

# Measles: Current Ontario Context & Public Health Management

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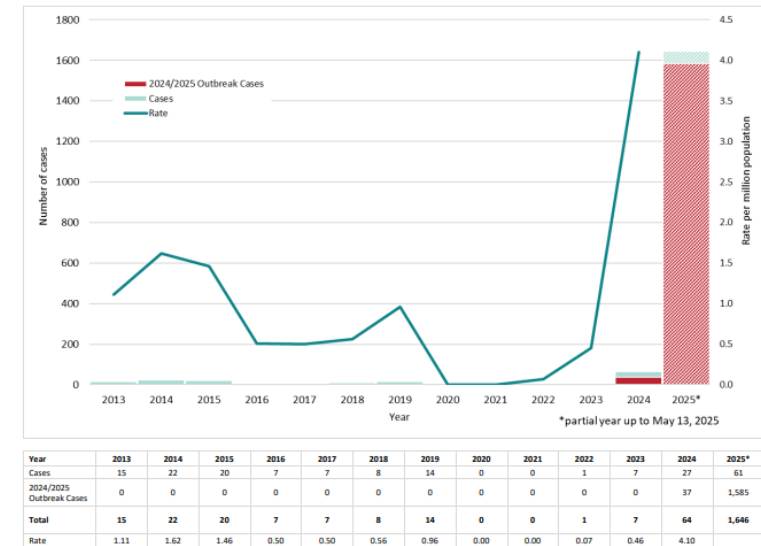
# Measles from a Public Health Perspective— Very Contagious Virus

- **Infectious!** 90% secondary attack rate among susceptible close contacts
- **Transmission:**
  - Person-to-person via large respiratory droplets
  - Airborne in closed areas for up to 2 hours
- **Communicable:** 4 days before to 4 days after rash onset
- **Report all suspect or confirmed cases** to public health

# Current Outbreaks of Measles in Ontario

- Began with travel-related case in New Brunswick.
- Total outbreak cases: **1,622** (Oct 2024 to May 15, 2025)
- By comparison, in 11 years – 2013 to 2023, total Ontario cases **101**
- 98% born in 1970 or later – 76% in children & teens, 23% in adults
  - 119 hospitalizations, 9 ICU, 0 deaths
  - (death in unvaccinated child of measles in Hamilton in 2024)

Figure 4: Number of Measles Cases and Incidence Rate per Million Population: Ontario, January 1, 2013 – May 13, 2025



# Current Outbreaks of Measles in Ontario

## Vaccination status:

- Unimmunized or unknown – 95%
- 2 or more doses – 4% (n=66 /1,622)

**Geographical spread in Ontario:** Not all regions have cases – not a broad based risk

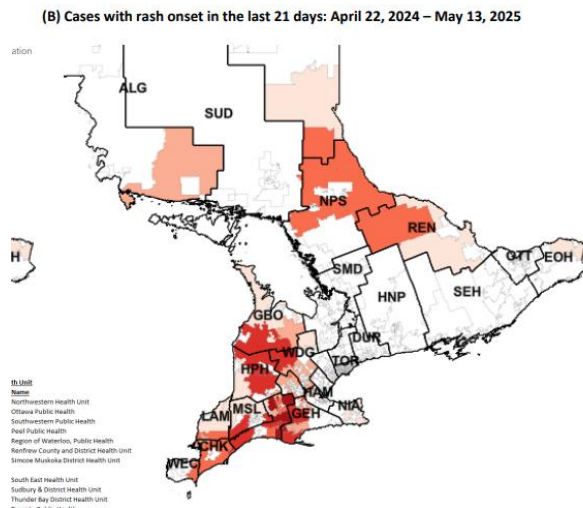
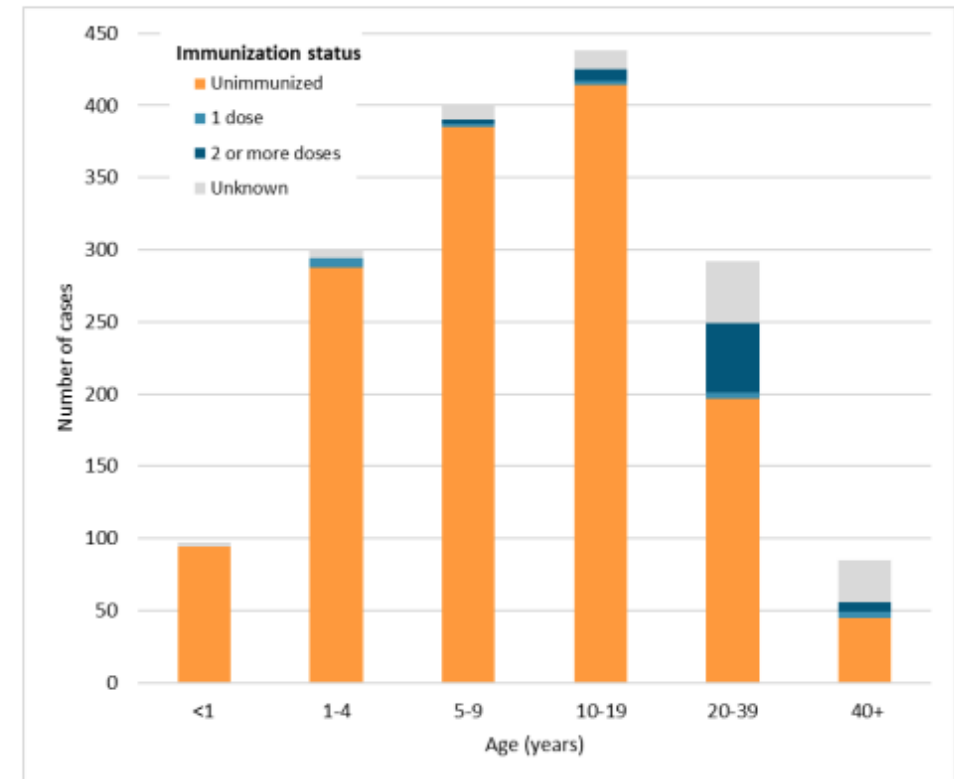


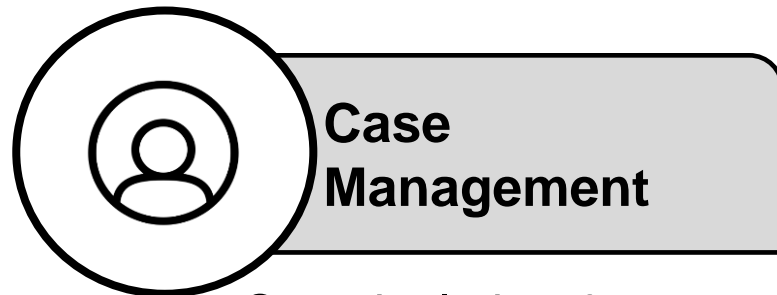
Figure 3: Immunization Status of Measles Outbreak Cases by Age Group: Ontario, October 28, 2024 – May 13, 2025



Age group	<1	1-4	5-9	10-19	20-39	40+
Unimmunized	96.9%	95.7%	96.0%	94.5%	67.5%	52.9%
1 dose	0.0%	2.0%	0.5%	0.7%	1.4%	4.7%
2 or more doses	0.0%	0.0%	0.7%	1.8%	16.4%	8.2%
Unknown	3.1%	2.3%	2.7%	3.0%	14.7%	34.1%

# Public Health Management of Measles Cases

- If a measles case is identified public health ensures testing and isolation for cases and contacts to contain spread.



- Case isolation & education
- Contact identification

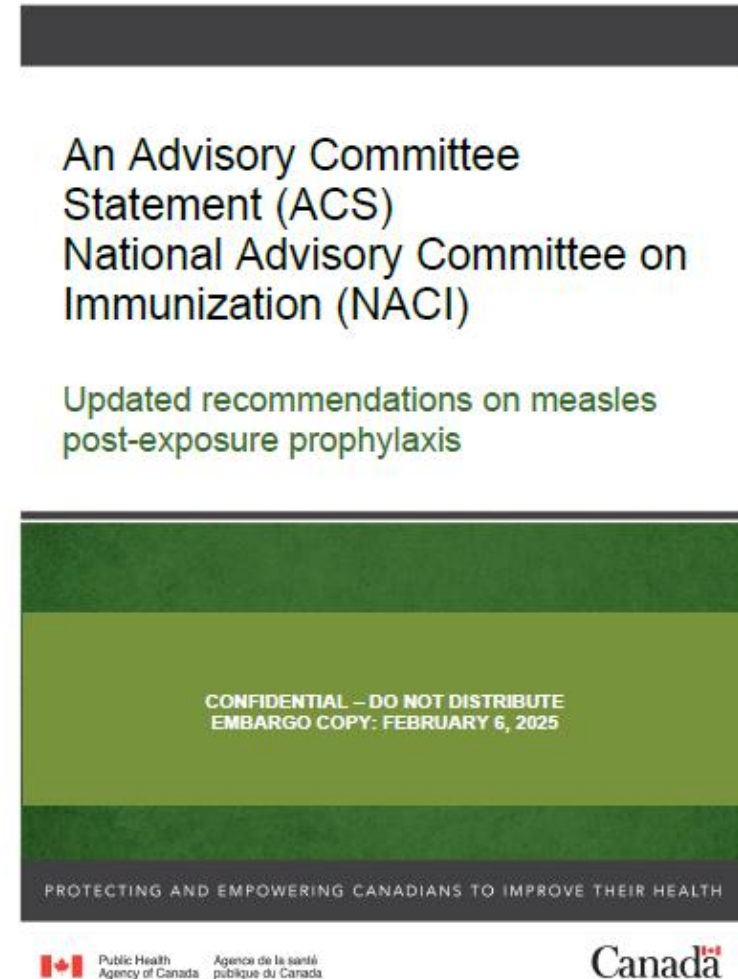


- Risk assessment & Prioritization
- Exclusion
- Post exposure prophylaxis and clinics
- Public communications and notifications

- **Note:** In a camp setting, if there is an exposure to measles infection, anyone who is not immune will be excluded right away, for up to 21 days from the last exposure.

# Post-Exposure Prophylaxis

- February 2025, NACI reviewed evidence and updated measles PEP guidance
- NACI continues to strongly recommend completion of the routine childhood and adult recommended immunization schedule with a measles-containing vaccine.
- NACI recommends that post-exposure prophylaxis (PEP) following exposure to measles should be offered to individuals not expected to have measles immunity.



- Year of birth before 1970
- History of laboratory-confirmed measles infection
- Receipt of two doses of a measles-containing vaccine (given at least 4 weeks apart) administered after 12 months of age
- Documented evidence of previous positive measles serology
  - Routine testing for laboratory evidence of measles immunity is not recommended for the general population.

# Post-Exposure Prophylaxis

- If exposed and susceptible, post-exposure prophylaxis can modify or prevent disease if given in time
- Can be given by HCP, facility or public health

## **MMR vaccine**

- Given up to 72 hours post-exposure
- 6 months of age & older

## **Immunoglobulin (IM)**

- <30 kg
- 0 to 6 months of age
- Given up to 6 days post-exposure
- 6 to 11 months @ 73 hours to <6 days

## **Immunoglobulin (IVIG)**

- Susceptible immunocompromised or pregnant
- Given up to 6 days post-exposure

# Post-exposure Prophylaxis in Immunocompromised

Group	PEP strategy
<p><b>Group 1</b> – Absent/near absent immune system</p> <p>Eg. HSCT within 12 months, CART, ALL, primary immunodeficiency, some meds (e.g. cyclophosphamide)</p>	<p>IVIg within 6 days of exposure.</p> <p>Previous vaccination or serological testing is not relevant</p>
<p><b>Group 2</b> – Immunocompromised and may have measles antibody protection from previous vaccination or infection</p> <p>E.g. Transplant &gt; 12 months, CART &gt;12 months, Malignancy, secondary immunodeficiency, medications</p>	<p>Consult specialist regardless of year of birth or vaccination status.</p> <p>Consider rapid serological testing. If negative give IVIg within 6 days of exposure</p>
<p><b>Group 3</b> – Low-level immunocompromise</p> <p>E.g. transplant &gt;24 months ago with post-transplant vaccination</p>	<p>Consider vaccination</p>

## Summary of Recommendations: Measles Post-Exposure Prophylaxis for Individuals Who Are Immunocompromised Due to Disease or Therapy

Published: March 2025

This document summarizes Ontario Immunization Advisory Committee (OIAC) recommendations detailed in the statement, [Recommendations: Measles Post-Exposure Prophylaxis for Individuals Who Are Immunocompromised Due to Disease or Therapy](#)<sup>1</sup> and has been reformatted from the original version. These recommendations are not intended to be prescriptive and should only be used as a guide.

Group	Definition	Measles Susceptibility Assessment	Time Since Exposure: ≤72 Hours (≤3 Days)	Time Since Exposure: 73 Hours – 6 Days
<b>Group A:</b> Individuals with an absence or near-absence of a functioning immune system	<ol style="list-style-type: none"> <li><b>Transplant<sup>a</sup></b> <ul style="list-style-type: none"> <li>Within 12 months of receiving autologous hematopoietic stem cell transplant (HSCT) or 24 months of receiving allogeneic HSCT or those with chronic graft-versus-host disease</li> <li>Within 12 months of a solid organ transplant</li> </ul> </li> <li><b>Chimeric antigen receptor (CAR) T-cell therapy</b> <ul style="list-style-type: none"> <li>Within 12 months of undergoing CAR T-cell therapy for malignancy</li> </ul> </li> <li><b>Acute lymphoblastic leukemia<sup>a</sup></b></li> </ol>	Assume individual is susceptible regardless of year of birth, prior lab-confirmed measles infection, or measles vaccination status	IMIg (bodyweight <30kg) or IVIg (bodyweight ≥30 kg) MMR vaccine is contraindicated	IMIg (bodyweight <30kg) or IVIg (bodyweight ≥30 kg) MMR vaccine is contraindicated

# Measles Vaccine Recommendations in Outbreak Settings

Age Group	Ontario's publicly funded routine immunization schedule	Measles outbreak immunization schedule and recommendations*
<b>Infants (6 to 11 months)</b>	Not applicable	One dose of MMR
<b>Children (12 months and over)</b>	<b>Two doses</b> of measles-containing vaccine: <ul style="list-style-type: none"> <li>• One dose of MMR at 1 year of age</li> <li>• One dose of MMRV between 4 and 6 years of age (prior to school entry)</li> </ul>	Two doses of measles-containing vaccine: One dose of MMR at 1 year of age Children 1 to 4 years of age are encouraged to receive a second dose of measles-containing vaccine as soon as possible**
<b>Adults (18 years and older)</b>	Adults of any age who have had only one dose of MMR may receive a second dose if they are: <ul style="list-style-type: none"> <li>• Health care workers</li> <li>• Post-secondary students</li> <li>• OR based on a health care provider's clinical judgement</li> </ul>	A second dose of MMR is recommended for all adults born in or after 1970 (for those who have not previously received 2 doses of MMR)

\*Measles outbreak recommendations for individuals who live, work, travel (e.g., family visit), worship, or spend time in affected regions and communities in Ontario with active measles cases and where the risk of exposure in the community is higher. These recommendations also apply to those who are travelling to areas where measles is of concern, either domestically or internationally.

\*\*Measles-containing vaccines (Measles, Mumps, Rubella [MMR]; Measles, Mumps, Rubella, Varicella [MMRV]) should be separated by a minimum interval of  $\geq 4$  weeks, from one another and other live attenuated vaccines.

- Collect vaccination records/immune status prior to arrival of campers and staff vs mandating measles vaccinations
- Be prepared to exclude those who are not immune or unvaccinated in the event of an exposure to someone who has measles
- Consider referral centres for immunoglobulin if immunocompromised and susceptible are exposed

# Thank you!

Toronto Public Health  
professionals website:

[www.Toronto.ca/health/professionals](http://www.Toronto.ca/health/professionals)

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## PLANNING TO TRAVEL? PROTECT YOUR FAMILY FROM MEASLES BEFORE YOU GO.



- ✓ Get your child up-to-date with vaccines.
- ✓ MMR vaccines protect against measles & are safe.
- ✓ Measles spreads quickly through the air & close contact.
- ✓ Symptoms are a red rash, fever, runny nose, cough, feeling tired or red eyes.
- ✓ Measles can be serious for babies & young children.

## TRAVELLING FOR MARCH BREAK? STAY UP-TO-DATE WITH YOUR MEASLES VACCINES BEFORE YOU GO



2 doses of the MMR vaccine are recommended if born in 1970 or later.



Children get their 1st dose after they turn 1 and their 2nd dose at 4-6 years old.



Infants 6-11 months can get a dose if travelling.



Adults born before 1970 who are unsure if they had measles or were vaccinated can get an MMR dose.

# Post-exposure Prophylaxis in Pregnancy

Immune Status	PEP strategy
Unvaccinated OR known measles IgG negative (known status)	IVIg within 6 days of exposure. Serological testing is not required  MMR post-partum
1 dose of measles vaccine OR uncertain vaccination status	Consider serological testing if results are expected within 24h of sampling time  IVIg within 6 days of exposure if serology is negative or timely measles serology testing is not available  MMR post-partum
Meets criteria for expected measles immunity	PEP not recommended