

# MEASLES INFORMATION PACKAGE



NORTHERN MATERNAL CHILD NETWORK  
RÉSEAU MÈRE-ENFANT DU NORD



## Disclaimer

The Northern Maternal Child Network (NMCN) has compiled key resources and references to assist in accessing information about measles. However, this document provides limited details on pregnancy and birth and should not be used as a standalone resource. Healthcare providers should consult Public Health Ontario (PHO) documents and other relevant sources for guidance on measles prevention, symptoms, and the necessary reporting and testing requirements for suspected cases.

This document is intended for educational use by healthcare professionals and clinicians but does not replace individual clinical judgment. Healthcare providers remain responsible for assessing and managing patients based on their specific medical needs. The guidelines and recommendations presented are based on the best available evidence at the time of writing, but NMCN and its affiliates assume no liability for any errors, omissions, or outcomes resulting from its use in clinical practice.

Providers are strongly encouraged to refer to authoritative sources, including the Centers for Disease Control and Prevention (CDC), World Health Organization (WHO), and local health authorities, to ensure they have the most up-to-date and reliable information when making clinical decisions related to measles management.

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## OVERVIEW

Measles is the most contagious pathogen and is a reportable disease in Ontario. If you are investigating a suspected case of measles, contact your local public health unit immediately; **do not wait for laboratory confirmation.**

Facts about measles:

- Measles is an airborne pathogen that can remain in the air and on surfaces for **up to two hours after** an infected person has left the area.
- Measles is **more severe in young children and adults** over the age of 20 years.
- **Over 90%** of unvaccinated people exposed to the measles virus will become infected.
- People with confirmed measles are **infectious from 4 days before rash onset to 4 days after the appearance of the rash.**
- People who recover from measles have lifelong immunity to the disease.

**Vaccination is the best means of protection against measles.** For children and most adults born after 1970, this means receiving two doses of measles-containing vaccine (e.g. MMR vaccine).

**Vaccination Records** can be verified via the local PHO website (health card information front and back are required).

Measles presenting on the face and body:



*Images from the Centers for Disease Control and Prevention*

Please refer to Public Health Ontario: Measles: Information for Health Care Providers:

[Measles: Information for Health Care Providers](#)

[Measles: For health professionals - Canada.ca](#)



## EPIDEMIOLOGY OF MEASLES IN ONTARIO

For the most up to date information, please visit: [Measles Exposures in Ontario | Public Health Ontario](#)

- **October 18, 2024:** Exposure to a travel-related case in New Brunswick led to measles cases in Ontario.
  - **Outbreak period:** From **October 18, 2024** to **March 26, 2025**, Ontario reported a total of **572** measles cases associated with this outbreak across **13** public health units, most in the Southwestern Ontario regions. **11** cases have been reported in the North Bay-Parry Sound District.
  - **Affected population:** Among the outbreaks, **76.2%** were reported in infants, children, and adolescents. **9** outbreak cases were pregnant individuals.
  - **Immunization status:** **93.8%** of affected infants, children, and adolescents were unimmunized.
- Hospitalizations:** **42** outbreak cases have required hospitalization. Among all hospitalizations, **41** were unimmunized including **36** children.

Measles Progression Timeline after Exposure			
The infectious period for measles is 4 days before rash onset until 4 days after rash onset.			
Progression	Definition	Timeline	Signs and Symptoms
<b>Incubation</b>	Length of time for symptom development after exposure	6-21 days	None
<b>Prodromal Stage</b>	Denoting the period between appearance of initial symptoms and development of rash	2-4 days	Fever The “3 C’s” <ul style="list-style-type: none"> <li>➤ Cough</li> <li>➤ Coryza (runny nose, sneezing)</li> <li>➤ Conjunctivitis (pink or red color in the white of the eye, non-purulent )</li> <li>➤ Koplik spots (tiny, bluish-white spots with a red halo found on the inner lining of the cheek)</li> </ul>
<b>Exanthema</b>	Widespread rash characteristic maculopapular	2-4 days	Occurring on the outside of the body. Typically starts as flat, red spots on the face and behind the ears, then spreads downwards. Rarely on palms and soles of feet. Typically <b>not itchy</b>
<b>Recovery</b>		1-2 weeks	Persistent cough

Please refer to Measles Clinical Features and Diagnosis video courtesy of the Centers for Disease Control and Prevention (CDC): [Measles Clinical Features and Diagnosis](#)



## MEASLES TREATMENT

Measles Treatment for hospitalized patients is supportive management with hydration and airborne isolation (N95 mask) in negative pressure room or private room with dedicated toileting facilities and Hepa Filtration Unit. There is no antiviral therapy indicated. Vitamin A administration considered for severe cases or malnourished patients.

## MEASLES TESTING

Measles Testing			
Test	Timing	Specifics	Turnaround Time
Measles Virus Detection <b>PCR</b>	Collected within 7 days of rash onset	Nasopharyngeal/throat Swab	Up to 3 business days from receipt at PHO's Laboratory
(NP or Throat AND Urine is to be collected)	Collected within 14 days of rash onset	Urine Sterile container- minimum volume 10ml, ideal volume 50ml	Resource: <a href="#">Measles – Diagnostic – PCR   Public Health Ontario</a>
Serology for Measles Containing Virus ( <b>IgM</b> )	Timing is with PCR testing	IgM serology should not be the only diagnostic test relied upon for the diagnosis of measles (PCR required)  This is collected in an SST container (5ml whole blood. Contact your lab for micro container volumes for neonates and infants.)	Up to 5 business days from receipt at PHO's Laboratory  Resource <a href="#">Measles – Serology   Public Health Ontario</a>
Serology for Measles Immunity ( <b>IgG</b> )		Measles IgG may be indicated to determine immune status either following natural infection or post-vaccination.  This is collected in an SST container (5ml whole blood. Contact your lab for micro container volumes for neonates and infants.)	Up to 5 business days from receipt at PHO's Laboratory  Resource <a href="#">Measles – Serology   Public Health Ontario</a>

Following a primary infection, both **IgG and IgM antibodies develop within 3-7 days after rash onset**. Both **antibodies then increase reaching a plateau 2-3 weeks later**.



## PUBLIC HEALTH ONTARIO LABORATORY CONTACTS

Test results are accessible through ONE Health and OLIS 24/7

PHO Laboratory Customer Service:

**1-877-604-4567**- Monday- Friday 7:30am-7pm EST

Saturday 8am-3:45pm

Email: **Customerservicecentre@oahpp.ca**

After hours and priority testing available upon approval from PHO microbiologist: contact After Hours Duty Officer **1-416-605-3113**

PHO Lab locations in the North:

- Sault Ste. Marie 1-800-263-0409
- Sudbury 1-888-564-6917
- Thunder Bay 807-622-6449
- Timmins 1-888-267-7181



## POST EXPOSURE PROPHYLAXIS (PEP) FOR CONTACTS

The timely administration of Post-exposure prophylaxis including MMR vaccine or Immunoglobulin (Ig) through intramuscular route (IMlg) or the intravenous route (IVlg) can reduce the risk of infection in susceptible individuals exposed to measles or in the case of immunoglobulin, can reduce clinical severity if measles infection occurs.

### PEP Guidance for Susceptible Non-pregnant Immunocompetent Contacts

Age	Measles Immunity Status	Time Since Exposure: ≤ 72hrs	Time Since Exposure: 73hrs to 6 days
<6 months	Considered non immune due to age	IMlg (0.5ml/kg) as soon as possible	IMlg (0.5ml/kg) as soon as possible
6-11 months	Considered non-immune due to age	MMR as soon as possible	IMlg (0.5ml/kg) as soon as possible
≥ 12 months and born on or after 1970	Unknown history of vaccination with measles-containing vaccine 0-1 dose of measles-containing vaccine	MMR as soon as possible	MMR recommended

NOTE: If IMlg injection volume is a concern, IVlg (400mg/kg) may be considered.

The maximum recommended volume for administration of IMlg is 15 ml. NACI concluded that anyone weighing 30 kg or more will not receive an optimal dose of IMlg at the recommended dosage of 0.5 ml/kg. For individuals who weigh 30 kg or more, or if injection volume is a concern, IVlg is recommended as an alternative to 14 IMlg.

### PEP Guidance for Susceptible Pregnant Contacts

Measles Immunity Status	Considerations	Time since exposure: Up to 6 days
Unvaccinated or known measles IgG negative serology	Administer MMR postpartum for future protection	IVlg (400mg/kg) as soon as possible and within 6 days of exposure. Serological testing is not required.
Unknown history of vaccination or one previous dose of measles containing vaccine	Consider serological testing if results are expected within 24hours of sampling time Administer MMR postpartum for future protection	IVlg (400 mg/kg) <sup>a</sup> as soon as possible and within 6 days of exposure if serology is negative or timely measles serology testing is not available (i.e., results not expected within 24 hours of sampling)

Live Vaccine should be delayed after receipt of immunoglobulin for an interval of 6month for IMlg and 8months for IVlg. Contact your local public health unit.



## PEP Resources

- Please visit for more information on PEP guidance for contacts with immunocompromising conditions: [Measles: Post-Exposure Prophylaxis for Contacts](#)
- [Ontario Public Health Standards: Requirements for Programs, Services and Accountability - Infectious Disease Protocol Appendix 1: Case Definitions and Disease-Specific Information - Disease: Measles](#)
- [Updated NACI recommendations for measles post-exposure Prophylaxis: CCDR:2018;44\(9\) - Canada.ca](#)





## INFECTION PREVENTION AND CONTROL (IPAC)

- All healthcare workers (HCW) should have documented immunity to measles.
- Only HCW's with presumptive immunity to measles should provide care to patients with suspect/confirmed measles due to increased risk of transmission of measles to susceptible individuals.
- **ALL HCW's should wear a fit-tested, seal checked N95 respirator when entering the room and/or caring for a patient with suspect/confirmed measles.**
- Additional personal protective equipment (**PPE**) such as gowns, gloves, goggles may be added as required based on a point of care risk assessment (**PCRA**) and in compliance with your hospital airborne isolation policy.
- Patients should be placed in an airborne infection isolation room (**AIIR**) whenever possible. Hospitals should check inventory of AIIRs as well as Portable HEPA Filtration Units availability for non-AIIR. Room door to be kept closed at all times and negative pressure measurement/alarm engaged.
- Room door must remain closed and negative airflow maintained after client/patient/resident discharge until all air in the room has been replaced; this will vary based on the number of room air changes per hour (minimum 12). If unknown, room must remain vacant for 2 hours prior to cleaning.

Day 0	Day 1-4	Day 5-21	Infectious from 4 days before rash until 4 days after
Exposure Date ↓	Post exposure incubation period ↓	Period of communicability ↓	
Routine Practices	Routine Practices	Airborne Precautions + PCRA	Airborne Precautions + PCRA

*Note: This is a general timeline for isolation. Please consult IPAC prior to discontinuing precautions.*

### Patient Visitors

Household contacts of patients with measles or varicella are not required to wear an N95 respirator when visiting as they will already have been exposed in the household. They should be assessed for active infection prior to visiting.

Visitors of patients with measles or varicella who are known to be immune do not need to wear an N95 respirator to visit. Non-household contacts that are not immune should not visit.



## IPAC in Perinatology

Infection/ Organism	Precautions for Mother	Precautions for Newborn	Mother/Newborn Contact	Breast Feeding	Comments
MEASLES: Mother ill- Term Healthy Newborn	Airborne Precautions  Immune staff only  Only immune family and visitors permitted to visit	Routine Practices when not in room with mother  Airborne Precautions when in room with mother	Room in with Mother	Permitted if rooming in with mother - May provide Expressed Breast Milk (EBM) if not rooming in	Newborn should receive immune globulin as soon as possible.  <b>Family &amp; Visitors:</b> Immunity is defined as a previous history of measles OR having received measles vaccine OR born before
MEASLES: Mother ill- Newborn in NICU	Airborne Precautions  Immune staff only  Only immune family and visitors permitted to visit	Airborne Precautions until 21 days from last exposure  Immune staff only  Only immune family and visitors permitted to visit	Mother <b>not</b> permitted in NICU until 4 days after the appearance of the rash, or if immune- compromised for duration of illness.  Must consult with IPAC prior to visitation.	Permitted as EBM only until 4 days after the appearance of the rash, or if immune- compromised for duration of illness.	
MEASLES: Newborn - ill or exposed	Routine Practices	Airborne Precautions  Immune staff only  Only immune family and visitors permitted to visit	<b>Mother Immune:</b> Permitted to see newborn  <b>Mother Susceptible:</b> Not permitted to see newborn until immunized	Permitted   Permitted as EBM for duration of illness	

Source: [IPC in Perinatology ENGLISH 2015 Revision](#)



## ADDITIONAL RESOURCES

Centers for Disease Control and Prevention - [Measles Clinical Diagnosis Fact Sheet](#)

Government of Canada - [Measles: For health professionals - Canada.ca](#)

Maternal, Newborn, Child, and Youth Network - [Measles links for Southwest region](#)

Ministry of Health

- [Ontario Public Health Standards: Requirements for Programs, Services and Accountability - Infectious Disease Protocol Appendix 1: Case Definitions and Disease-Specific Information - Disease: Measles](#)
- [Immunization Through the Lifespan](#)

Ontario College of Family Physicians

- [Measles](#)
- [About Measles](#)

Peds Cases Notes - [PedsCases Notes Measles.pptx](#)

Provincial Council for Maternal and Child Health - [PCMCH-IPHCC Measles Fact Sheet](#)

Public Health Ontario

- [Measles | Public Health Ontario](#)
- [Recommendations: Measles Post-Exposure Prophylaxis for Individuals Who Are Immunocompromised Due to Disease or Therapy](#)
- [Defending Ontario Against Measles](#)

World Health Organization

- [Rougeole](#)
- [Guide for clinical case management and infection prevention and control during a measles outbreak](#)

## VIDEOS

- [Information Session: Measles](#)- OH Central and West Regions – March 21,2025
- [Bing Videos](#) - Osmosis video- Measles
- [Video: Measles-MSD Manual Consumer Version](#)
- Canadian Pediatric Society: [CPS Grand Rounds Series - MAR 27 2025 on Vimeo](#)



## APPENDIX

Editable [Measles Poster](#) for outside of healthcare facility. ([Measles Poster-French](#))

### Do you think you have Measles?



**What is Measles?**  
Measles is a highly contagious, serious airborne disease caused by a virus that can lead to severe complications and sometimes death.

**Symptoms of Measles can include:**

- Fever
- Cough
- Runny nose
- Sore or red eyes
- Rash



**If you have been in contact with someone who has Measles or have symptoms of Measles, please remain outside and call:**

 **<insert phone number>**

If this is a medical emergency, call 911 and report potential measles.

Insert Logo

### Pensez-vous avoir la rougeole ?



**Qu'est-ce que la rougeole ?**  
La rougeole est une maladie aéroportée grave et très contagieuse causée par un virus qui peut entraîner de graves complications et parfois la mort.

**Les symptômes de la rougeole peuvent être les suivants :**

- Fièvre
- Toux
- Nez qui coule
- Yeux rouges ou douloureux
- Éruption cutanée



**Si vous avez été en contact avec une personne atteinte de la rougeole ou si vous présentez des symptômes de la rougeole, restez à l'extérieur et appelez :**

 **<insérer numéro de téléphone>**

S'il s'agit d'une urgence médicale, appelez le 911 et signalez la possibilité d'une rougeole.

Insert Logo

## [Measles Checklist for Health Care Settings](#) - NMCN



### Measles Checklist for Health Care Settings

This checklist is a tool to assist Clinicians in Emergency Departments, Inpatient Wards, and Outpatient Hospital Clinics minimize the spread of measles.

This checklist is not in anyway intended to replace previously established processes, policies, and procedures within your facility.

☐ Ensure all Health Care Practitioners (HCP) have presumptive immunity to measles.

- ☐ Immunity can include: documentation of 2 dose measles virus containing vaccine (i.e. MMR), laboratory evidence of immunity (IgG), OR laboratory confirmation of previous disease.

NOTE: HCP without acceptable presumptive evidence of measles immunity should not enter a known or suspected measles patient's room (if there is a HCP with presumptive immunity available to transfer care of patient to).

☐ Clinical areas should keep a list of employees' specific size and type of N95 mask. HCP should have current documentation of up-to-date mask fit respirator provided by Occupational Health and Safety.

☐ Ensure staff are trained on current protocols for management of suspected measles cases.

- ☐ Post clear guidance documents for HCP should they experience a measles exposure.

NOTE: Consider reviews and 'just in time' training for surge staff.

☐ Minimize potential measles exposure.

- ☐ Post signage on the exterior doors of the Emergency Department and Main Entrance with clear instructions for patients and families.
- ☐ Ensure pathways/footprints are developed in preparation for suspected/confirmed patient arrival.
- ☐ Instruct EMS to notify receiving facility in advance when transporting a patient with known or suspected measles.

☐ Have appropriate stock of isolation supplies prepared for patient arrival to healthcare setting.



NOTE: This stock should contain personal protective equipment (PPE) for staff and patients to apply and this should be facilitated at the entrance of the facility.

☐ Ensure isolation carts are fully stocked with with airborne isolation signs and supplies, including appropriate N95 respirator.

☐ Take inventory of Airborne Infection Isolation Rooms (AIIR) within your healthcare setting.

Number of AIIR rooms in your healthcare setting: \_\_\_\_\_

Locations: \_\_\_\_\_

☐ Take inventory of available High Efficiency Particulate Air (HEPA) filtration system units if AIIR not available or limited.

Number of HEPA filtration system units in your healthcare setting: \_\_\_\_\_

☐ Prepare for laboratory testing requirements and what the testing process is within your health care setting.

☐ Have the Public Health Laboratory contact info for routine and urgent requests available and posted.

Public Health Laboratory contact information:  
Routine Inquiries: 1-877-694-4567      Stat/Urgent Inquiries: 1-146-605-3113

☐ In collaboration with your local public health authority, establish clear guidelines for Post Exposure Prophylaxis (PEP).

Location of administration for patients. For e.g.

- MMR vaccine
- IMIG administration
- IVIG administration

☐ Develop a transport pathway that includes the patient wearing a facemask if tolerated and a route (footprint) that includes minimal contact with persons not essential for patient's care.

NOTE: Transportation of known/suspected measles within the healthcare setting and between healthcare facilities should be limited to essential purposes (e.g. diagnostic testing that cannot be performed in patient room).



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