



PEI RESPIRATORY ILLNESS 2023-24 SEASON SUMMARY

CHIEF PUBLIC HEALTH OFFICE

AUGUST 27, 2023 TO MAY 4, 2024

The surveillance period for the 2023-24 PEI Respiratory Illness Season Summary started on August 27, 2023 (epidemiological week 35-2023) and ended on May 4, 2024 (epidemiological week 18-2024). Surveillance weeks correspond to the [Public Health Agency of Canada \(PHAC\) influenza surveillance weeks](#). While COVID-19 is not yet recognized as a seasonal respiratory virus, unlike influenza and RSV, data for COVID-19 are reported according to the surveillance period established for influenza.

SUMMARY

- Overall, respiratory illness activity was highest from late December 2023 to mid-January 2024 but patterns of activity differed for the different viruses.
 - COVID-19 remained active throughout the respiratory illness season with the highest activity occurring between October and February.
 - Influenza A activity began in November with peak activity occurring from the last week of December to the middle of January. Influenza A detections decreased to sporadic by mid-March.
 - Influenza B was first detected in mid-January and activity peaked from the middle of March to the end of March. Influenza B detections decreased to sporadic by late April.
 - RSV activity steadily increased starting mid-November. Activity peaked from late January to early February and then gradually decreased with only sporadic detections by April.
- Hospitalizations and deaths:
 - For COVID-19, the rate of hospitalizations was notably highest among those aged 65 years and older;
 - For influenza, the rate of hospitalizations was highest among those ages 65 years and older, followed by those aged 0 to 19 years;
 - For RSV, the rate of hospitalizations was highest among those aged 0 to 19 years;
 - Comparing all three respiratory viruses, the rates of hospitalizations were highest for COVID-19 patients aged 65 years and older (214 hospitalizations per 100,000 population) and RSV patients aged 0 to 19 years (213 hospitalizations per 100,000 population).
 - Of the patients that were hospitalized for COVID-19, 78% were not up-to date with their COVID-19 immunizations and of the patients hospitalized for influenza, 73% had not received the 2023-24 seasonal influenza vaccine.
 - The average and median length of a hospital stay was longer for a patient hospitalized for COVID-19 (average: 11.4 days / median: 7 days) than a patient hospitalized for influenza (average: 7.5 days / median: 4 days) or RSV (average: 6.6 days / median: 4 days).
 - There were more deaths reported due to COVID-19 (n = 14) and influenza (n = 11) than for RSV (n = 3). Overall, 81% of the deaths due to the three respiratory viruses occurred among those aged 65 years and older and none occurred in the youngest age group (0 to 19 years).
- Outbreaks:
 - Outbreaks due to COVID-19 were more frequent than outbreaks due to influenza or RSV. There were more outbreaks declared in long-term care and community care settings than in the other surveillance settings. It is important to note that due to increased testing and surveillance, case detection and outbreak detection is more likely long-term care and community care settings than in other settings and therefore it is not surprising that more outbreaks were declared in these settings.

EPIDEMIOLOGICAL CURVE AND TEST POSITIVITY

Figure 1. Weekly respiratory illness case count and test positivity by respiratory virus, PEI, August 27, 2023 to May 4, 2024

Influenza/RSV/COVID-19, 2023-24 Respiratory Season, PEI

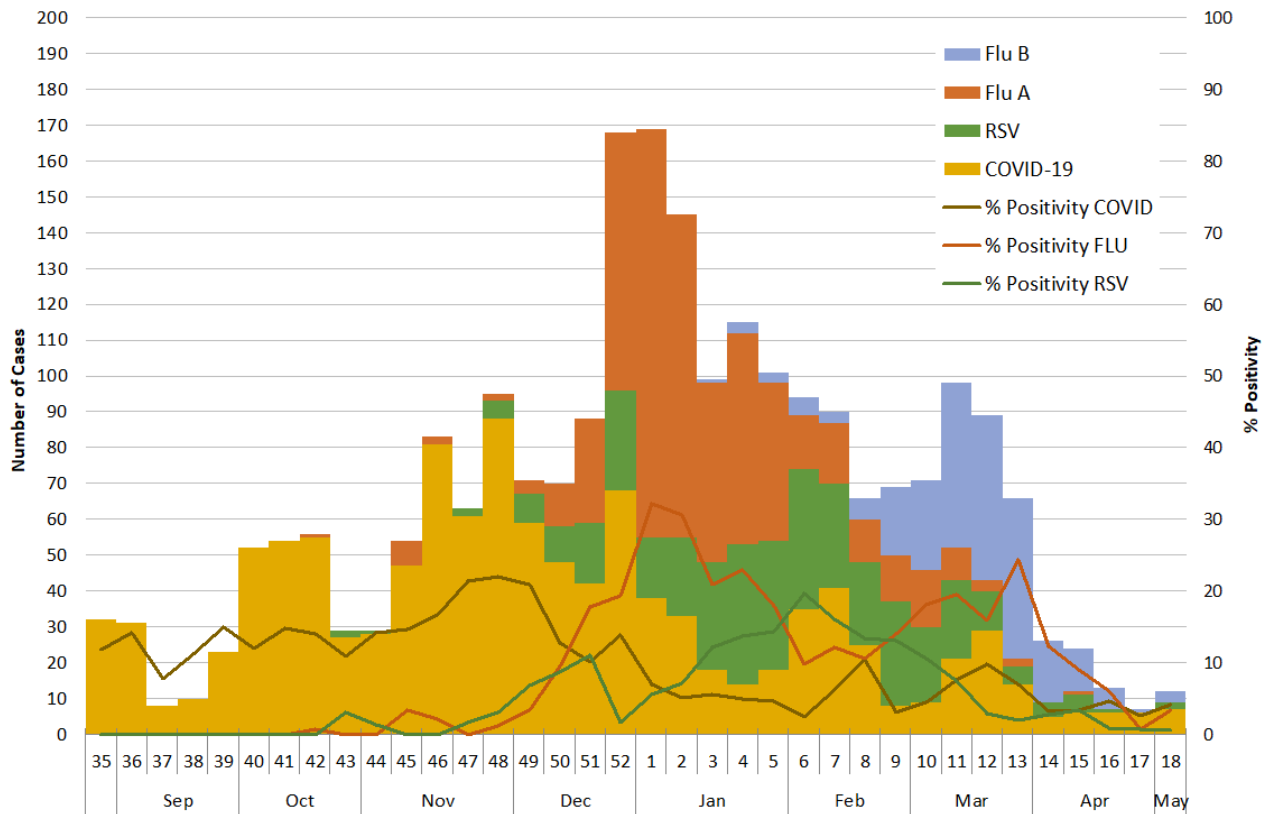


Table 1. Confirmed COVID-19, influenza, and RSV cases, PEI 2023-24 respiratory illness season

	Number of cases	Median age (range)	Sex
COVID-19	1,147	79 years (<1 to >100 years)	60% female / 40% male
Influenza - total	815	37 years (<1 to >100 years)	56% female / 44% male
Influenza A	574	51 years (<1 to >100 years)	55% female / 45% male
Influenza B	241	17 years (<1 to 71 years)	57% female / 43% male
RSV	408	3 years (<1 to 100 years)	55% female / 45% male

COVID-19, influenza and RSV case counts are just an indication of greater respiratory illness activity as many individuals with respiratory illness do not seek medical attention.

SEVERE OUTCOMES SURVEILLANCE, 2023-24 RESPIRATORY ILLNESS SEASON

Table 2. Number of hospitalizations, intensive care unit (ICU) admissions and deaths due to COVID-19, influenza and RSV, PEI 2023-24 respiratory illness season

	Hospitalizations	ICU admissions	Deaths
COVID-19	100	6	14
Influenza	121	18	11
RSV	110	3	3

Figure 2. Rate (per 100,000 population) of COVID-19, influenza and RSV hospitalizations by age group, 2023-24 Respiratory Season, PEI

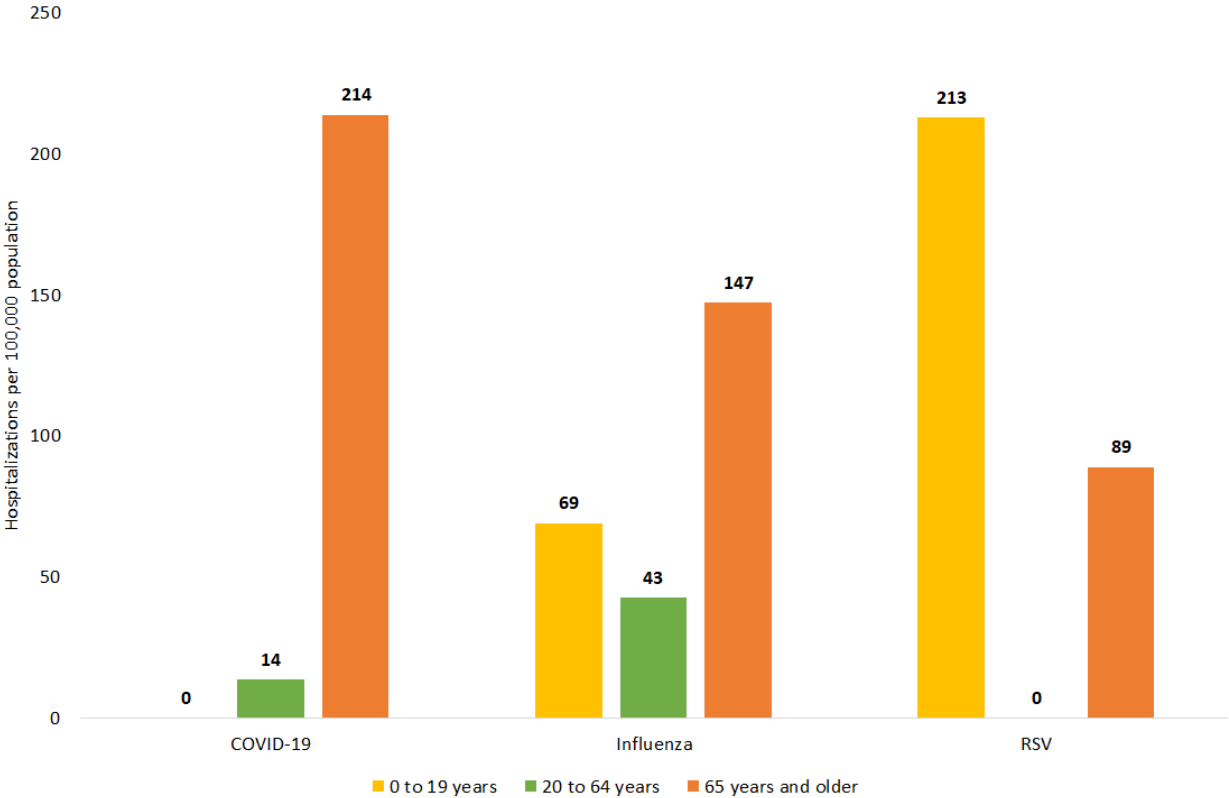


Figure 3. Vaccination status of influenza and COVID-19 hospitalized cases, 2023-24 Respiratory Season, PEI

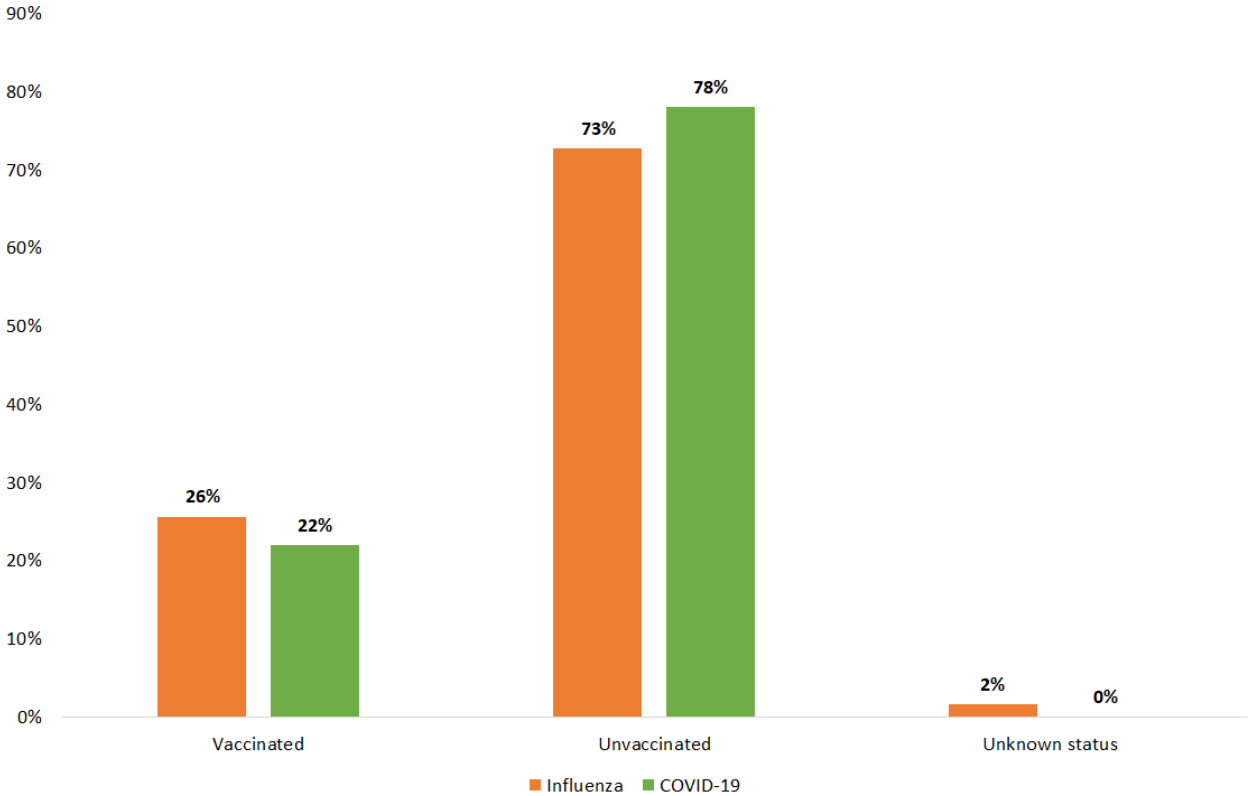


Table 3. Average and median length of hospital stay for patients hospitalized due to COVID-19, influenza and RSV, PEI 2023-24 respiratory illness season

	Average length of stay	Median length of stay	% of hospitalized cases with information on length of stay
COVID-19	11.4 days	7 days	97%
Influenza	7.5 days	4 days	98%
RSV	6.6 days	4 days	97%

Table 4. Deaths due to COVID-19, influenza and RSV by age group, PEI 2023-24 respiratory illness season

	0 to 19 years	20 to 64 years	65 years and older
COVID-19	0	1	13
Influenza	0	4	7
RSV	0	0	3

RESPIRATORY ILLNESS OUTBREAKS, 2023-24 RESPIRATORY ILLNESS SEASON

Table 5. Respiratory illness outbreaks in long-term care / community care and other settings, PEI 2023-24 respiratory illness season

	LTC / CC ¹	Other ²
COVID-19	49	5
Influenza A	12	0
Influenza B	0	1
RSV	4	0
ILI	0	3
Other	1	0

¹ LTC = long term care facility; CC = community care facility

² For example, acute care facilities and correctional facilities

ILI = influenza like illness

SURVEILLANCE FOR COVID-19 VARIANTS

PEI contributes data to the national reporting of [COVID-19 variants in Canada](#)

WASTEWATER SURVEILLANCE

PEI's Chief Public Health Office and the Department of Environment, Energy and Climate Action have partnered with the municipalities of Alberton, Charlottetown (including Stratford), Montague, Souris, and Summerside, and the National Microbiology Laboratory in Winnipeg to implement wastewater surveillance for COVID-19 in PEI.

PEI wastewater testing results are included on the national [COVID-19 wastewater surveillance dashboard](#)

HISTORICAL COVID-19 DATA

Year	Total Cases	Hospitalized	ICU	Deaths
2023, to Week 34	1,727	112	7	28
2022	54,179	355	29	81
2021	1,413	5	1	0
2020	96	0	0	0

HISTORICAL INFLUENZA DATA

Influenza Season	Predominant Strain	Total Cases	Hospitalized	ICU	Deaths
2022-23	A/H3	360	78	7	5
2021-22	A/H3	66	12	1	0
2020-21	-	0	0	0	0
2019-20	A	220	77	7	5
2018-19	A/pH1N1	280	123	12	9
2017-18	B	319	132	13	6
2016-17	A/H3	208	88	11	5
2015-16	A/pH1N1	71	39	2	1
2014-15	A/H3 (B)	209	98	11	9
2013-14	A/pH1N1	119	62	13	2

TECHNICAL NOTES

COVID-19 case count includes individuals who tested positive on lab-based PCR, Abbott ID Now NAAT, and Lucira NAAT. It does not include individuals that tested positive on a rapid antigen test.

Note that clinical diagnosis of influenza takes place frequently in the community during peak season and is not confirmed with laboratory testing. In contrast to COVID-19, the prescribing of anti-viral treatment for influenza does not require a positive influenza test and can be based on a clinical diagnosis alone. Given the differences in testing approaches, the number of influenza detections and the number of COVID-19 detections in a given time period are not directly comparable.

$$\text{Test positivity} = \frac{\text{Count of positive tests per reporting period}}{\text{Count of total tests per reporting period}} \times 100$$

Test positivity for COVID-19 includes lab-based PCR and Abbott ID Now NAAT. For influenza and RSV, test positivity includes lab-based PCR. Cases among PEI residents diagnosed outside of the province are included in the case counts but are excluded from the percent positivity calculation.

Outbreak definitions

- Influenza
 - o Laboratory-confirmed influenza outbreak: two or more cases of influenza like illness (ILI) within a seven-day period with an epidemiological link, including at least one laboratory confirmed case of influenza within a surveillance setting
 - o ILI outbreak: two or more cases of ILI within a seven-day period
 - o ILI outbreak in school or workplace: Greater than 10% absenteeism which is likely due to ILI
- COVID-19 outbreak: 2 or more test-confirmed cases of COVID-19 which are epidemiologically linked to a specific setting or location
- RSV: 2 or more cases of ILI within a seven-day period with an epi link, including at least one laboratory confirmed case of RSV within a surveillance setting

Hospitalization definition: a laboratory confirmed case of influenza/RSV or test-confirmed case of COVID-19 that received treatment in hospital as a result of their respiratory illness

ICU admission definition: a case of influenza, RSV or COVID-19 that meets the hospitalization definition and was admitted to the ICU

Death definition: a death resulting from a clinically compatible illness in a laboratory confirmed influenza/RSV case or test-confirmed COVID-19 case. A death due to influenza/COVID-19/RSV may be attributed when influenza/COVID-19/RSV is the cause of death or is a contributing factor.

Test-confirmed COVID-19 case: case with a positive result on lab-based PCR, Abbott ID Now NAAT, or Lucira NAAT. A case with a positive result on a rapid antigen test may be considered to be a test-confirmed case of COVID-19 upon review by a Chief Medical Officer of Health or relevant public health authority.

Hospitalization data is gathered through infection prevention and control practitioners at each Island hospital.

Vaccination status of hospitalized cases was defined as following:

- For influenza, a patient was considered vaccinated if they had received the 2023-24 seasonal influenza vaccine prior to their hospitalization;
- For COVID-19, a patient was considered vaccinated if they had received a COVID-19 vaccine in the previous 6 months and at least 14 days from the date of their diagnosis or if they were previously infected with COVID-19 in the past 6 months and had a record of a positive test in the provincial Communicable Disease Surveillance system.