

Peel Health Surveillance

April 21, 2024 to April 27, 2024 (Week 17)

- In week 17, respiratory activity in Peel remains similar to the previous week.
- COVID-19 indicators this week are similar to week 17 levels from the 2022-2023 season.
- Next report: May 8, 2024.

Table 1: Indicators of respiratory virus activity in Peel

Indicator	Week 17 Activity in Peel	Activity Level	Weekly Change
Lab-Confirmed Cases^{1,2}			
Influenza	46 new cases reported	Low	▼ Lower
COVID-19	123 new cases reported	Low	≈ Similar
Percent Positivity of Lab Tests^{3,4}			
Influenza	4.7% percent positivity (week 16) ⁷	Low	▲ Higher
SARS-CoV-2 (COVID-19)	9.7% percent positivity (week 17)	Low	▲ Higher
Other respiratory viruses ⁷	Adenovirus: 3.0% (week 16) Enterovirus/Rhinovirus: 11.4% (week 16) Human metapneumovirus: 4.8% (week 16) Parainfluenza virus: 9.6% (week 16) Seasonal human coronavirus: 3.0% (week 16) Respiratory syncytial virus (RSV): 0.6% (week 16)	--	--
Emergency Department Visits⁵			
Influenza-like illness (ILI)	3.3% of total ED visits	Moderate	≈ Similar
Respiratory symptoms	4.8% of total ED visits	Moderate	≈ Similar
Respiratory Outbreaks in Hospitals, Long-Term Care Homes, and Retirement Homes^{1,2}	8 new respiratory outbreaks declared Total outbreaks this season: Influenza: 12 COVID-19: 175 Other or multiple respiratory viruses: 65	Moderate	▲ Higher
Wastewater Concentrations⁶			
Influenza	Influenza A: Not detectable Influenza B: Present at low levels	--	--
RSV	RSV: Not detectable	--	--
COVID-19	The wastewater signal for SARS-CoV-2 in week 17 is comparable to lower SARS-CoV-2 levels seen in August 2023.	Low	▼ Lower

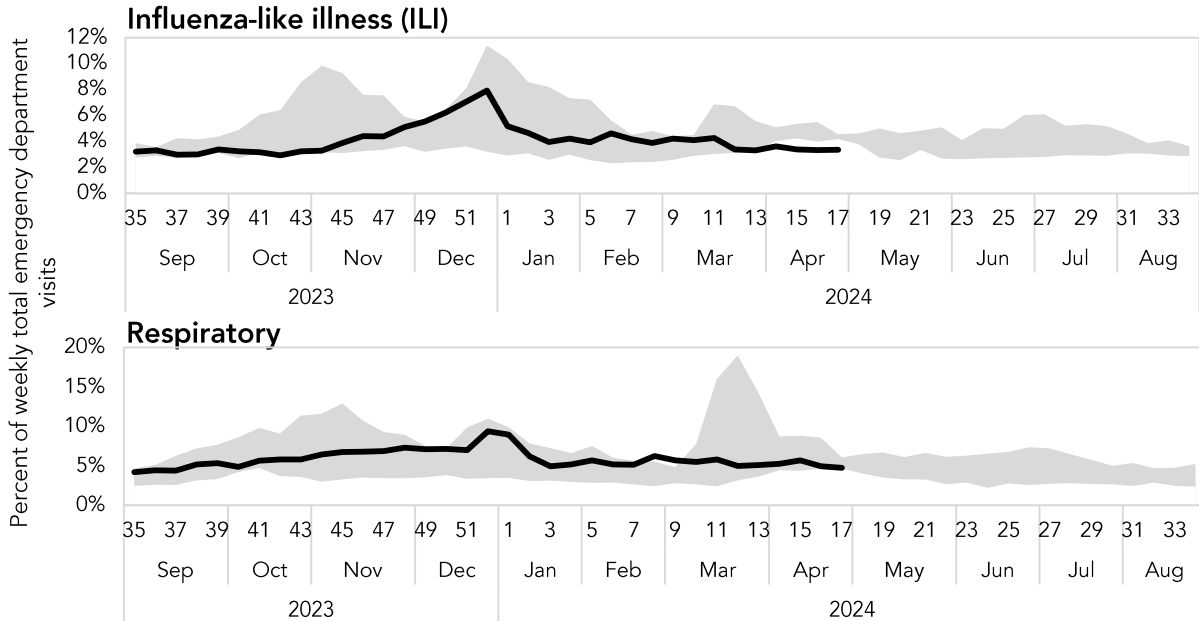
Notes: Current activity level (low/moderate/high) is assigned based on comparisons to historical data, and weekly change (lower/similar/higher) is based on comparisons to the previous week. **Bold** indicates a change in activity level compared to the previous week.

Sources: 1) Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, extracted by Peel Public Health [30/Apr/2024]; 2) Ontario Ministry of Health, Case and Contact Management Solution (CCM), extracted by Peel Public Health [30/Apr/2024]; 3) Public Health Ontario (PHO), Ontario Respiratory Virus Tool, extracted by Peel Public Health [30/Apr/2024]; 4) Ontario Ministry of Health, Ontario Laboratory Information System; 5) Kingston, Frontenac and Lennox & Addington Public Health, Acute Care Enhanced Surveillance; 6) University of Waterloo, Servos Group; 7) RSV and four other respiratory viruses with the highest percent positivity in the most recent complete week, extracted by Peel Public Health [30/Apr/2024], are presented. Percent positivity for respiratory viruses not presented may be found on PHO's Ontario Respiratory Virus Tool.

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Respiratory Infection Activity

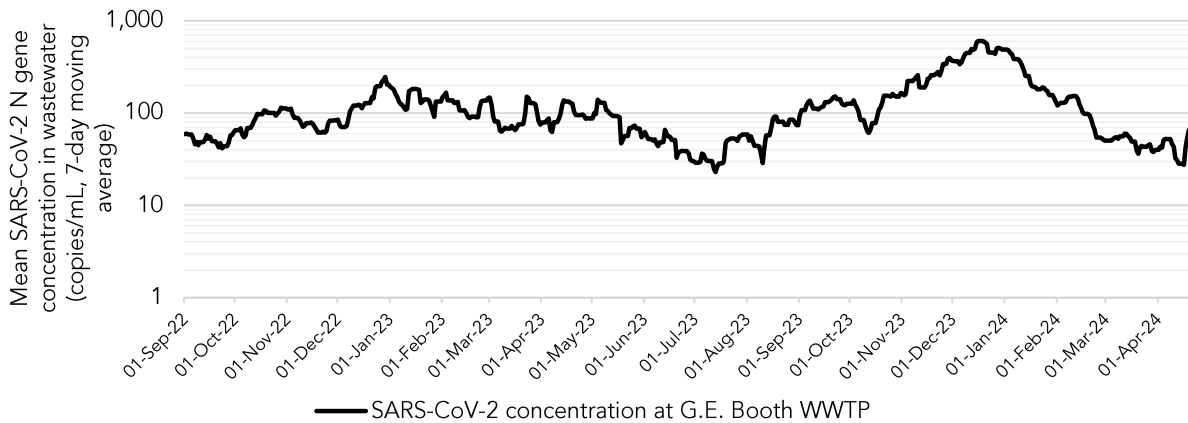
Figure 1. Weekly percent of emergency department visits due to influenza-like illness or respiratory syndromes, Peel residents: August 27, 2023, to April 27, 2024



Note: The grey shaded area represents the range between the minimum and maximum weekly percentage of ED visits due to ILI or respiratory syndromes, between 2018/19 and 2022/23.

Source: Kingston, Frontenac and Lennox & Addington Public Health, Acute Care Enhanced Surveillance, extracted by Peel Public Health [30/Apr/2024]

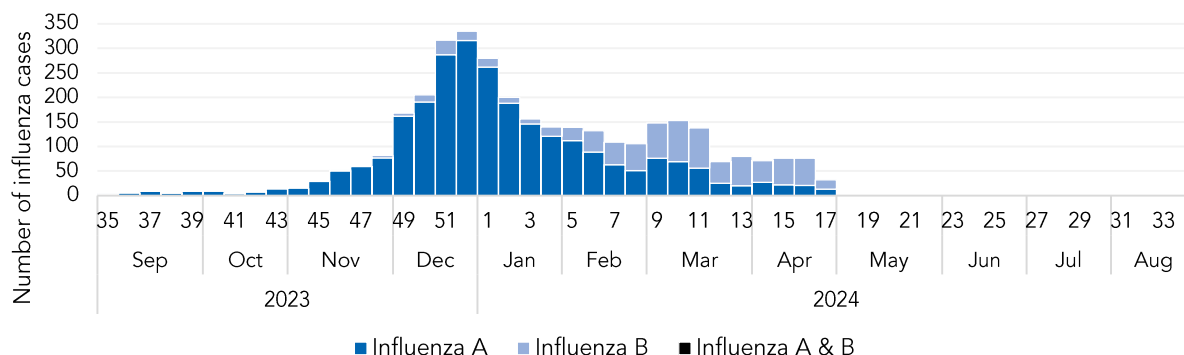
Figure 2. Concentration of SARS-CoV-2 virus detected in untreated wastewater: September 1, 2022, to April 22, 2024



Notes: Data are presented as moving averages to adjust for fluctuations in individual data points. Influent wastewater samples are tested for the N1, N2 and N200 genes of the SARS-CoV-2 virus, and prior to October 7, 2022, the values in the figure represent the mean concentration of N1 and N2 genes. Due to reduced sensitivity of the N1 test associated with new circulating lineages, starting October 7, 2022, the figure shows the mean concentration of N2 and N200. Source: University of Waterloo, Servos Group

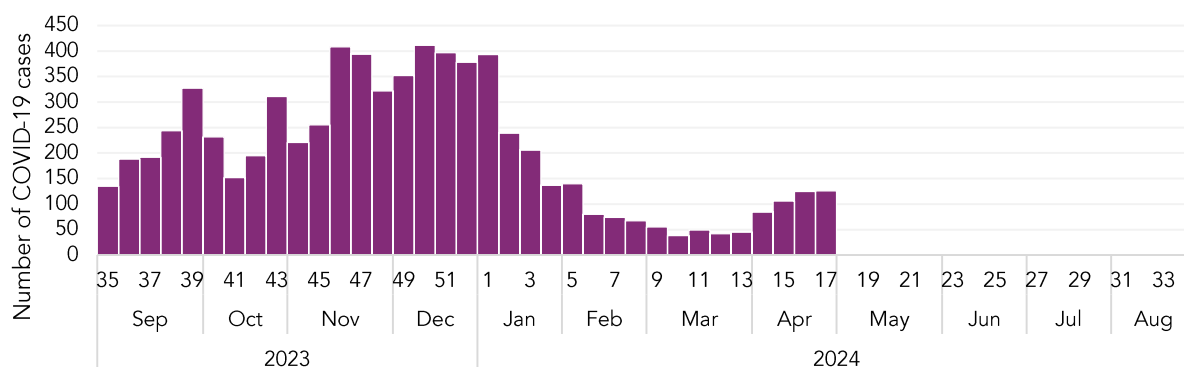
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Figure 3. Laboratory-confirmed influenza cases in Peel by type and episode week: August 27, 2023, to April 27, 2024



Note: Episode date of cases reflect the earliest of symptom onset, test date, or date reported to public health. Illnesses occurring during the most recent weeks may not yet be reported to public health.
 Source: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, extracted by Peel Public Health [30/Apr/2024]

Figure 4. Laboratory-confirmed COVID-19 cases in Peel by episode week: August 27, 2023, to April 27, 2024



Note: Episode date of cases reflect the earliest of symptom onset, test date, or date reported to public health. Illnesses occurring during the most recent weeks may not yet be reported to public health.
 Source: Ontario Ministry of Health, Public Health Case and Contact Management Solution (CCM), extracted by Peel Public Health [30/Apr/2024]

Table 2: Laboratory-confirmed influenza and COVID-19 cases by age group, Peel: September 1, 2023, to April 27, 2024

Age group (years)	Influenza A				Influenza B Total	Total Influenza cases (%)	Influenza rate [†]	COVID-19 cases (%)	COVID-19 rate [†]
	A(H1N1) pdm09	A(H3N2)	A(UnS)*	A Total					
0-4	67	18	557	642	186	829 (24.1%)	946.9	453 (6.5%)	517.4
5-17	43	21	340	404	343	748 (21.7%)	311.5	138 (2.0%)	57.5
18-44	40	30	442	512	212	724 (21.0%)	105.4	1,112 (15.8%)	161.9
45-64	46	14	297	357	48	405 (11.8%)	101.3	1,283 (18.3%)	320.8
65+	57	46	593	696	41	738 (21.4%)	304.6	4,036 (57.5%)	1,666.0
Total	253	129	2,229	2,611	830	3,444 (100%)	207.9	7,022 (100%)	423.8

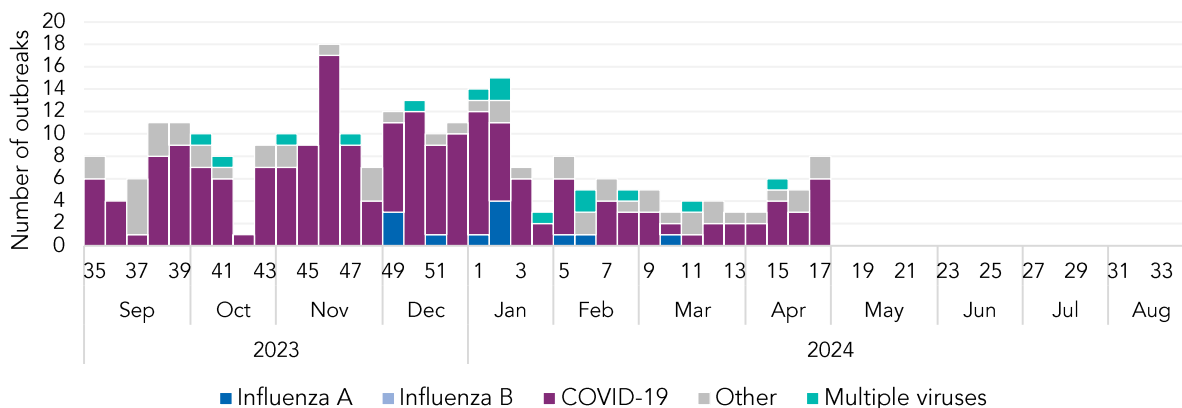
*UnS: unsubtype; the specimen was typed as influenza A, but no result for subtyping was available.

[†]Cumulative incidence rate per 100,000 population.

Sources: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, extracted by Peel Public Health [30/Apr/2024]; Ontario Ministry of Health, Public Health Case and Contact Management Solution (CCM), extracted by Peel Public Health [30/Apr/2024]; Ontario Ministry of Finance, Population projections by county and PHU, 2023 [Oct/2020]

Outbreaks in Priority Settings

Figure 5. Confirmed institutional respiratory outbreaks by week declared and virus, Peel: August 27, 2023, to April 27, 2024



Notes: Other virus outbreaks include: respiratory syncytial virus (n=15), rhinovirus (n=14), parainfluenza virus (n=9), seasonal human coronavirus (n=6), human metapneumovirus (n=4), respiratory infection unspecified (n=3); multiple virus outbreaks include: COVID-19 and influenza A (n=2), influenza A and respiratory syncytial virus (n=2), parainfluenza virus and rhinovirus (n=1), respiratory syncytial virus and rhinovirus (n=1), seasonal human coronavirus and human metapneumovirus (n=1), seasonal human coronavirus and respiratory syncytial virus (n=1), influenza B and respiratory syncytial virus (n=1), COVID-19 and rhinovirus (n=1), seasonal human coronavirus and parainfluenza virus (n=1), COVID-19 and seasonal human coronavirus (n=1), COVID-19 and respiratory infection unspecified (n=1), COVID-19 and respiratory syncytial virus (n=1). The outbreak declared date represents the date the outbreak first met the definition for a suspect or confirmed outbreak.

Sources: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, extracted by Peel Public Health [30/Apr/2024]; Ontario Ministry of Health, Public Health Case and Contact Management Solution (CCM), extracted by Peel Public Health [30/Apr/2024]

Table 3. Institutional respiratory outbreak summary, Peel: September 1, 2023, to April 27, 2024

Measure	Influenza A	Influenza B	COVID-19	Other virus
Total institutional outbreaks	16	1	196	66
Acute Care	1	0	55	5
Long-Term Care Home	9	1	65	51
Retirement Home	6	0	56	10
Congregate Living Settings	N/A	N/A	20	N/A
Number of deaths among outbreak-associated cases	1	0	32	7

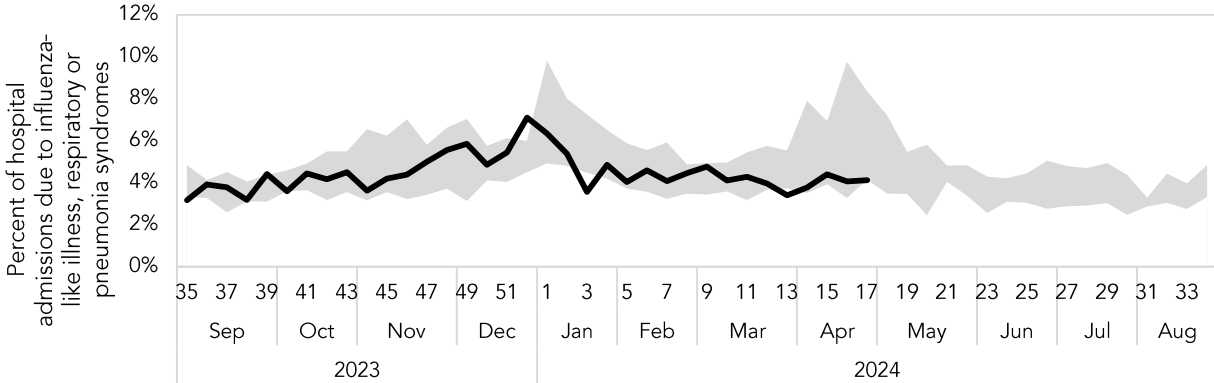
Notes: Congregate living settings include: shelters, correctional facilities, supported living facilities, group homes, and hospices. Only COVID-19 outbreaks are declared in congregated settings. In congregated settings, only COVID-19 outbreaks require reporting to Public Health. Outbreaks with multiple co-circulating viruses are counted per virus. Other virus outbreaks include: respiratory syncytial virus (n=21), rhinovirus (n=16), seasonal human coronavirus (n=10), parainfluenza virus (n=10), human metapneumovirus (n=5), respiratory infection unspecified (n=4).

Sources: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, extracted by Peel Public Health [30/Apr/2024]; Ontario Ministry of Health, Public Health Case and Contact Management Solution (CCM), extracted by Peel Public Health [30/Apr/2024]

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Disease Severity

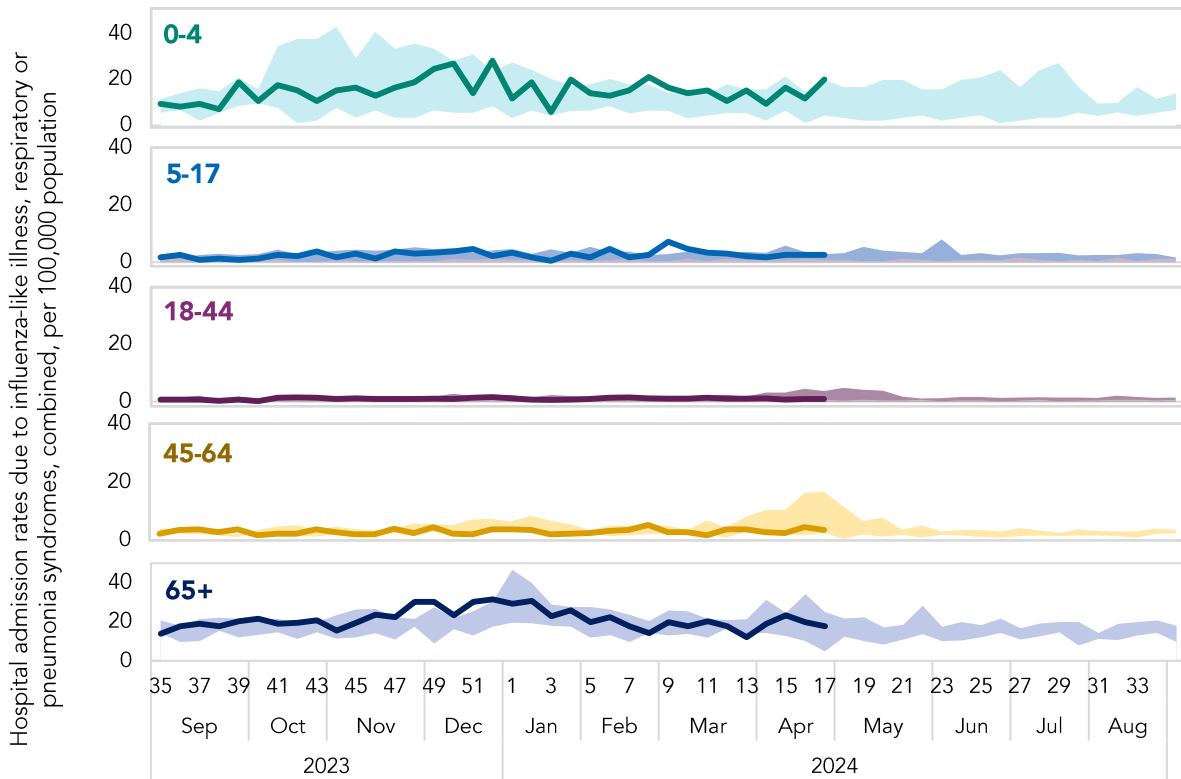
Figure 6. Weekly percent of hospital admissions among Peel residents due to influenza-like illness, respiratory, or pneumonia syndromes: August 27, 2023, to April 27, 2024



Note: The shaded area represents the range between the minimum and maximum weekly percentage of admissions due to ILI, respiratory, or pneumonia syndromes, between 2018/19 and 2022/23.

Source: Kingston, Frontenac and Lennox & Addington Public Health, Acute Care Enhanced Surveillance, extracted by Peel Public Health [30/Apr/2024]

Figure 7. Weekly hospital admission rates among Peel residents due to influenza-like illness, respiratory, or pneumonia syndromes, combined, by age group: August 27, 2023, to April 27, 2024

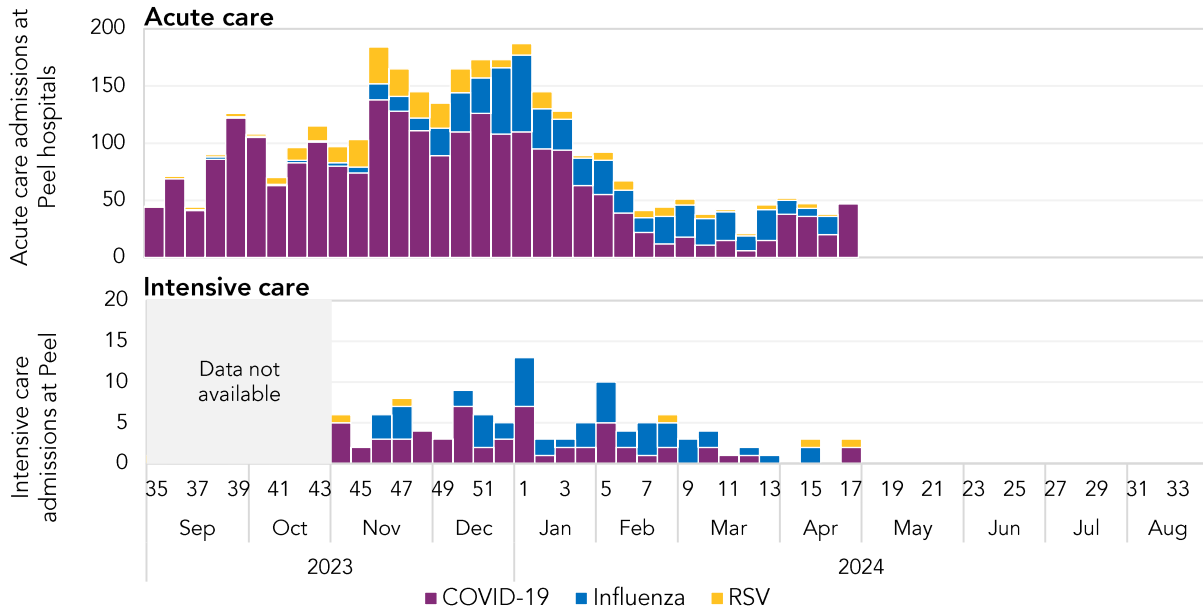


Note: The shaded areas represent the ranges between the minimum and maximum age-specific admission rates due to ILI, respiratory, or pneumonia syndromes, between 2018/19 and 2022/23.

Sources: Kingston, Frontenac and Lennox & Addington Public Health, Acute Care Enhanced Surveillance, extracted by Peel Public Health [30/Apr/2024]; Ontario Ministry of Finance, Population projections by county and PHU, 2022 [Oct/2020]

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Figure 8. Weekly acute care admissions among COVID-19, influenza, and RSV cases, Peel hospitals, August 27, 2023, to April 27, 2024



Notes: Due to technical updates to the reporting system, intensive care admissions for September and October are not available.
 Sources: Ontario Ministry of Health, Daily Bed Census, extracted [30/Apr/2024]; Ontario Ministry of Health, Critical Care Information System, extracted [30/Apr/2024]

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Data notes

- Unless otherwise specified, this report includes the most current data available as of 8:30 am on [30/April/2024] from the provincial Public Health Case and Contact Management Solution (CCM) and Integrated Public Health Information System (iPHIS).
- CCM and iPHIS are dynamic reporting sources for infectious disease surveillance data. Data extracted represent a snapshot of data entered up to and at the time of extraction and may differ in previous or subsequent reports.
- Laboratory-confirmed cases included in this report represent those individuals who resided in Peel region at the time of their diagnosis.
- Emergency department visit and admission data from the [Acute Care Enhanced Surveillance Application](#) are categorized by syndromes and do not necessarily represent health care utilization/outcomes due to respiratory virus infections. Syndromes are not clinical diagnoses.

Respiratory virus testing indications

Currently, PCR testing eligibility differs for SARS-CoV-2 compared to influenza and other respiratory viruses. Therefore, metrics such as test positivity cannot be compared between SARS-CoV-2 and other viruses, due to differing denominators. In general, non-SARS-CoV-2 tests can be requested for symptomatic patients who are hospitalized, visit the emergency department, live in institutional settings, or are involved in an institutional outbreak. SARS-CoV-2 testing eligibility is set by the [Ontario Ministry of Health](#).

Table 5. Respiratory virus testing indications

Patient symptom status	Patient setting	Testing Available by Request	
		SARS-CoV-2	Influenza A, Influenza B, and other viruses*
Symptomatic	Hospitalized (all inpatients)	✓	✓
	Remote communities	✓	✓
	Public health unit declared respiratory infection outbreak (up to 4 specimens)	✓	✓
	Institutions (non-outbreak)	✓	✓
	Emergency Department: pediatric patients (<18 years old)	✓	✓
	Emergency Department: adult patients	✓	
	Ambulatory/outpatient settings, assessment centres, including ambulatory influenza high risk patients	✓	
	Not specified on requisition	✓	
	People who fall into one of the specified groups in the COVID-19 provincial testing guidance	✓	
Asymptomatic	People who fall into one of the specified groups in the COVID-19 provincial testing guidance	✓	

*The multiplex respiratory virus PCR (MRVP) tests for: influenza A, influenza B, respiratory syncytial virus (RSV A/B), parainfluenza (1 – 4), adenovirus, enterovirus, seasonal human coronavirus (OC43, 229E, NL63, HKU1), rhinovirus and human metapneumovirus. Adapted from: [Public Health Ontario: Respiratory Viruses \(including influenza\)](#); [Ontario Ministry of Health: COVID-19 Provincial Testing Guidance Update \(October 6, 2022\)](#).

Resources

Influenza surveillance

- Provincial: [Public Health Ontario: Ontario Respiratory Virus Tool](#)
- Federal: [Public Health Agency of Canada: FluWatch surveillance](#)
- Global: [World Health Organization: Global Influenza Programme](#)

COVID-19 surveillance

- Provincial: [Public Health Ontario: Ontario Respiratory Virus Tool](#)
- Provincial genomic surveillance: [Public Health Ontario: SARS-CoV-2 Genomic Surveillance in Ontario](#)
- Federal: [Public Health Agency of Canada: COVID-19 epidemiology update](#)