

Influenza

Influenza is an acute respiratory illness caused by influenza A or B viruses, and occasionally influenza C viruses. Seasonal outbreaks occur every year, mainly in the late fall and winter months. Influenza A, which is most commonly seen, has high rates of mutation and gene re-arrangement, changing the virus from year to year and sometimes within the same season. Although influenza is generally an acute, self-limited and usually uncomplicated disease in healthy children, it can be associated with severe morbidity and mortality.

EQUAL OPPORTUNITY VIRUS:

- Approximately 10% of children per year have signs & symptoms of influenza
- Up to 2000 children in Canada are hospitalized for influenza each year
- 20% of those children require care in the ICU
- 5% require mechanical ventilation
- 0.5% die
- 50% of hospitalized children do not have a chronic illness



Populations at a **higher risk for complications** include children under 5 years of age (particularly those under 2), children with lung disease, obesity, diabetes, kidney disease, heart disease, and those who are immunocompromised.

TRANSMISSION:

- Easily spread via small droplets - contact with respiratory secretions and contaminated objects.
- Viral shedding occurs up to two days prior to the appearance of symptoms.

SYMPTOMS:

- Abrupt onset. High fever, cough, congestion, and sore throat.
- Headache, extreme fatigue, myalgias.
- Symptoms are often prolonged compared to viral URTIs, lasting 1-2 weeks.
- NOT just a bad cold.

TESTING:

- Viral swab is not necessary. Recommended only if it affects clinical management.
- Patient is exhibiting severe symptoms, is being admitted to hospital or is at risk for complications.
- Labs: often show neutropenia. If influenza presents with an elevated white count, consider a secondary bacterial infection.

ADMISSION:

- Supplementary oxygen requirements, dehydration & respiratory distress.

Influenza

SUPPORTIVE MANAGEMENT:

- Management is largely supportive - rest, fluids, NSAIDs, acetaminophen.
- Avoid ASA (implicated in Reye's syndrome in combination with influenza).
- Cough & cold medications NOT recommended for any pediatric patients.

COMPLICATIONS:

- Respiratory - pneumonia is a major complication of influenza. Bacterial co-infection with *S. aureus* and *S. pneumoniae* may be particularly severe and potentially fatal. Exacerbation of underlying chronic pulmonary conditions (particularly asthma). Respiratory failure.
- CNS - febrile & non-febrile seizures and encephalopathy.
- Cardiac - myocarditis and pericarditis.

MYOSITIS:

- Mild, transient myositis is a common “complication” of influenza in pediatrics.
- Typically self-limited. Bilateral calf muscle pain - patients present not wanting to walk.
- Mild elevation in CK and myoglobin - does not cause myoglobinuria or kidney damage.
- Blood work, urinalysis and IV fluids not necessary if patient tolerating PO fluids.

ANTIVIRAL THERAPY:

- Recommended for children with suspected or confirmed influenza who are hospitalized, have severe or progressive symptoms, or have underlying conditions that increase the risk of complications (even if >48hr since onset of illness).
- Antiviral therapy reduces viral shedding, symptoms, complications, hospitalizations and death.
- If indicated, should be started as soon as possible after symptom onset, ideally within 48 hours.
- Oseltamivir (Tamiflu) is the recommended agent for pediatric patients.

INFLUENZA VACCINE:

- The National Advisory Committee on Immunization (NACI) and the Canadian Pediatric Society (CPS) recommend that everyone over 6 months of age receive an annual influenza vaccine. Children 6m-8y need 2 vaccines one month apart their first year.
- Due to frequent changes in circulating strains, the vaccine usually requires updating annually. Efficacy of the vaccine varies year by year.
- For maximum benefit, the vaccine should be given as soon as it is available, prior to the start of influenza season.

Influenza: Canadian Respiratory Virus Surveillance Report

Influenza highlights for the week ending December 13, 2025 (week 50)



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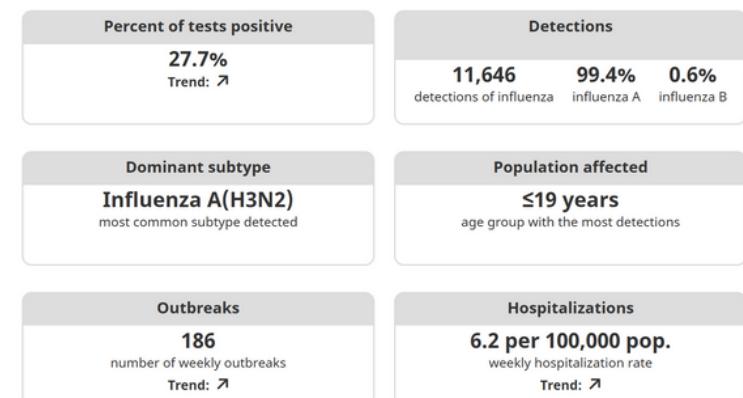
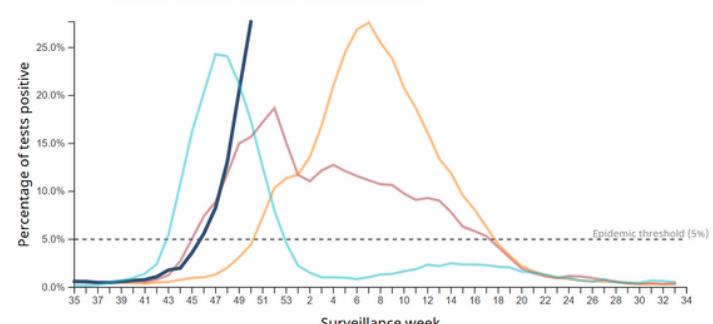


Figure 3: Percentage of tests positive for influenza in Canada for surveillance period 2025-2026 compared to previous periods

Select seasons 2025-2026 2024-2025 2023-2024 2022-2023 Deselect all



IWK Pediatric Grand Rounds

January 14 0900-1000: Maritime Child Health

ZOOM: Meeting ID 817 1067 5567

Passcode: 443679

January 28 0900-1000: A Review of Common Pediatric Neuroinflammatory Disorders
ZOOM: Meeting ID 817 1067 5567
Passcode: 443697

Comfort Corner



Children's Healthcare Canada, in partnership with Solution for Kids in Pain have been working to reduce the research gap in children's pain assessment, treatment and management. They have built on the expertise in the Canadian child health community and have created a Pediatric Pain Management Practice and Policy Network. The network is designed to be multidisciplinary and inclusive of members across the continuum of care.



The Pediatric Pain Network provides a national forum for the child health community to come together and work on activities such as:

- Sharing information on current pain management processes.
- Collaborating on knowledge mobilization and project planning.
- Building awareness and uptake of the [Health Standards Organization \(HSO\) Pediatric Pain Management Standard](#).
- Facilitating national pain knowledge mobilization and alignment.
- Participating as Subject Matter Experts to rebrand, refresh and update resources such as the [Pediatric Pain Management Toolkit](#).

[Join the network!](#)

Procedural pain management in children & youth: A toolkit for health professionals

Medical procedures are common. They are amongst the most distressful and painful aspects of medical care for children and youth.

This toolkit shares evidence-based solutions so #ItDoesntHaveToHurt.



Santé des enfants Canada

References

TREKK (2024). *Video for Healthcare Providers: Influenza in Children*. <https://trekk.ca/resources/video-influenza-in-children-virtual-education-session>

CPS (2024). *The Use of Antiviral Drugs for Influenza: Guidance for Practitioners*. <https://cps.ca/en/documents/position/antiviral-drugs-for-influenza>

Up to Date (2025). *Seasonal Influenza in Children*. <https://www.uptodate.com/contents/seasonal-influenza-in-children-clinical-features-and-diagnosis>

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