

2019/2020 INFLUENZA REPORT

Overview

- ⇒ There were 708 laboratory-confirmed cases of influenza during the 2019/2020 season. Of these cases, there were 92 hospitalizations, 17 ICU admissions and 9 influenza-related deaths (Table 1).
- ⇒ This season peaked in week 10 (first week of March) (Figure 1).
- ⇒ Influenza B was the predominant virus circulating across all regional health authorities, accounting for 70.9% of all laboratory-confirmed cases (Figure 2). This strain typically affects children, young adults and middle-aged adults.
- ⇒ Influenza indicators may have been influenced by the COVID-19 pandemic, due to public health measures and changes in health-seeking behaviour.

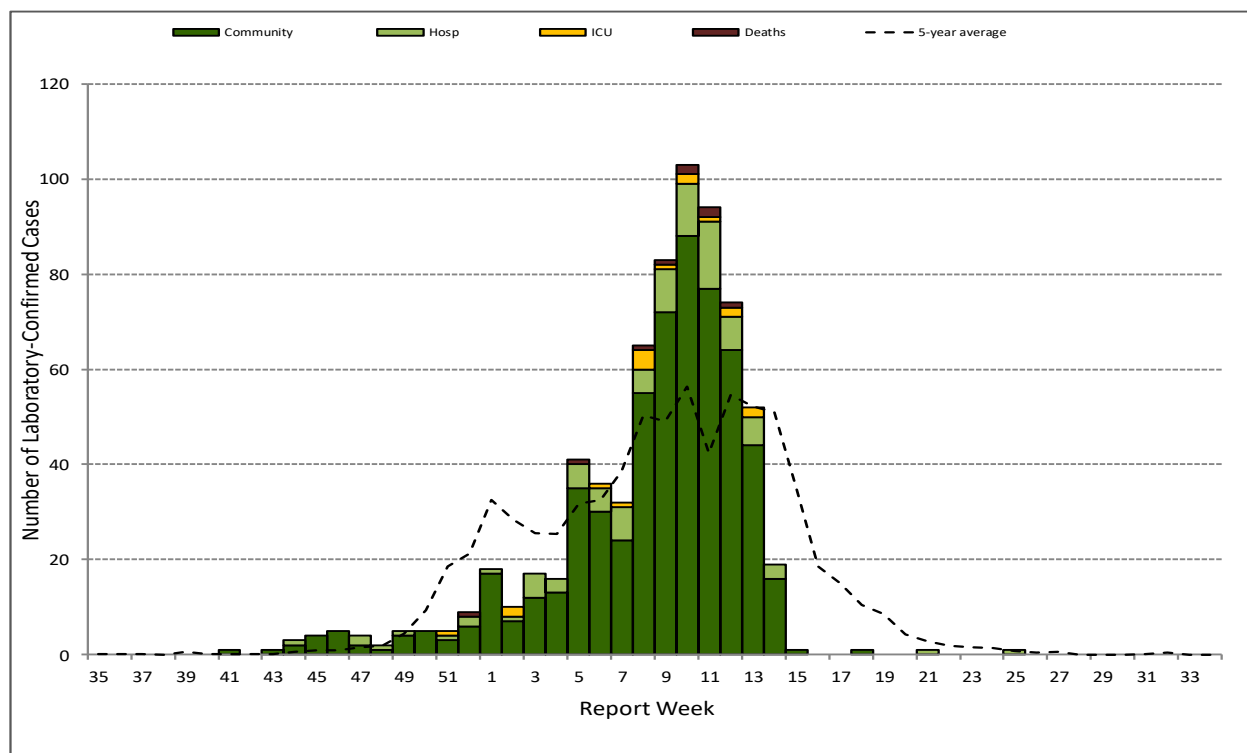


Figure 1: Number of cases, hospitalizations, ICU admissions and deaths, by week virus identified, NL, 2019/2020

- ⇒ Adults aged 20-64 years accounted for the largest proportion of cases overall (48%), followed by those less than 20 years of age (38%). Those aged 65 years and older accounted for 14% of lab-confirmed cases (Figure 3).
- ⇒ The average age of confirmed cases was highest for those who had died:
 - ⇒ Cases, mean: 33.4 years
 - ⇒ Hospitalizations, mean: 43.8 years
 - ⇒ ICU admissions, mean: 47.9 years
 - ⇒ Deaths, mean: 73.6 years
- ⇒ Over half (54.1%) of laboratory-confirmed cases were female, and they accounted for 52.2% of hospitalizations, 64.7% of ICU admissions and 33.3% of deaths (Table 1).

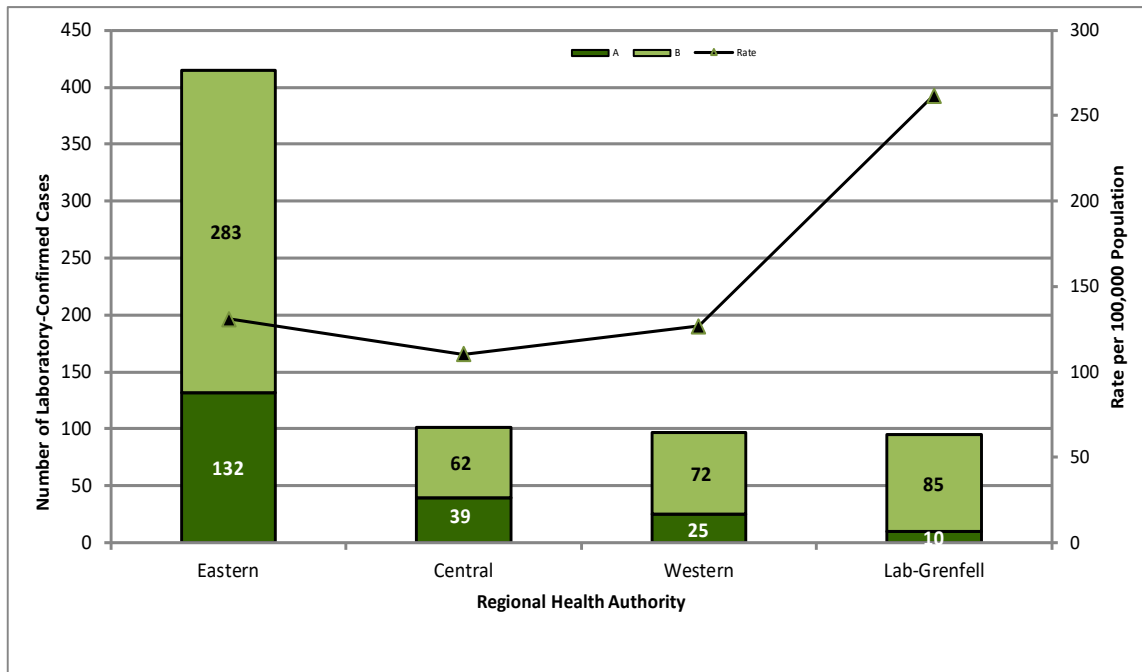


Figure 2: Total number of laboratory-confirmed influenza A and B, by RHA, 2019/2020

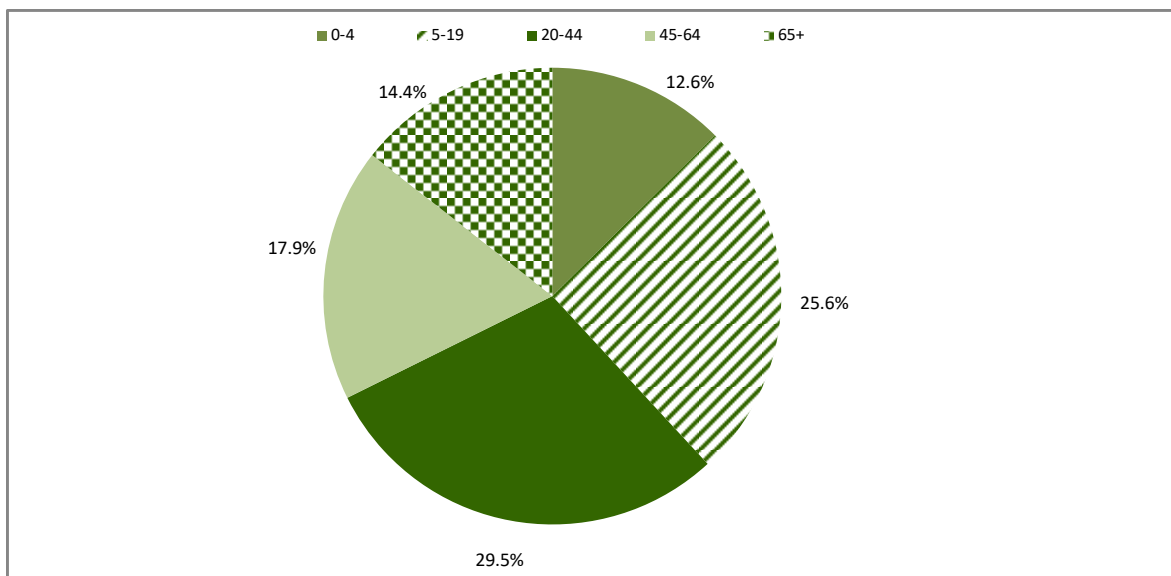


Figure 3: Number of laboratory-confirmed influenza cases, by age group, NL, 2019/2020

Table 1: Number and percent of influenza cases, hospitalizations, ICU admissions and deaths, by sex, NL, 2019/2020

	Cases	Hospitalizations	ICU Admissions	Deaths
Female	383 (54.1)	48 (52.2)	11 (64.7)	3 (33.3)
Male	325 (45.9)	44 (47.8)	6 (35.3)	6 (66.7)
Total	708	92	17	9

Influenza Strain

- ⇒ Influenza B was the predominant strain during the 2019/2020 season in NL. Of cases, 70.9% were influenza B and 29.1% were influenza A (Table 2). This dominance of influenza B circulation has not been observed in recent years.
- ⇒ Across Canada, influenza A accounted for 59% of laboratory-confirmed cases, of which sub-type A(H1N1)pdm 09 was the most common.
- ⇒ Over the 2019/2020 season, the National Microbiology Laboratory tested 733 influenza A and B viruses for antiviral resistance: one virus was resistant to oseltamivir (Table 3).

Table 2: Number and percent of influenza cases, hospitalizations, ICU admissions and deaths, by type, NL, 2019/2020

Flu Type	Cases	Hospitalizations	ICU Admissions	Deaths
A	203 (28.7)	38 (41.3)	4 (23.5)	4 (44.4)
B	505 (71.3)	54 (58.7)	13 (76.5)	5 (55.6)
Total	708	92	17	9

Table 3: Cumulative antiviral resistance by influenza virus type and sub-type, Canada, 2019/2020

	Oseltamivir			Zanamivir			Amantadine		
	Tested	Resistant		Tested	Resistant		Tested	Resistant	
	#	#	%	#	#	%	#	#	%
A (H3N2)	164	0	0.0	164	0	0.0	--	--	--
A (H1N1)	283	1	0.4	283	0	0.0	--	--	--
B	286	0	0.0	286	0	0.0	--	--	--
Total	733	1	0.1	733	0	0.0	--	--	--

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, 14.9% reported receiving the 2019/2020 influenza seasonal vaccine, 55.3% reported no immunization, and 29.8% 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 1053 influenza viruses (109 H3N2, 760 H1N1 and 184 B viruses) during the 2019/2020 influenza season. Of the H3N2 and H1N1 viruses characterized, 21% and 50%, respectively, were antigenically similar to the vaccine strain. Of the influenza B viruses characterized, 12% 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 108 respiratory outbreaks during the 2019/2020 season. Of these, 2 were confirmed influenza A outbreaks and 4 were confirmed influenza B outbreaks (Figure 4).
- ⇒ Outbreaks occurred in all regions, peaking in March.

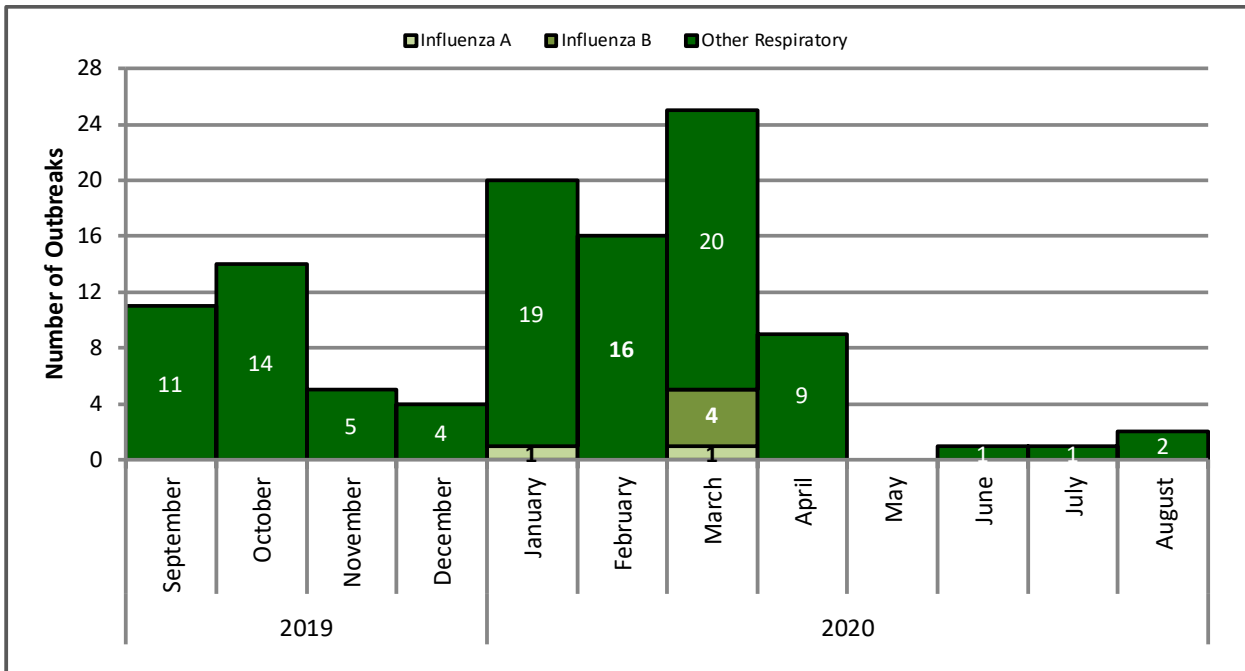


Figure 4: Number of confirmed influenza outbreaks reported in Canadian Network for Public Health Intelligence (CNPHI) Outbreak Summaries by month of onset of outbreak, NL, 2019/2020 season

Other Respiratory Viruses

- ⇒ In addition to influenza, there were a number of other respiratory viruses circulating during the 2019/2020 season (Table 4). The most predominant virus other than influenza was Enterovirus/Rhinovirus.

Table 4: Number of positive respiratory virus specimens, by type, NL, 2019/2020 season¹

	Total
R.S.V.	339
Parainfluenza virus 1	149
Parainfluenza virus 2	2
Parainfluenza virus 3	13
Adenovirus	126
Enterovirus/Rhinovirus	402
hMPV	190



¹Source: Respiratory Virus Detections/Isolations for the period August 25, 2019- August 22, 2020, Public Health Agency of Canada

Syndromic Surveillance

- ⇒ The COVID-19 pandemic impacted the symptomatic respiratory HealthLine calls during the latter half of the 2019/2020 influenza season (Figure 5). A significant increase in calls was observed in the beginning of March as the pandemic approached and the public were encouraged to call 811.
- ⇒ Most callers to HealthLine were advised to see their family physician (48.4%) or to care for themselves at home (39.7%) (Figure 6).

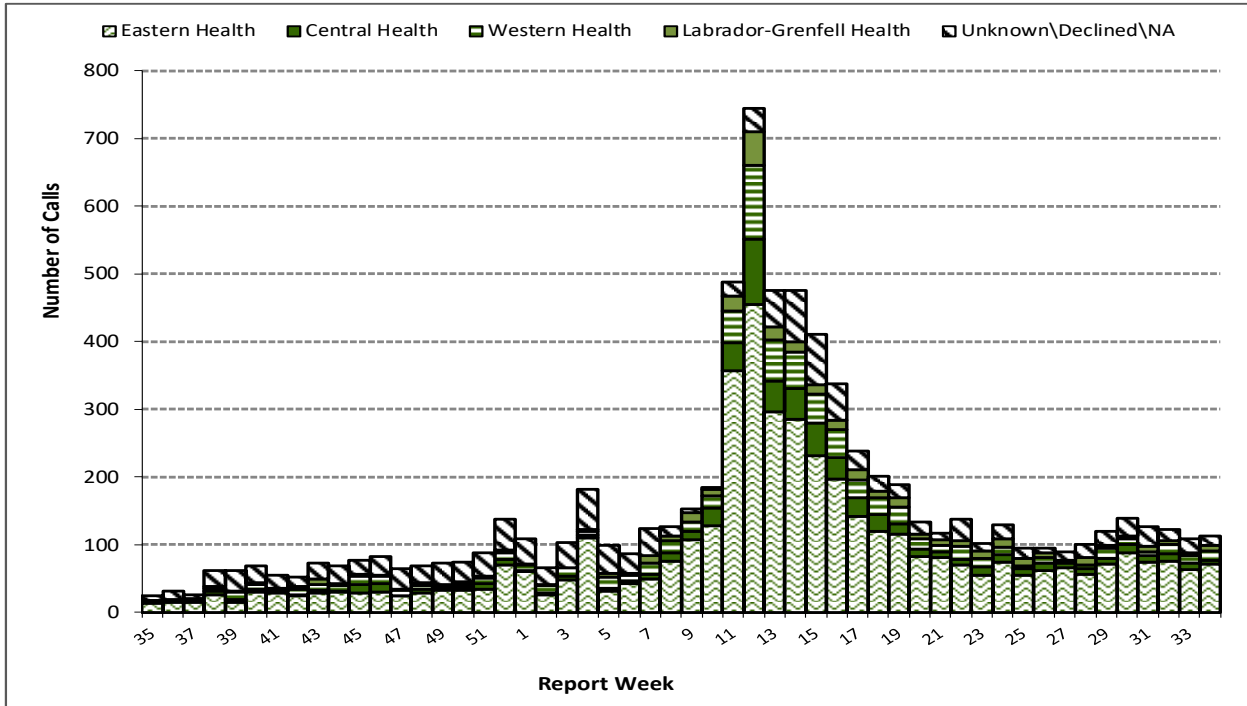


Figure 5: Number of symptomatic respiratory HealthLine calls by report week and RHA, 2019/2020 season

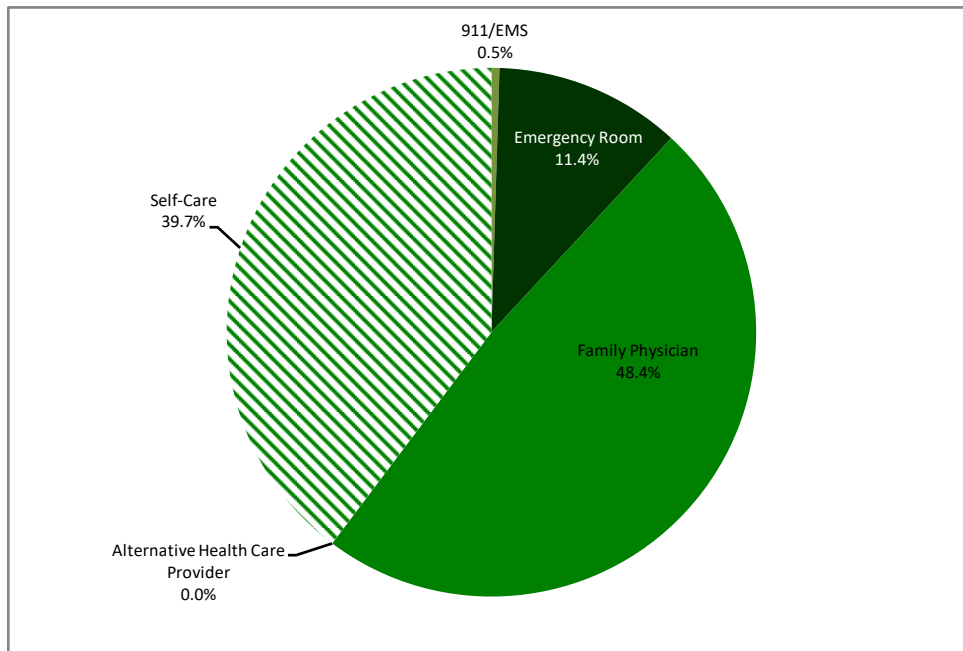


Figure 6: Symptomatic respiratory HealthLine calls by disposition, NL, 2019/2020 season

Emergency Department Influenza-like-illness

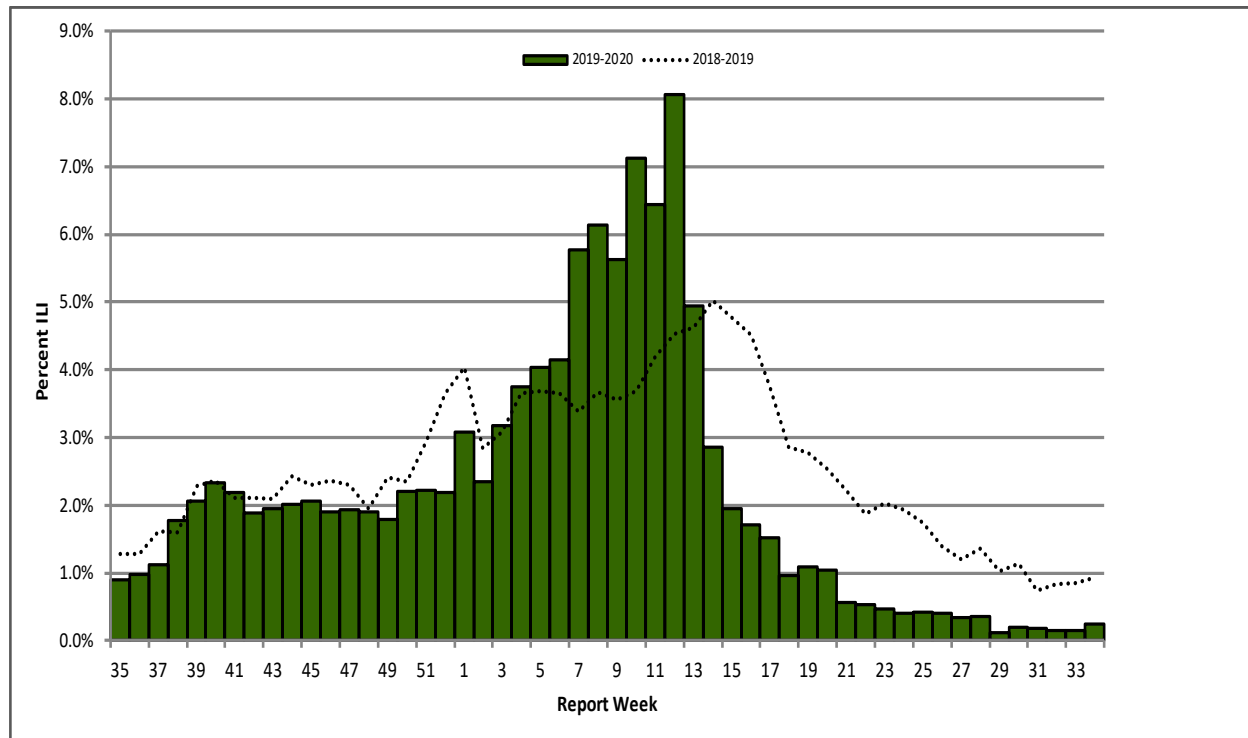


Figure 7: Percent of emergency department visits with ILI by report week, NL, 2019-2020

⇒ The percentage of emergency room visits with Influenza-like-illness is consistent with the peak of the 2019/2020 influenza season (Figure 7). However, public health measures and changes in healthcare-seeking behavior as a result of the COVID-19 pandemic contributed to the abrupt decline in emergency department visits due to ILI.

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 25, 2019 - August 22, 2020; 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>