

2018/2019 INFLUENZA REPORT

Overview

- ⇒ There were 1033 laboratory-confirmed cases of influenza during the 2018/2019 season. Of these cases, there were 270 hospitalizations, 63 ICU admissions and 27 influenza-related deaths (Table 1).
- ⇒ This season peaked in week 14 (first week of April), 4 to 6 weeks later compared to the 5-year average (Figure 1).
- ⇒ Influenza A was the predominant virus circulating across all regional health authorities, accounting for 98.9% of all laboratory-confirmed cases (Figure 2).

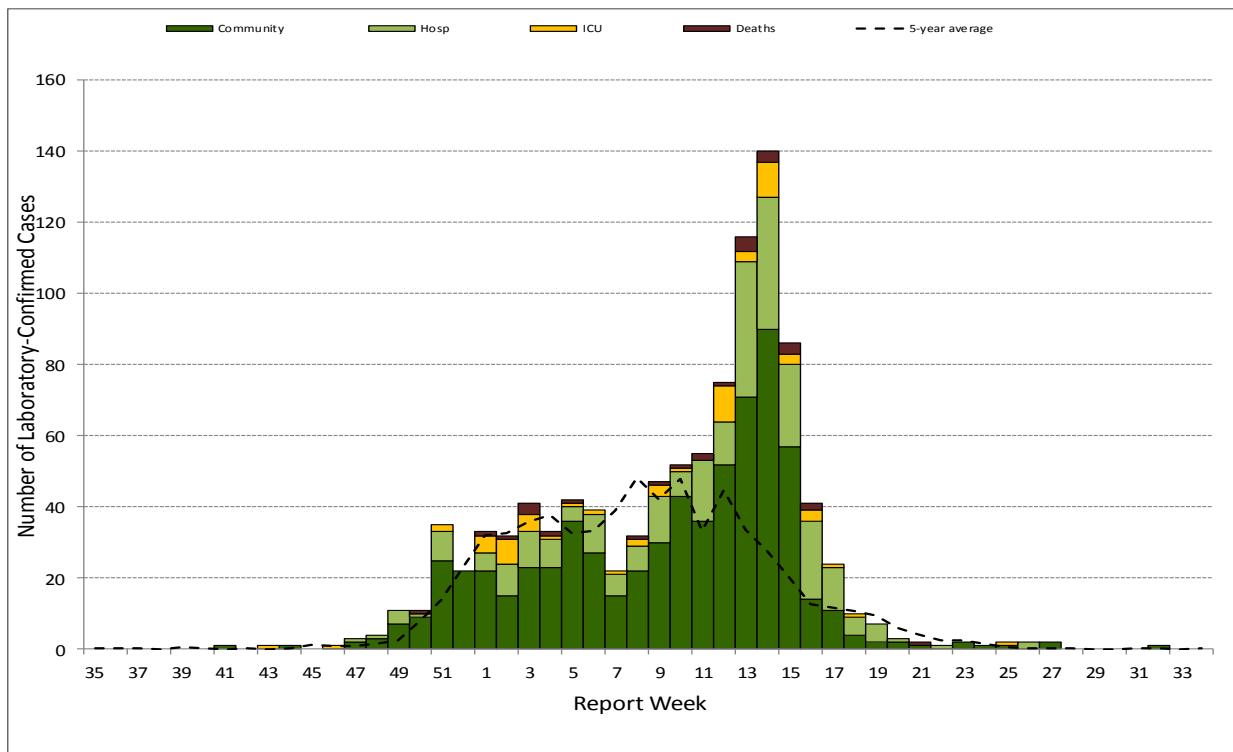


Figure 1: Number of cases, hospitalizations, ICU admissions and deaths, by week virus identified, NL, 2018/2019

- ⇒ Adults aged 20-64 years accounted for the largest proportion of cases overall (45%), followed by adults aged 65 and above (33%). Those less than 20 years of age accounted for 23% of lab-confirmed cases (Figure 3).
- ⇒ The average age of confirmed cases was highest for those who had died:
 - ⇒ Cases, mean: 47.5 years
 - ⇒ Hospitalizations, mean: 57.6 years
 - ⇒ ICU admissions, mean: 56.6 years
 - ⇒ Deaths, mean: 74.4 years
- ⇒ Over half (59.5%) of laboratory-confirmed cases were female, and they accounted for 53.3% of hospitalizations, 60.3% of ICU admissions and 48.1% of deaths (Table 1).

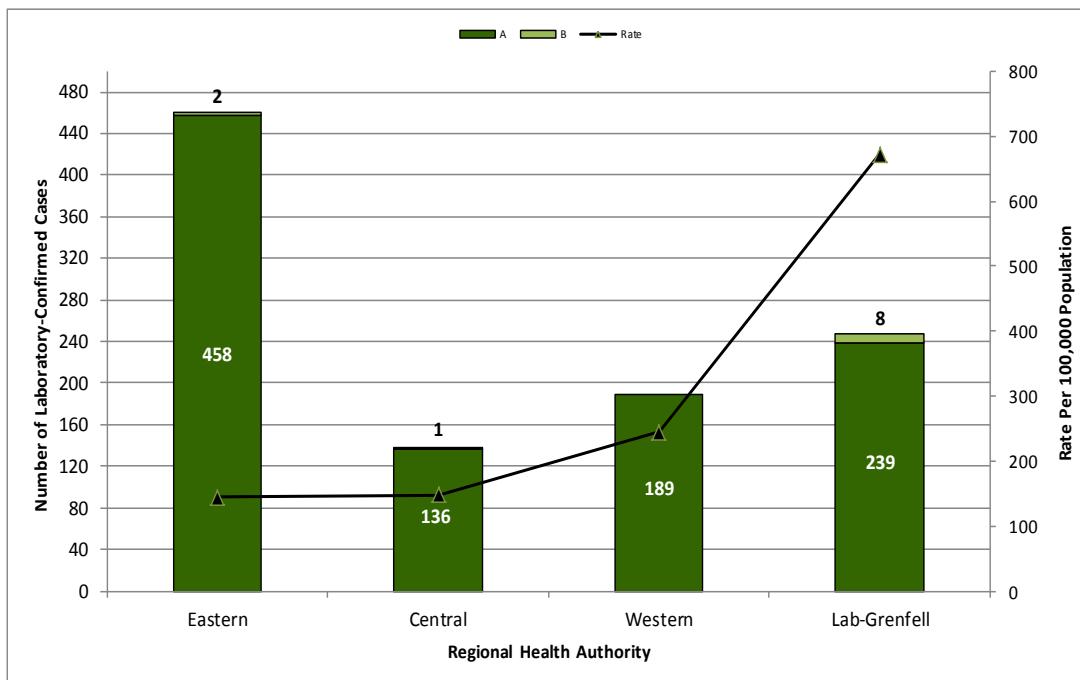


Figure 2: Total number of laboratory-confirmed influenza A and B, by RHA, 2018/2019

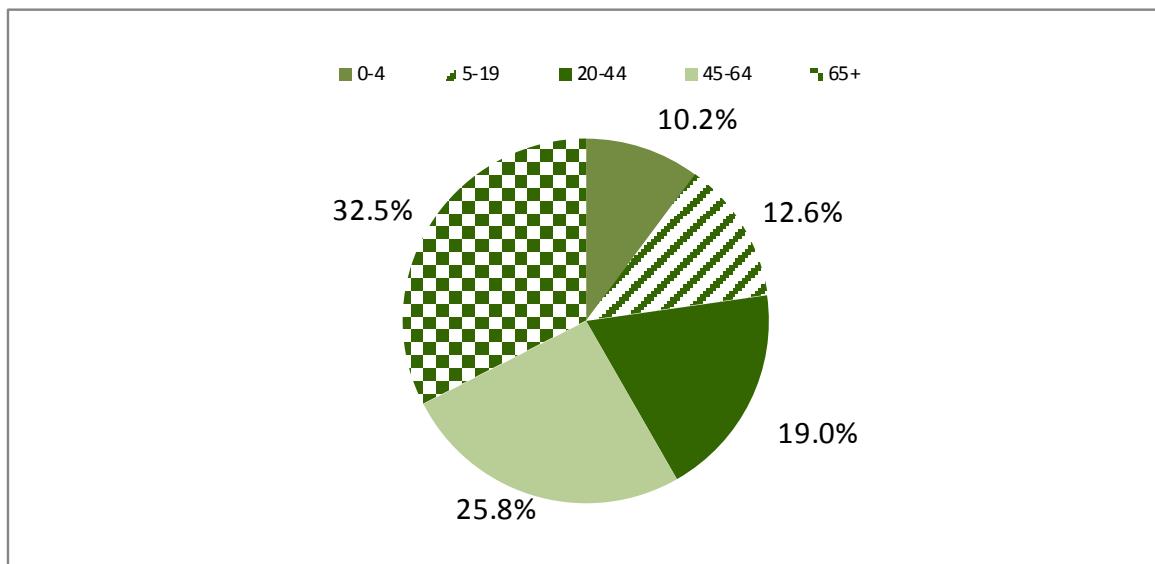


Figure 3: Number of laboratory-confirmed influenza cases, by age group, NL, 2018/2019

Table 1: Number and percent of influenza cases, hospitalizations, ICU admissions and deaths, by sex, NL, 2018/2019

	Cases	Hospitalizations	ICU Admissions	Deaths
Female	615 (59.5)	144 (53.3)	38 (60.3)	13 (48.1)
Male	418 (40.5)	126 (46.7)	25 (39.7)	14 (51.9)
Total	1033	270	63	27

Influenza Strain

- ⇒ Influenza A was the predominant strain during the 2018/2019 season in NL. Of cases, 98.9% were influenza A and 1.1% were influenza B (Table 2). Fewer influenza B detections have been reported this season compared to recent seasons.
- ⇒ Across Canada, influenza A accounted for 95.3% of laboratory-confirmed cases, of which subtype A(H1N1)pdm 09 was the most common.
- ⇒ Over the 2018/2019 season, the National Microbiology Laboratory tested influenza A and B viruses for antiviral resistance: 4 viruses were resistant to oseltamivir (Table 3).

Table 2: Number and percent of influenza cases, hospitalizations, ICU admissions and deaths, by type, NL, 2018/2019

Flu Type	Cases	Hospitalizations	ICU Admissions	Deaths
A	1022 (98.9)	267 (98.9)	62 (98.4)	27 (100.0)
B	11 (1.1)	3 (1.1)	1 (1.6)	0 (0.0)
Total	1033	270	63	27

Table 3: Cumulative antiviral resistance by influenza virus type and sub-type, Canada, 2018/2019

	Oseltamivir			Zanamivir			Amantadine		
	Tested	Resistant		Tested	Resistant		Tested	Resistant	
		#	%		#	%		#	%
A (H3N2)	220	0	0.0	220	0	0.0	134	134	100
A (H1N1)	1082	4	0.4	1080	0	0.0	389	389	100
B	142	0	0.0	142	0	0.0	--	--	--
Total	1444	4	0.3	1442	0	0.0	523	523	100

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

Immunization

- ⇒ Influenza immunization history is collected (when available) for lab-confirmed cases that result in a hospitalization or death. Of these cases, 15.6% reported receiving the 2018/2019 influenza seasonal vaccine, 61.9% reported no immunization, and 22.5% had unknown immunization status.
- ⇒ 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) characterized antigenically 2274 influenza viruses (378 H3N2, 1656 H1N1 and 240 B viruses) during the 2018/2019 influenza season. The majority of H3N2 and H1N1 viruses were antigenically similar to the vaccine strain. Of the influenza B viruses characterized, 30% were antigenically similar to one of the two vaccine components in the quadrivalent flu vaccine.

Note: The NML receives a proportion of the influenza positive specimens from provincial laboratories for strain characterization and antiviral resistance testing. Strain characterization data reflect the results of hemagglutination inhibition (HI) testing compared to the reference influenza strains recommended by WHO.

Outbreak Reports (CNPHI: Outbreak Summaries)

- ⇒ There were 150 respiratory outbreaks during the 2018/2019 season. Of these, 37 were confirmed influenza A outbreaks (Figure 4). There were no confirmed influenza B outbreaks.
- ⇒ Outbreaks occurred in all regions, peaking in March.

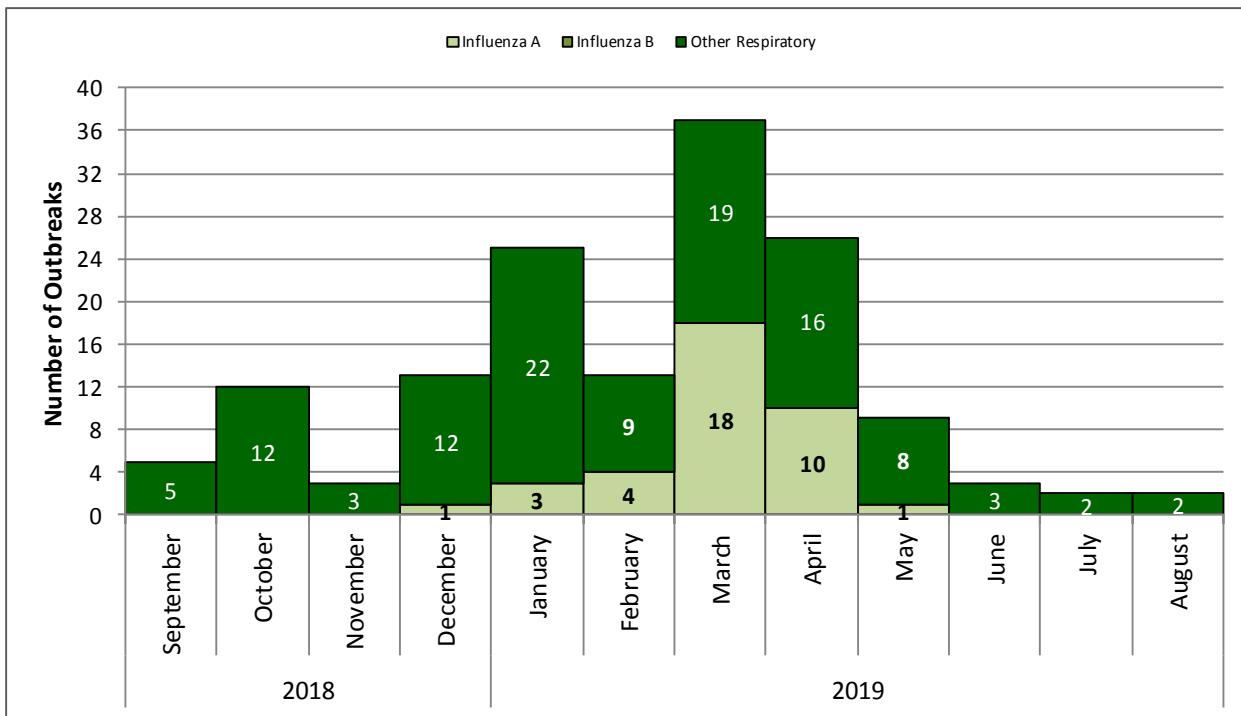


Figure 4: Number of confirmed influenza outbreaks reported in Canadian Network for Public Health

Other Respiratory Viruses

- ⇒ In addition to influenza, there were a number of other respiratory viruses circulating during the 2018/2019 season (Table 4). The most predominant virus other than influenza was RSV.

Table 4: Number of positive respiratory virus specimens, by type, NL, 2018/2019 season¹

	Total
R.S.V.	490
Parainfluenza virus 1	11
Parainfluenza virus 2	59
Parainfluenza virus 3	202
Adenovirus	52
Enterov/Rhinovirus	395
hMPV	230



¹Source: Respiratory Virus Detections/Isolations for the period August 26, 2018- August 24, 2019, Public Health Agency of Canada

Syndromic Surveillance

- ⇒ Influenza-related HealthLine calls are consistent with the peak of the 2018/2019 influenza season (Figure 5).
- ⇒ Most callers to HealthLine were advised to see their family physician (48.0%) or to care for themselves at home (33.8%) (Figure 6).

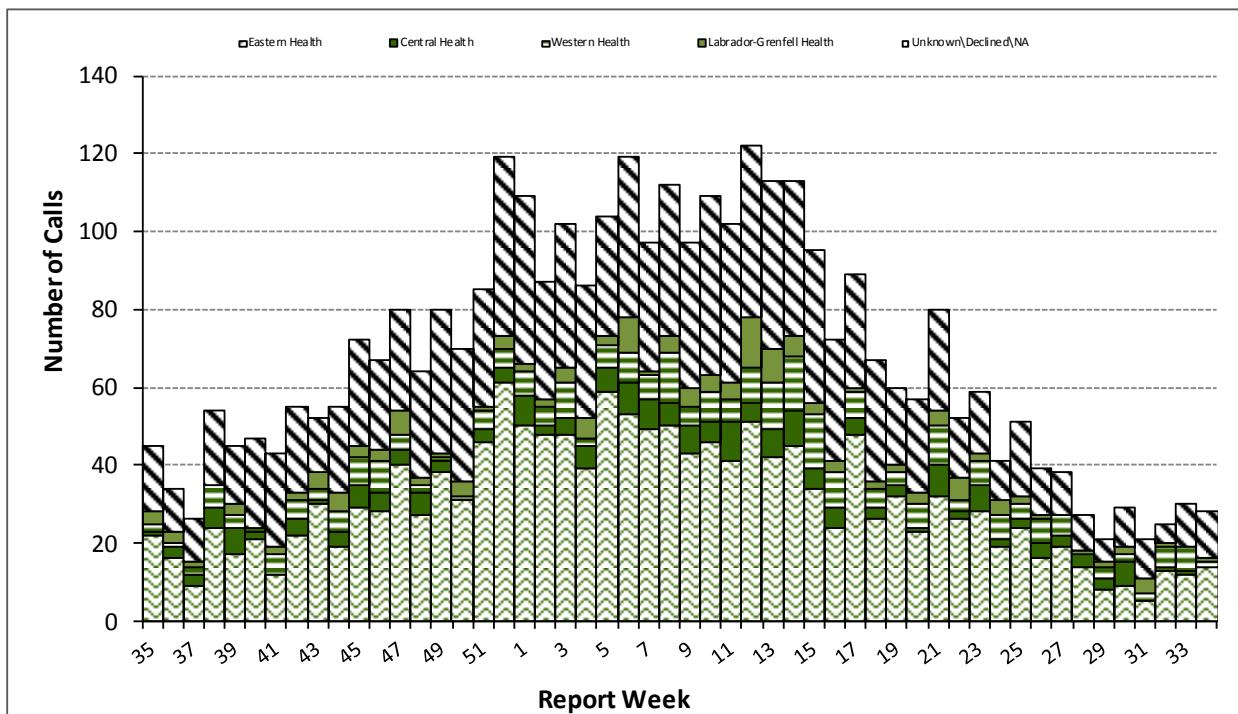


Figure 5: Number of influenza-related HealthLine calls by report week and RHA, 2018/2019 season

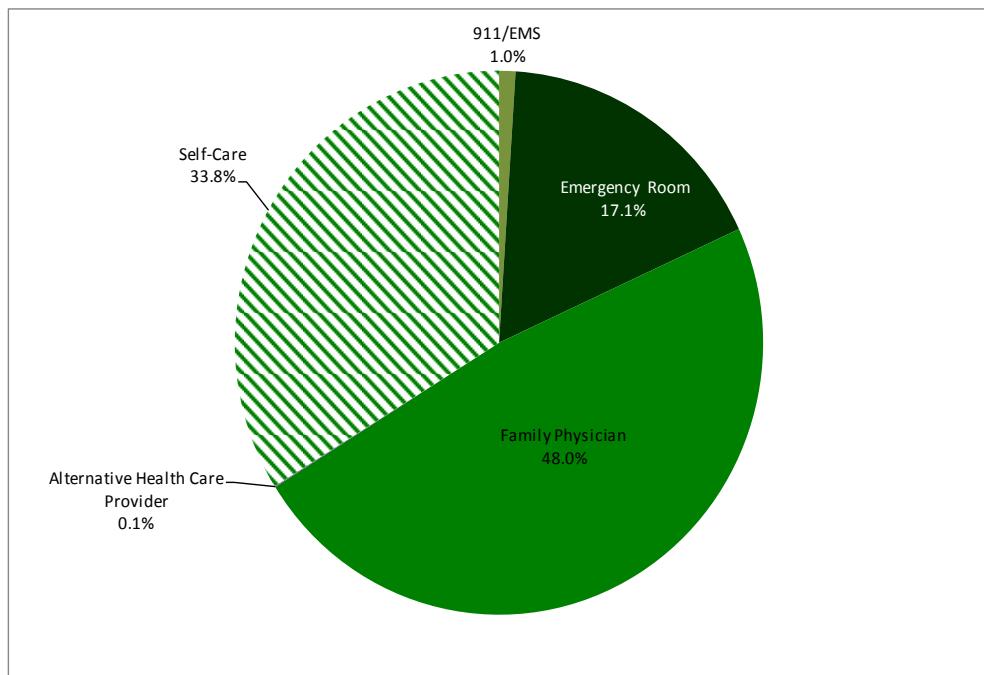


Figure 6: Influenza-related HealthLine calls by disposition, NL, 2018/2019 season

Emergency Department Influenza-like-illness

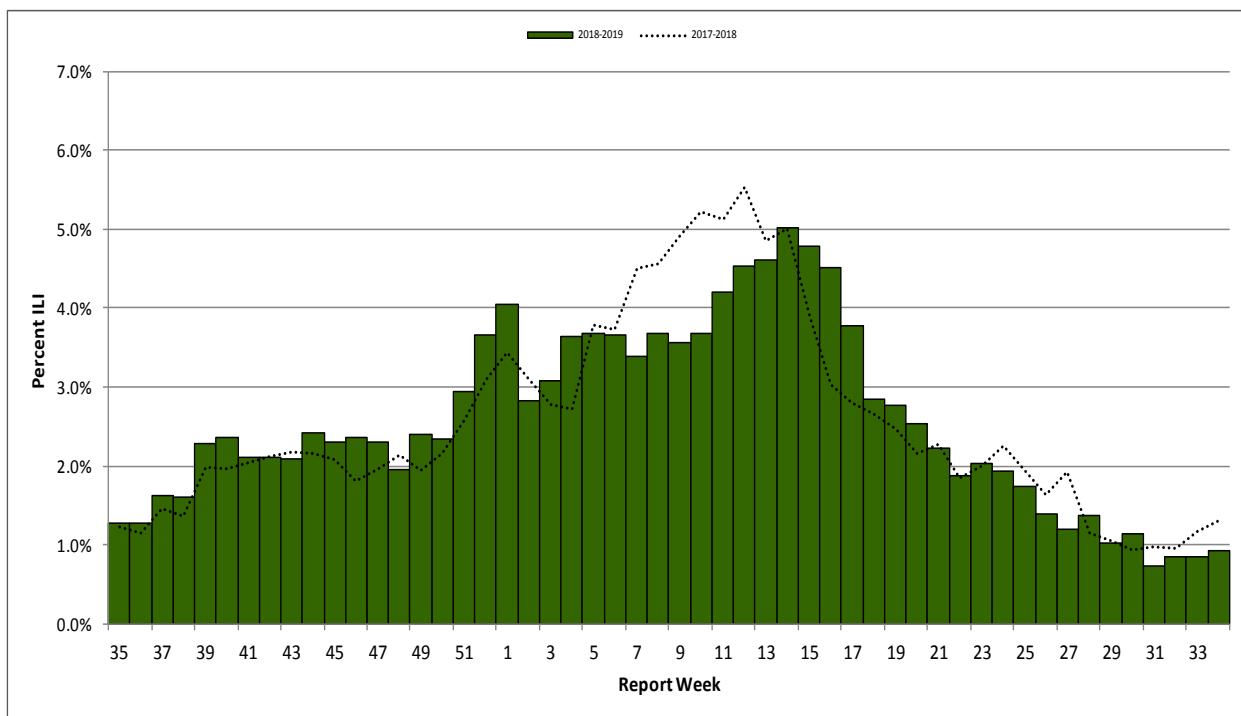


Figure 7: Percent of emergency department visits with ILI by report week, NL, 2018-2019

⇒ The percentage of emergency room visits with Influenza-like-illness is consistent with the peak of the 2018/2019 influenza season (Figure 7).

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 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 August 26, 2018 - August 24, 2019; 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>