Department of Health and Community Services
Government of Newfoundland and Labrador

2015/2016 INFLUENZA REPORT

Overview

⇒ There were 521 laboratory-confirmed cases of influenza during the 2015/2016 season. Of these cases, there were 218 hospitalizations, 49 ICU admissions and 8 influenza-related deaths. Unlike previous seasons, this season peaked in early to mid-March (Figure 1).

⇒ Influenza A was the predominant virus circulating across all regional health authorities (Figure 2).

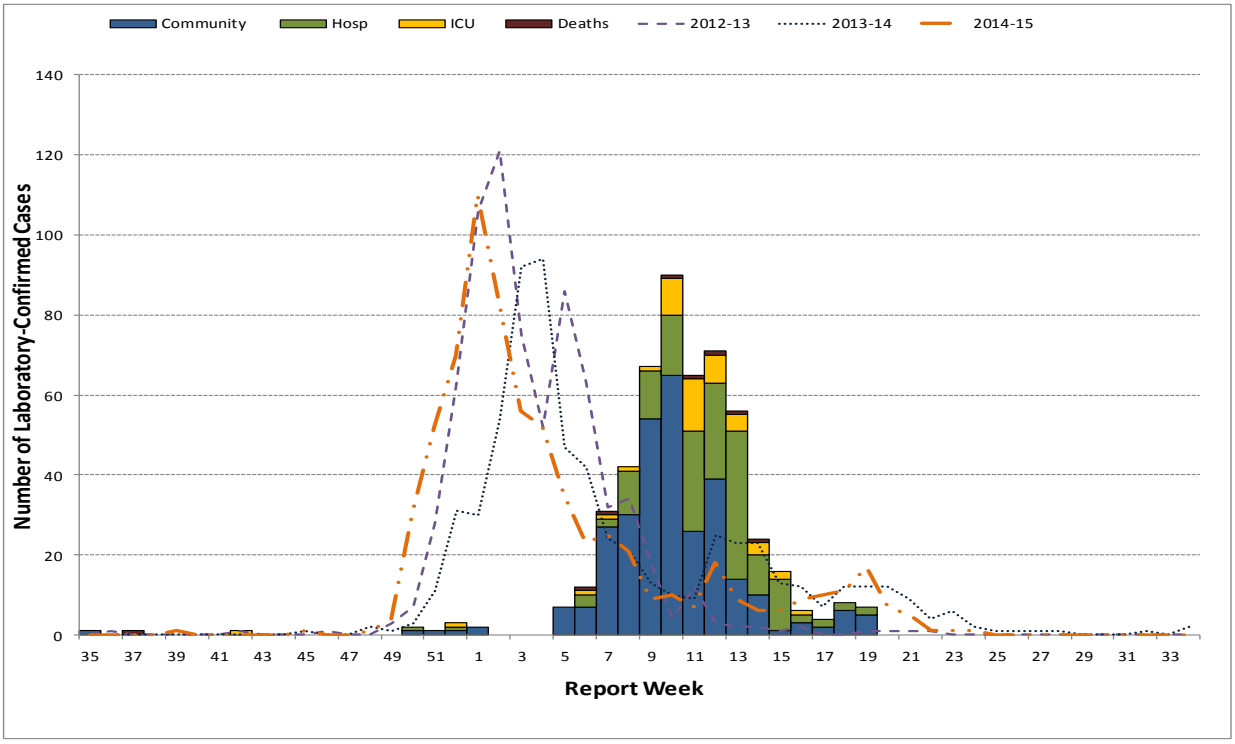

Figure 1: Number of cases, hospitalizations, ICU admissions and deaths, by week virus identified, 2015/2016

⇒ The average age of confirmed cases was highest for those admitted to ICU (Figure 3):
  - ⇒ Cases, mean: 40.3 years
  - ⇒ Hospitalizations, mean: 51.9 years
  - ⇒ ICU admissions, mean: 54.9 years

⇒ Over half (54.7%) of laboratory-confirmed cases were female, and they accounted for 50.9% of hospitalizations, 55.1% of ICU admissions and 62.5% of deaths. (Table 1).

⇒ Eight influenza-related deaths were reported during this influenza season (Table 1).

⇒ Compared to national data, NL reported a lower proportion of hospitalizations attributed to those aged 65 and older (~37% in NL and ~50% in Canada).

Source: National data is from the FluWatch Report, weeks 21-24 (2015/2016). Note: Influenza-associated hospitalizations are not reported to PHAC by the following Provinces and Territory: BC, NU, and QC. Only hospitalizations that require intensive medical care are reported by Saskatchewan. ICU admissions are not distinguished among hospital admissions reported from Ontario.

Influenza by type, RHA

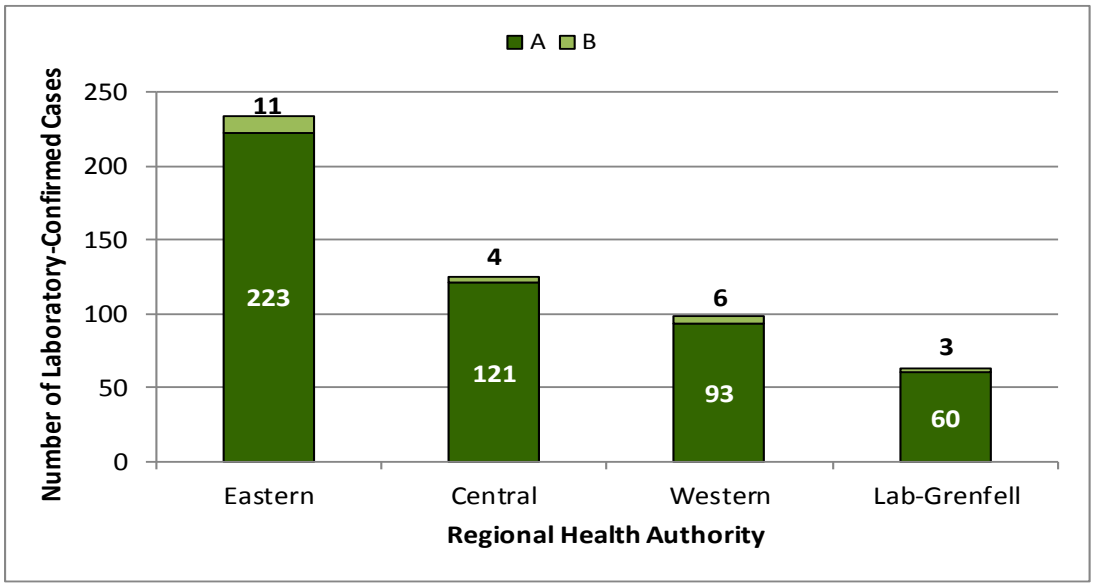

Figure 2: Total number of laboratory-confirmed influenza A and B, by Regional Health Authority, 2015/2016

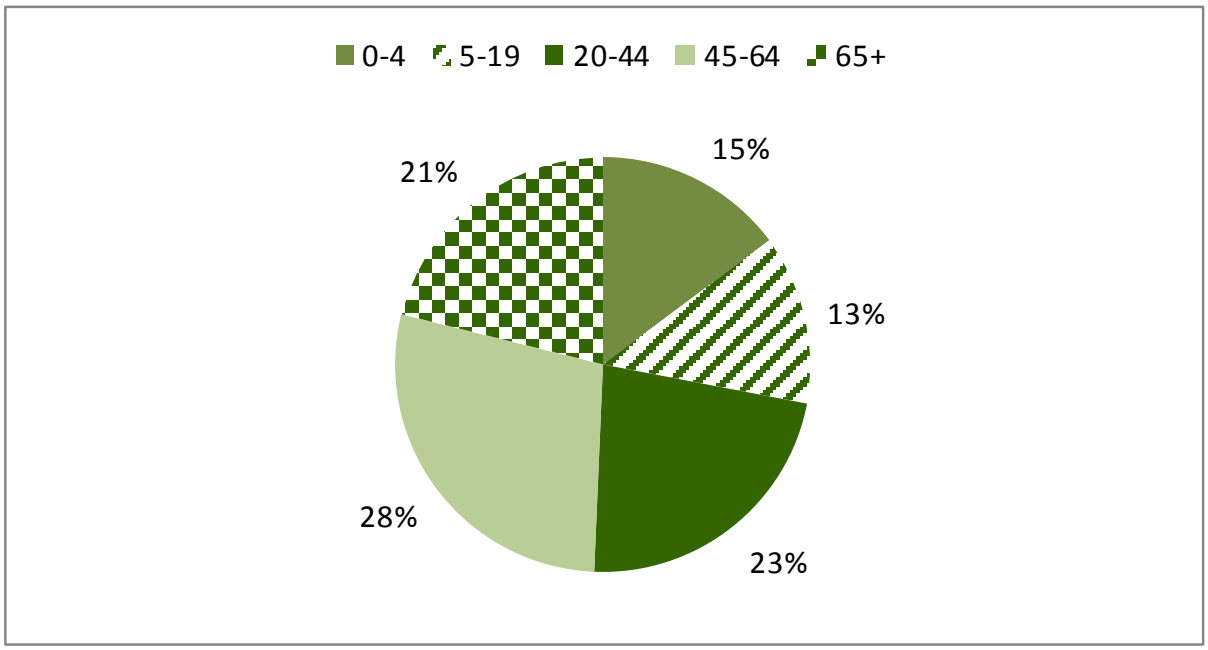

Figure 3: Number of laboratory-confirmed influenza cases in NL, by age group, 2015/2016

Table 1: Number and percent of influenza cases, hospitalizations, ICU admissions and deaths, by sex, 2015/2016

	Cases	Hospitalizations	ICU Admissions	Deaths
Female	285 (54.7)	111 (50.9)	27 (55.1)	5 (62.5)
Male	236 (45.3)	107 (49.1)	22 (44.9)	3 (37.5)
Total	521	218	49	8

Influenza Strain

⇒ Influenza A was the predominant strain during the 2015/2016 season in NL and accounted for 95.4% of cases. Influenza B (4.6% of cases) appeared later in the season. The majority of those subtyped were A(H1N1). Both B/Yamagata and B/Victoria viruses were found to be circulating in NL.

⇒ Across Canada, influenza A accounted for approximately 72% of laboratory-confirmed cases; the majority of those sub-typed were A(H1N1).

⇒ Over the 2015/2016 season, the National Microbiology Laboratory tested influenza A and B isolates for antiviral resistance. All viruses were sensitive to zanamivir; 10 influenza viruses were resistant to oseltamivir. All but two A isolates was resistant to amantadine (Table 3).

Table 2: Number and percent of influenza cases, hospitalizations, ICU admissions and deaths, by type, 2015/2016

Flu Type	Cases	Hospitalizations	ICU Admissions	Deaths
A	497 (95.4)	204 (93.6)	44 (89.8)	8 (100)
B	25 (4.6)	14 (6.4)	5 (10.2)	0 (0)

Table 3: Cumulative antiviral resistance by influenza virus type and sub-type, Canada, 2015/2016

	Oseltamivir			Zanamivir			Amantadine		
	Tested	Resistant		Tested	Resistant		Tested	Resistant	
	#	#	%	#	#	%	#	#	%
A (H3N2)	185	0	0	185	0	0	237	236	99.6
A (H1N1)	1092	10	0.9	1092	0	0	1454	1453	99.9
B	689	0	0	689	0	0	--	--	--
Total	1966	10	0.5	1966	0	0	1633	1631	99.9

Source: Influenza and Respiratory Viruses Section, National Microbiology Laboratory (NML), Public Health Agency of Canada

Immunization

⇒ In NL, influenza vaccine is offered to all individuals six months of age and older. The flu vaccine is especially important for those who are at high risk of complications from the flu such as individuals with underlying health conditions. For more information visit http://www.health.gov.nl.ca/health/publichealth/cdc/infoforpros_edu.html

⇒ The National Microbiology Laboratory (NML) antigenically characterized 1,450 influenza A (H1N1) (viruses that were received from Canadian laboratories during the 2015/2016 influenza season. Analysis completed by the NML indicates that all A(H1N1) viruses characterized were antigenically similar to the A(H1N1) component of the vaccine.

⇒ Of the A(H3N2) viruses tested by the NML, most were antigenically related to the A(H3N2) component of the vaccine.

⇒ All B viruses characterized were antigenically similar to one of the two vaccine components in the quadrivalent influenza vaccine. The quadrivalent influenza vaccine was available in this province.

Outbreak Reports (CNPHI: Outbreak Summaries)

⇒ There were 53 respiratory outbreaks during the 2015/2016 season. Of these, 10 were confirmed influenza outbreaks (Figure 4). This is a sharp decrease from the 2014/2015 season; 58 confirmed influenza outbreaks were reported.

⇒ Outbreaks occurred in all regions; the majority of which were during March.

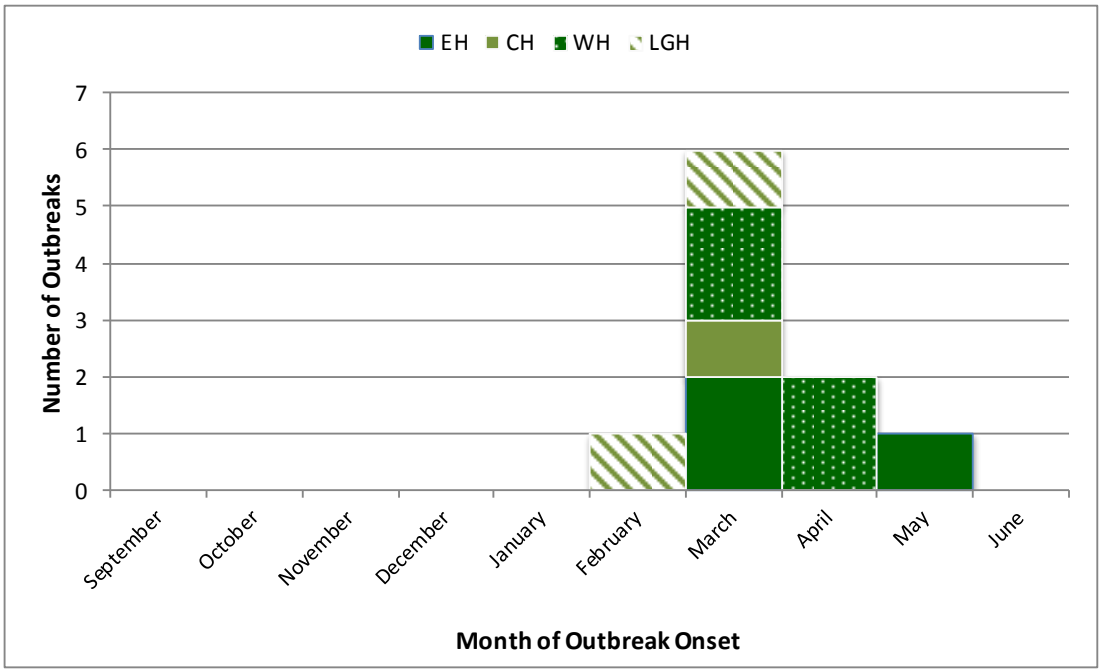

Figure 5: Number of confirmed influenza outbreaks reported in Canadian Network for Public Health Intelligence (CNPHI) Outbreak Summaries by month of onset of outbreak, by Regional Health Authority, 2015/2016 season

Other Respiratory Viruses

⇒ In addition to influenza, there were a number of other respiratory viruses circulating during the 2015/2016 season (Table 4). The most predominant virus other than influenza was rhinovirus.

Table 4: Number of positive respiratory virus specimens, by type, 2015/2016 season, NL.[1]

	Total
R.S.V.	134
Parainfluenza virus 1	41
Parainfluenza virus 2	2
Parainfluenza virus 3	20
Adenovirus	95
Rhinovirus	201
hMPV	99

[1]Source: Respiratory Virus Detections/Isolations for the period August 30, 2015 - June 20, 2016, Public Health Agency of Canada

Syndromic Surveillance (HealthLine, GoogleFlu)

⇒ Influenza-related HealthLine calls are consistent with the peak of the 2015/2016 influenza season (Figure 6).

⇒ Most callers to HealthLine were advised to see their family physician (50%) or to care for themselves at home (30%) (Figure 7).

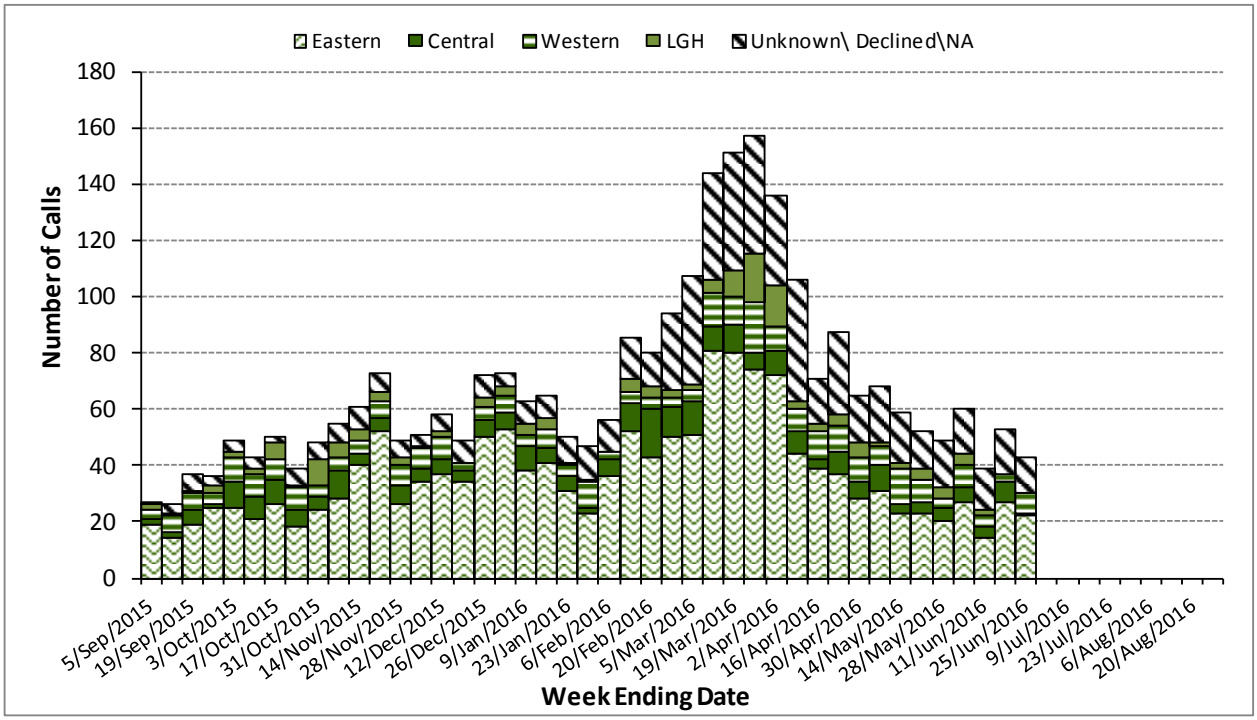

Figure 6: Number of influenza-related HealthLine calls by report week and disposition 2015/2016 season

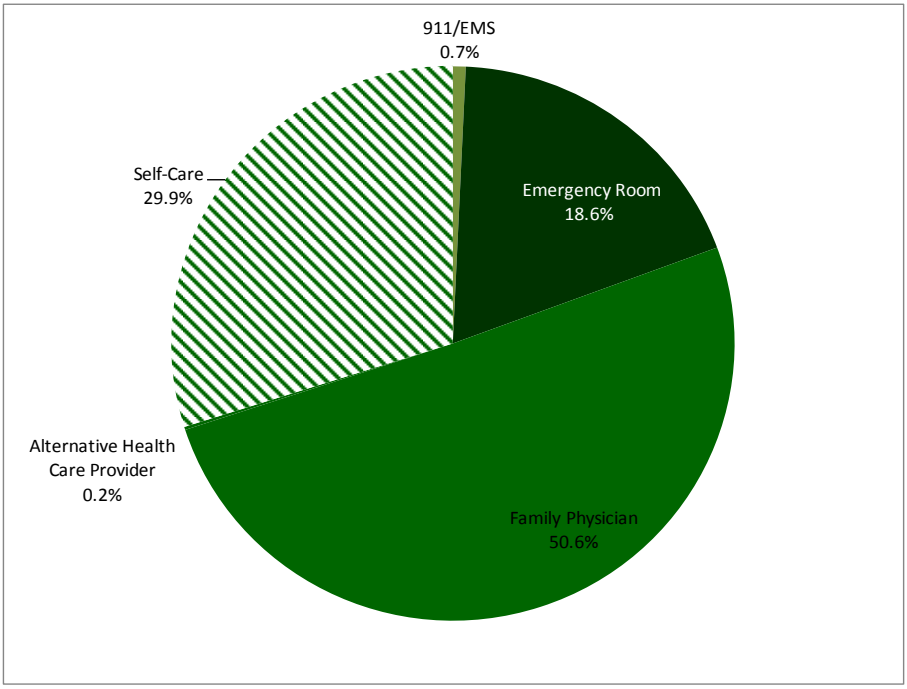

Figure 7: Influenza-related HealthLine calls by disposition, 2015/2016 season

Data Sources and Disclaimer

Influenza case data is from the Communicable Disease Control influenza reporting tool: case counts are available from Influenza Weekly Reports, located at:
http://www.health.gov.nl.ca/health/publichealth/cdc/informationandsurveillance.html#influenza

FluWatch and influenza outbreak data are from the Canadian Network for Public Health Intelligence (CNPHI).

HealthLine data are from the NL HealthLine: http://yourhealthline.ca

Note: The data presented here are from September 2015 to June 2016 (as of June 30, 2016); report weeks from various sources may not align exactly. Fluctuations in data occur with each report and can be attributed to continuous updating. Death surveillance is passive and may underestimate the true number of influenza-related deaths in NL.

All laboratory-confirmed influenza and severe respiratory illness (SRI) are reported to the Regional Medical Officer of Health (RMOH) or designate responsible for appropriate investigation, treatment, case follow up and provincial reporting.

For more information on influenza in Canada see the Public Health Agency of Canada website: http://healthycanadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/flu-grippe/surveillance/index-eng.php