

MEASLES CONTACT MANAGEMENT IN THE ED: POST-EXPOSURE PROPHYLAXIS (PEP)

Cheat Sheet for Children's Emergency Staff

Also see [Manitoba Health Measles Protocol](#)

(1) EMO CALLS

- Verify that Public Health (PH) or Peds ID has recommended that the patient receive PEP
 - o If PH is unaware, have the caller notify the MOH on call in their region for recommendations. Most PEP can be managed in the patient's home region.
- Ask which PEP is being requested/recommended (see Table 1)
 - o MMR vaccine: can be given in the community by PH, should not present to a clinic, ED or PCP. If the patient is already in a facility that can immunize, immunize there. Call MOH on call to arrange if PH is needed to immunize others not present at the facility (e.g. family members who are also contacts).
 - o Immune Globulin IM (IMIg): for WRHA contacts currently in the community, IMIg can be given by WRHA PH unless volume exceeds IM volume limits, in which case IVIG may need to be given. Other regional PHNs do not administer IMIg so contacts need to present to their local healthcare facility (consult MOH).
 - o IVIg : need Peds ID to release, order from Canadian Blood Services.
- Have caller instruct patient(s) to present to triage with a medical mask on, or mask immediately on arrival

(2) MANAGEMENT OF MEASLES CONTACTS IN THE ED

- Triage to a room, minimize time in the WR. Use airborne precautions, ISO or room with closed door. N95 for staff, mask for patient and family.
- Report any new suspect/probable/confirmed cases to site Infection Control Professional (ICP)
- Verify that Public Health (PH) and Peds ID have recommended PEP
 - o If not, page the MOH on call. Consult ID for immunocompromised patients and for IMIg, IVIG.
- Verify which PEP is being requested/recommended (see Table 1)
 - o MMR vaccine: 0.5mL subcut (do not use MMRVaricella, not approved for PEP due to lack of evidence)
 - o Immune globulin IM (IMIg): 0.5mL/kg, 15mL max. For IM maximum volume see Table 2. Product name is GamaSTAN S/D. [Monograph](#) on Insite under Measles resources.
 - Order using Shared Health blood products req
 - o IVIg: 400mg/kg, infusion rate per [protocol](#)
 - Order using Shared Health blood products [req](#)
 - Provide IVIg information for families [handout](#) for informed consent discussion
 - Informed consent required (standard hospital consent form). CBS consent [guidelines](#).

(3) DISCHARGE INSTRUCTIONS for SUSCEPTIBLE CONTACTS

- Provide the Manitoba Health measles [handout](#) for the public (symptoms and what to do if symptoms develop)
- Provide immunization card and MMR vaccine [handout](#) (or link) if immunized
- Provide *Immune Globulin Information Sheet for Prevention of Measles* [handout](#) if IMIg administered
- Provide IVIg information [handout](#) if IVIg administered
- Follow Public Health advice, avoid exposure to vulnerable individuals (infants, pregnant individuals and immunocompromised). Monitor for symptoms for 21 days from the last exposure, and isolate and report to public health if symptoms develop.
- Transportation arrangements home from the ED:
 - o Do not send home on public transport with multiple passengers (bus)
 - o Use a private vehicle with previously exposed or immune persons if possible.
 - o If a private vehicle is not possible use a taxi with the patient to be masked for full duration of trip and the windows opened if possible. Offer the taxi driver an N95 mask and instruct on use and limitations.
- Group/residential care: consult with PH and Social Work/CFS to determine safe discharge location and information for staff caring for the patient

DEFINITIONS (for your reference, confirm contact status with PH): **Contact:** Someone who shared the same airspace (room or enclosed space, no minimum length of time) with a measles case during the infectious period or two (2) hours after the measles case left the room or space. **Susceptible Contact:** criteria for immunity include individuals born before 1970 **OR** born during or after 1970 who have received two doses of MMR **OR** Laboratory documentation of antibodies to measles. **For healthcare facility exposures follow IPC guidance.**

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Table 1: Canadian Immunization Guide: Summary of updated measles PEP recommendations for susceptible contacts

Populations	Time since exposure to measles [*]	
	≤ 72 hours	73 hours - six days
Susceptible infants 0 to 6 months old ⁸	IMiG (0.5mL/kg) ²	
Susceptible immunocompetent infants 6 to 12 months old	MMR vaccine ¹	IMiG (0.5mL/kg) ^{2 7 8}
Susceptible immunocompetent individuals 12 months and older	MMR vaccine series ^{3 7}	
Susceptible pregnant individuals ⁴	IVIg (400mg/kg) or IMiG (0.5mL/kg), limited protection if 30kg or more ⁵	
Immunocompromised individuals 6 months and older	IVIg (400mg/kg) or IMiG (0.5mL/kg), limited protection if 30kg or more ^{5 6}	
Individuals with confirmed measles immunity	N/A	

- 1 Two additional doses of MMR vaccine provided after 12 months of age are required for long-term protection.
 - 2 If injection volume is a major concern, IVIg can be provided at a dose of 400mg/kg.
 - 3 Susceptible immunocompetent individuals 12 months of age and older are not a priority to receive Ig following measles exposure due to low risk of disease complications and the practical challenges of administration contact management.
 - 4 Provide MMR vaccine series postpartum for future protection.
 - 5 For individuals 30kg or more, IMiG will not provide complete protection but may prevent some symptoms.
 - 6 In HIV-infected individuals, measles antibody titer is known to decline more rapidly over time as compared to those who are not HIV-infected. A dose of Ig should be considered in HIV-infected individuals with severe immunosuppression after a known exposure to confirmed measles, even with documented previous MMR immunization. Regardless of vaccination status pre-transplant, Ig should be considered for hematopoietic stem cell transplantation (HSCT) recipients, unless vaccinated post-HSCT and known to have an adequate measles antibody titre.
 - 7 MMR vaccine will not provide PEP protection after 72 hours of exposure, however, starting and completing a two dose series should not be delayed to provide long term protection.
 - 8 Two doses of measles-containing vaccine are still required after the first birthday for long-term protection.
- * Ig should only be provided within 6 days of measles exposure; unless it is contraindicated, individuals who receive Ig should receive measles-containing vaccine after a specified interval, once the measles antibodies administered passively have degraded. For more information, refer to [Blood Products, Human Immunoglobulin and Timing of Immunization](#) in Part 1.

Table 2: IM Injection Volume Guideline (ref - WRHA Public Health)

Immune Globulin Preparations (HBIg, Ig, TIg, Varlg, Rablg)

Client Age	Needle Length	Size (Gauge)	Site	Route	Maximum Volume Per Site
Infants under 12 months	7/8" - 1"	25	Ventrogluteal ^{A, B}	IM	1 mL
			Vastus lateralis	IM	1 mL
Children 12 months to 4 years (inclusive)	1"	22-25	Ventrogluteal ^{B, C}	IM	1 mL
			Vastus lateralis	IM	2 mL
			Deltoid	IM	1 mL
Children 5 years to 18 years	1" - 1½"	20-25	Ventrogluteal ^{B, C}	IM	3 mL
			Deltoid ^D	IM	1 mL
			Vastus lateralis	IM	3 mL
			Dorsogluteal ^E	IM	3 mL
Adults 19 years and older	1" - 1½"	20-22	Ventrogluteal ^{B, C}	IM	4 mL
			Deltoid ^D	IM	2 mL
			Vastus lateralis	IM	5 mL
			Dorsogluteal ^E	IM	5 mL