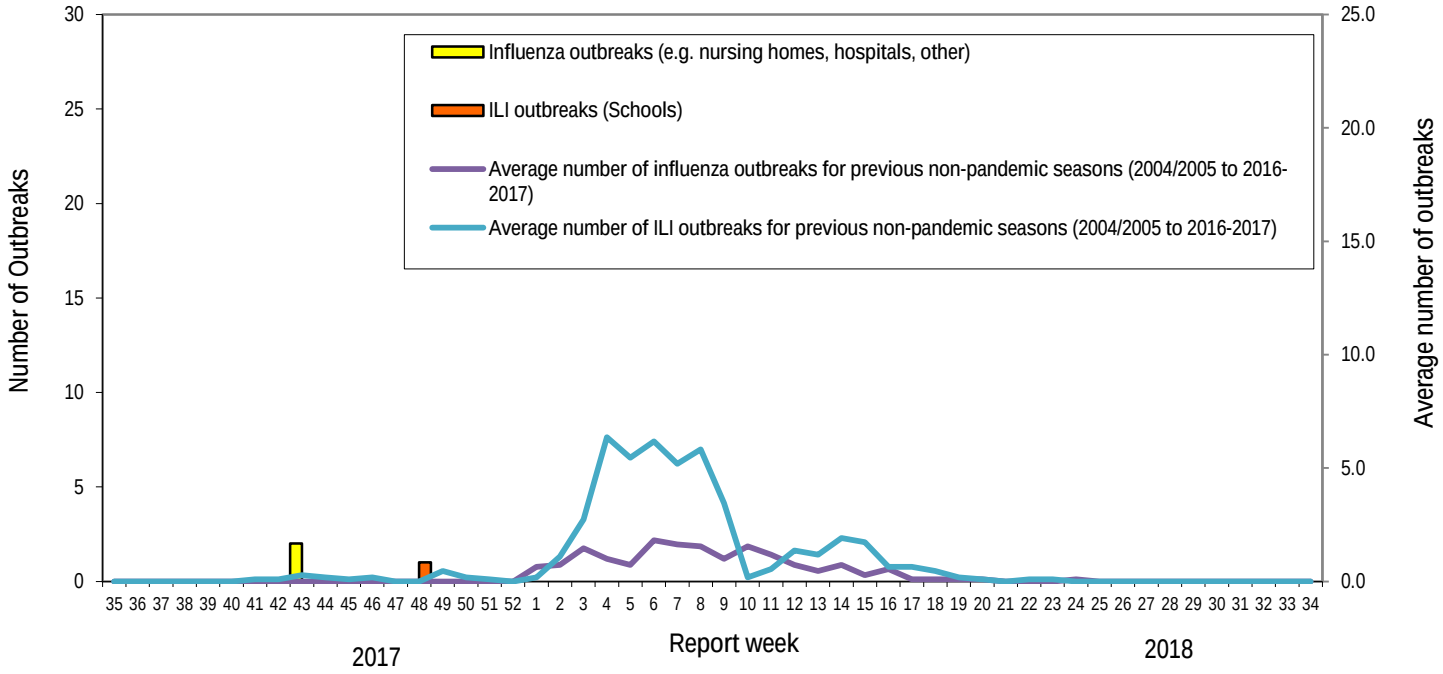
3) ILI and Laboratory-Confirmed Outbreak Data

Table 2: ILI activity/outbreaks in New Brunswick nursing homes and schools for the reporting week, current and previous seasons.

	Reporting period: November/26/2017–December/02/2017			Cumulative # of outbreaks season 2017-2018	Cumulative # of outbreaks season 2016-2017
	Lab-confirmed outbreaks in Nursing homes[4]	ILI school outbreaks[5]	Lab-confirmed outbreaks in Other settings[4]		
Zone 1	0 out of 13	0 out of 74	0	0	3
Zone 2	0 out of 16	0 out of 81	0	0	5
Zone 3	0 out of 14	1 out of 95	0	3	14
Zone 4	0 out of 6	0 out of 22	0	0	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	0	0
Zone 7	0 out of 4	0 out of 27	0	0	2
Total NB	0 out of 64	1 out of 352	0	3	25

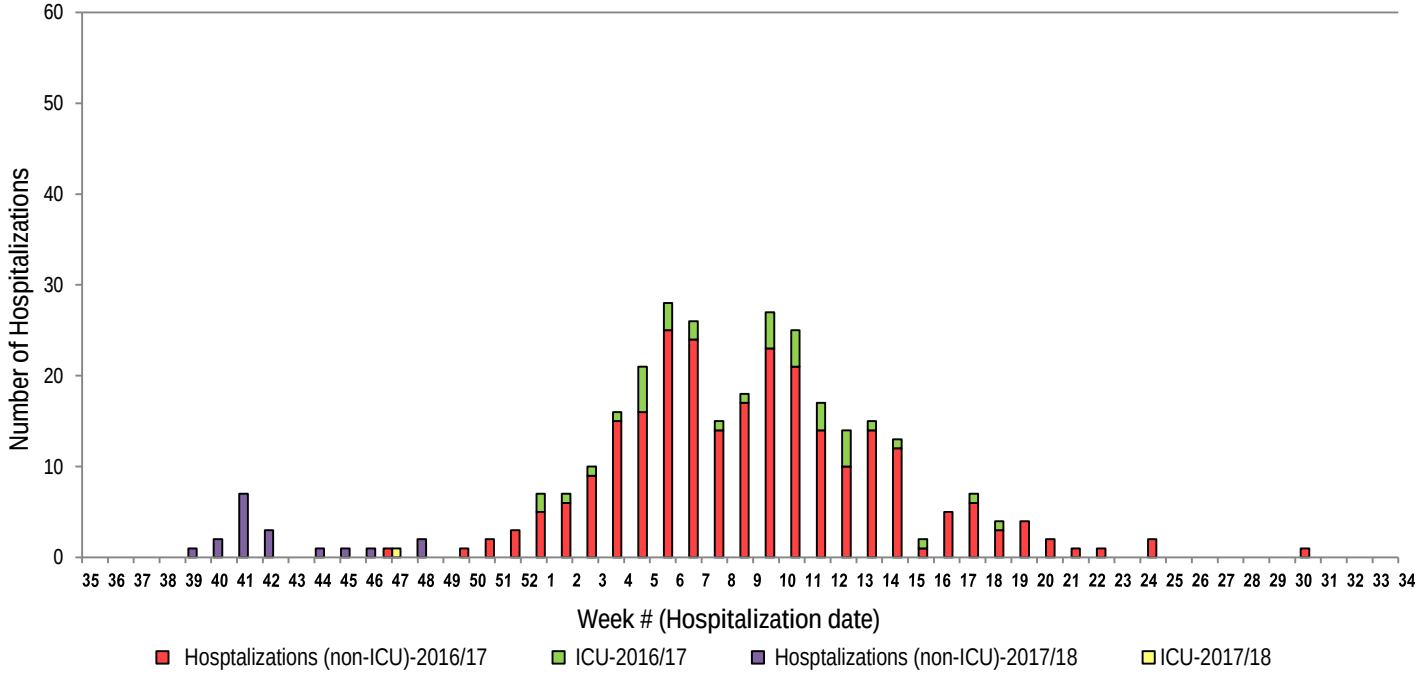
[3] A total of 28 practitioner sites (16 FluWatch sentinel physicians and 12 NB SPIN sites) are recruited this season to report the number of ILI patients and total patient consultations one day during a reporting week.
[4] Two or more ILI cases within a seven day period, including at least one laboratory-confirmed case of influenza. Outbreaks are reported in the week when laboratory confirmation is received.
[5] 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 Hospitalization[6] and Death[7] Surveillance

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
** One death has been reported so far in season 2017-2018.

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

[7] Deaths are influenza associated; influenza may not be the direct cause of death.

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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