Perinatal
IPC Recommendations for Measles

In addition to **Routine Practices**

Measles (Rubeola)

Measles is a vaccine preventable illness that normally begins with non-specific upper respiratory tract symptoms such as cough/coryza/fever followed by a diffuse maculopapular rash several days after the fever.

- The appearance of the rash can vary. Rash beginning on the face (along the hairline of forehead and behind the ears) and spreading down the body and then to the arms and legs. The rash appears as blotchy spots initially, then becomes more uniform, especially on the face. On lighter skin colours, the rash appears red and blotchy. On darker skin colours, it can appear more reddish-brown to purple or darker than the skin around it, or it might be hard to see
- The measles virus is one of the most contagious pathogens known and can be transmitted via airborne methods.
- Most cases of measles occur in individuals without prior vaccine history, or in those where the vaccine history is unknown.
- Many will also have relevant epidemiologic risk such as exposure to a recent case or travel to an area of high measles activity.
- Mothers who have measles infection in the perinatal period may pass on the infection to their newborns.
- Congenital infections are rare but do occur.
- Post-natal exposure may also lead to newborn measles infection which can lead to severe disease.
- There is increased risk of complications and death in children under 1 year of age.

Source Control

Patients are to put on a surgical or procedure mask if they are:

- A known measles case,
- An exposed susceptible contact,
- A suspect case, or
- Accompanying the patient, they should be encouraged to wear a mask

Surgical masks are not a substitute for airborne precautions. They serve as an added layer of protection in shared or transitional spaces

Additional Precautions and Accommodation

- Move patient to an airborne isolation room.
- If the site does not have an airborne isolation room, follow Management of Patients Requiring Airborne Isolation
- See below for delivery room specifics

For more information contact
ipcsurvstdadmin@ahs.ca

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Alberta Health Services
Infection Prevention & Control

Additional precautions for:

- Suspect measles case: **Airborne Precautions** **AND** **Contact & Droplet Precautions**
- Confirmed measles case: **Airborne Precautions** **AND** additional precautions as needed based on IPC risk assessment

Masking (N95 respirator)

General principles

- N95 is required for all healthcare workers regardless of vaccination or immunity to Measles.
- Choose the correct N95 model/size based on your fit testing.
- Wear the N95 respirator so that it covers the nose, mouth and chin.
- **Do not double mask in any combination**.
- If the N95 respirator becomes wet/moist or visibly soiled, leave the room, doff the N95 respirator currently being worn, perform hand hygiene, and don a new one.
  - Respirators are single use; do not reuse or store in uniform/scrubs or clothing pockets. Do not wear an N95 respirator around the neck.

- Remove the N95 respirator after leaving the patient's room. Doffing an N95 respirator is a deliberate process and should be done carefully to prevent self-contamination.
- Refer to the AHS Donning and Doffing PPE posters for details on careful removal and disposal of N95 respirators.

Use **Airborne Precautions** **AND** **Contact & Droplet Precautions** if other infectious diseases are suspected (i.e., influenza and meningococcemia) have not been ruled out.

- Once other infectious diseases have been ruled out or measles has been confirmed, use **Airborne Precautions** and Infection Prevention and Control Risk Assessment (IPC RA).

When using Airborne Precautions AND Contact & Droplet Precautions

- Eye protection can be a face shield, goggles, or personal safety glasses. **Prescription eyeglasses alone are not adequate**.
- Using clean hands, don facial PPE by putting the respirator on first.
- Consider facial PPE to be a single unit of protection; always don/doff both at the same time.
- Change/discard facial PPE if it becomes contaminated, wet or soiled, as directed by additional precaution signs. See the previous general principles section for additional N95 doffing instructions.

Assessing the Need for Additional PPE

- When a patient is on Additional Precautions, follow PPE requirements as indicated **AND** perform an Infection Prevention and Control Risk Assessment (IPC RA). Different or more PPE may be required based on the IPC RA.

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Notification

- Contact MOH/Public Health 1-844-343-0971
- Notify Virologist on-call
- Alert IPC

Assess Maternal Risk Factors

- Can measles serology be tested on previous blood samples at ProvLab to confirm immunity?
- Is vaccination history available? Has the patient received 2 appropriately timed doses of Measles containing vaccine?
- Has the patient been exposed in the past 30 days during travel or known exposure sites in Alberta

Testing

- Refer to lab bulletins for specimen handling, testing and notification for updates. APL will coordinate testing requests. [See *Laboratory Testing for Suspected Measles* – posted 15 May 2024]

Labour and Delivery

Delivery room: Use the following in order of preference

- Deliver in an appropriate airborne isolation room
- Transfer to site with airborne isolation
- Use most appropriate room with four walls and a door. Limit opening doors. Collaborate with FM&E to alter airflow Management of Patients Requiring Airborne Isolation (Algorithm for facilities without Airborne Isolation Rooms)
- Refer to Airborne OR document for C-section, Airborne Precautions in Operating Rooms

Neonatal Resuscitation

- Ensure neonatal resuscitation team is present in case the neonate requires immediate care. NICU staff should use appropriate PPE when entering the room

Care of Neonate

Immediate post-delivery care of the neonate:

- *Separate neonate from birthing person with suspect/confirmed measles to reduce the risk of post-natal exposure
- Neonate should be placed in an isolette and taken to an airborne isolation room. If the site does not have an airborne isolation room, follow Management of Patients Requiring Airborne Isolation

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- If the neonate requires NICU care, place the neonate in an isolette if possible and an airborne isolation room. If the site does not have an airborne isolation room, follow Management of Patients Requiring Airborne Isolation
- The neonate should be put on airborne isolation and observed for signs of measles infection, particularly if the mother was infectious around the time of delivery.
- ***Exception - If there is clinical evidence of measles in the newborn with rash present at birth, and the baby is well, the neonate may stay with mother (skin to skin, etc.) on airborne precautions**

NICU – Additional precautions and testing

Additional Precautions:

Ensure that the neonate is placed on airborne isolation in a room with negative pressure

- All healthcare workers must wear appropriate PPE when giving care
- If mother's tests confirm measles infection, then recommend testing of baby to be done after newborn's first bath to avoid surface contamination from maternal body fluids

Lab Testing:

Neonate should have acute measles test panel in Connect Care ordered (NP swab for measles PCR, Urine for measles PCR, and Serology IgM and IgG) in first 24 hours of life

- If initial testing is negative, airborne isolation is still required for exposed neonate
- Repeat testing may be indicated at the discretion of attending physician and/or Pediatric ID physician
- Testing for acute measles may be repeated if symptoms develop
- Duration of airborne precautions should be discussed with IPC if repeat testing is negative
    - Further assessment may confirm measles infection in the newborn, in that case, if the newborn is well, neonate can stay with birthing person on airborne precautions

Measles Post-Exposure Prophylaxis

- If the mother is confirmed to have measles, the baby is considered exposed, and it is recommended that the baby receive intramuscular immune globulin (IMIg) 0.5 mL/kg (or IVIG 400mg/kg if there is intravenous access) within 6 days of exposure to decrease the severity or prevent infection. (If the baby is also confirmed to have infection, please consult with Pediatric Infectious Diseases regarding the use of immunoglobulin)
- Additional precautions period for exposed baby who remains admitted in NICU or admitted at hospital should be 28 days from last exposure date if immunoglobulin is given

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Post-partum Care of the Birthing Person

- Continue appropriate isolation of the birthing person until measles has been ruled out or if measles is confirmed, continue additional precautions till 4 days after the onset of rash

Designated Family/Support Persons (DFSPs) and Visitors

- To minimize the risk of transmission, wherever possible, access to patients will be limited to DFSPs who have been assessed and deemed immune or adequately immunized, as outlined in in Alberta Public Health Disease Management Guidelines, Measles. Exceptions require approval by IPC and MOH
- DFSP who is considered measles non-immune or with unknown immunity who has been exposed to the mother for 5 days since first date of exposure, should avoid coming to hospital and always need to wear medical/procedure mask if at hospital. Further direction for this DFSP will be provided by MOH and IPC with possible difference in management in the community and acute care sites.
- Assessment of the DFSP should be undertaken in a timely manner to minimize additional exposures and simplify the preventive measures.
- Encourage DFSPs/visitors to perform hand hygiene and follow all IPC precautions.
- Access limits for DFSPs/visitors to be guided by Family Presence: Designated Family/Support Person & Visitor Policy.

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