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Children's Wisconsin (CW) Contacts

Additional clinical guidance beyond this guideline can be provided by CW Infectious Disease Provider On-Call using one of the following options:

- CW paging system (internal providers)
- Call the Physician Referral Line to contact that individual 414-266-2470

Other resources

https://www.dhs.wisconsin.gov/immunization/measles.htm *
https://www.dhs.wisconsin.gov/publications/p02416.pdf

*CW Providers: Infection Prevention will notify the Health Department.

*Providers outside the CW system: Notify the patient's local health department with confirmed or suspected cases or definitive exposure.

Measles Testing and Post-Exposure Prophylaxis

Clinical Guideline

System wide

Should measles testing be ordered?

This document is for general guidance for cases where need to test for measles is uncertain. Provider concern for measles supersedes these recommendations.

Does patient have a confirmed exposure* to measles?

Yes

Consider PEP

No / Unknown

Is the patient immunocompromised

Yes

Does the patient have **ANY** of the following symptoms?

- Fever (38.0)
- Cough
- Coryza (rhinorrhea, congestion)
- Conjunctivitis
- Koplik spots
- Rash (rash may not be present in immunocompromised hosts)

No

Yes

Does the patient have any risk factors?

- Domestic travel to affected areas
- International travel or travel through large international airports
- Exposure to a known case
- Member of, or exposure to, a community with an ongoing outbreak

No

No measles testing is indicated

No

Does the patient have immunity to measles?

Considered immune if:

- Up to date on measles vaccine**
- Has laboratory documented evidence of immunity
- Has laboratory confirmation of previous disease
- Born before 1957

Children too young for vaccine (those less than one year of age) are considered non-immune

Yes

No

Does the patient have a **maculopapular rash that started on head and then spread distally and/or Koplik spots AND** at least 1 of the other following symptoms?

- Fever (38.3)
- Cough
- Coryza (rhinorrhea, congestion)
- Conjunctivitis

Yes

STOP! Contact Infection Prevention on Call via Secure Chat or pager

Order measles testing***

If testing is indicated

Consult Infectious Disease physician on call to determine need for testing ***

No

No measles testing is indicated

Does the patient have **ANY** of the following symptoms?

- Fever (38.3)
- Cough
- Coryza (rhinorrhea congestion)
- Conjunctivitis
- Koplik spots
- Rash

No

No measles testing indicated. Continue to have patient monitor for symptoms

Yes

STOP! Contact Infection Prevention on Call via Secure Chat or pager

Order measles testing***

See next slide for:

* EXPOSURE DEFINITION

** UP TO DATE ON VACCINE PER AAP

*** MEASLES TESTING REQUIREMENTS

HOW TO ORDER TESTING AT FV HOSPITAL

Measles Testing and Post-Exposure Prophylaxis

Clinical Guideline

System wide

MEASLES

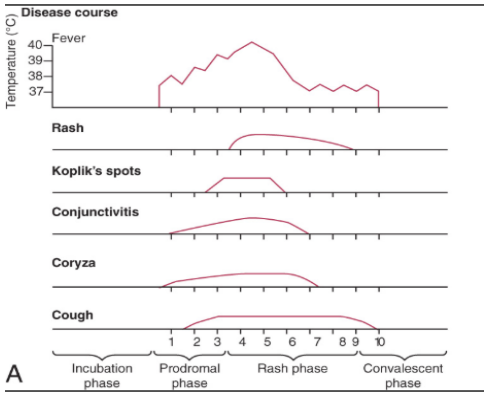
INCUBATION PERIOD:

- Typically, 11-12 days from the initial exposure until symptoms appear.

SYMPTOMS:

Prodromal: Fever, cough, coryza, or conjunctivitis.

- Koplik spots (tiny white spots inside the mouth) may also appear 2–3 days after symptoms first appear



Source: https://www.bsmhft.nhs.uk/wp-content/uploads/2023/12/Spots-in-mouth-1-1024x1024.png

Rash: follows the prodromal symptoms 2–4 days later and usually lasts 5–6 days.

- A maculopapular rash (rash of both flat and raised skin lesions) begins on the head and face and then spreads downward to the neck, trunk, arms, legs, and feet.
- The spots may become joined together as they spread from the head to the body.
- Fever may spike to more than 104° F when rash appears.
- Rash may not be present in immunocompromised persons.

*** EXPOSURE DEFINITION**

Per CDC, a measles exposure is defined as being in the same airspace as an infectious person, or in that airspace for up to 2 hours after the infectious person has left, with out appropriate PPE (N95/CAPR) even if the infectious person was masked

**** UP TO DATE ON VACCINE PER AAP**: one dose MMR at 12 through 15 months and the second dose at age 4 through 6 years

***** MEASLES TESTING REQUIREMENTS**: ORDER MEASLES DIAGNOSTIC PANEL

- Measles NAAT (2 separate swabs- 1 throat, 1 NP. Put BOTH swabs in one Viral Transport Medium tube (VTM).)
- Rubeola IgM(Red top)
- Measles Immune Status (IgG) (Red Top)
- These tests are sent to the State Lab of Hygiene and will have a 24-48 hour turn around time

TO ORDER TESTING at FV Hospital

1. Type in MSO Measles Virus PCR. This will get Measles PCR which is EPIC Test Code: MSO, nonblood- LAB3762.
2. Type in Measles M. This will get Measles IgM which is EPIC Test Code: LAB50491, blood test.
3. Type in MISIGG. This will get Measles IgG which is EPIC Test Code: 86765.02, blood test.
4. Instructions for MSO: Change Priority to STAT
   1) Type in “Measles Virus PCR” in name of test requested
   2) In scheduling instructions box, type in “Tube type: VTM and code: VR01713!”

Source: Centers for Disease Control and Prevention National Center for Immunization and Respiratory Diseases

Measles is infectious 4 days before and 4 days after rash onset.

Measles Testing and Post-Exposure Prophylaxis

Clinical Guideline

System wide

Measles Exposure: Per CDC, a measles exposure is defined as being in the same airspace as an infectious person, or in that airspace for up to 2 hours after the infectious person has left, without appropriate PPE (N95/CAPR) even if the infectious person was masked.

Measles Testing: Please see separate CW Measles Testing Algorithm for decision support.

Post-Exposure Prophylaxis (PEP): Immune Globulin Intramuscularly (IMIG), dose 0.5ml/kg (max dose 15ml)

TABLE: PEP Guidance by Age, Immune Status, and Vaccination Status

Age	Immune System Status	MMR Vaccination	Recommendation See below for monitoring recommendations
<6 months	Normal for age	NA	• IGIM if within 6 days of exposure • Home Quarantine
6-11 months	Normal for age	NA	**First 72 hours from exposure**: • MMR (This MMR dose does *not* count toward regular MMR dosing schedule) • No quarantine needed but exclude from healthcare settings for 21 days. **4-6 days from exposure:** • IMIG* is recommended • Home quarantine **>6 days from exposure**: • PEP not indicated • Home quarantine
>12 months	Normal for age	Unvaccinated	**First 72 hours from exposure**: • MMR vaccine • No quarantine needed but exclude from healthcare settings for 21 days **>4-6 days** • MMR vaccine • Home quarantine
>12 months	Normal	Vaccinated (x1 dose)	• Recommended to give 2nd dose of MMR vaccine if >28 days from first dose • No quarantine
>4 years	Normal	Vaccinated (x2 doses)	• No PEP • No quarantine
All Ages	Severely immuno-compromised (See definition on page 6)	Vaccination status does not matter in this population	**First 6 days from exposure:** • Administer intravenous immune globulin (IVIG) • Home quarantine **>6 days from exposure**: • PEP not indicated • Home quarantine

Monitoring during/following administration of IMIG:

- Measles vaccination – Monitor for syncope or hypersensitivity for 15 minutes
- Immune globulin –A full set of vital signs (HR, RR, BP, temp) is required immediately prior to administration, 15 minutes after administration and 30 minutes after the administration.
- Assess for signs of a reaction (difficulty breathing, uneasiness or agitation, headache, rash, local irritation at site, abdominal cramping, cough, wheezing, pruritus, dizziness, color changes, chills or increased temperature).

Continued on next page

Vaccine timing following immunoglobulin

- IGIM: Measles vaccine should be administered 6 months after IGIM administration provided child is at least 12 months of age.
- IVIG: Measles vaccine should be administered 8 months after IVIG provided child is at least 12 months of age.

Quarantine

The quarantine period is 21 days after the last exposure; most health departments would extend the monitoring period to 28 days if IG is administered as PEP, because IG can prolong the incubation period. Decisions on whether exposed persons who received IG as PEP appropriately (i.e., within 6-day window) should return to settings such as childcare, school, or work (ie, not be quarantined) should include consideration of the immune status and intensity of contacts in the setting and presence of high-risk individuals. These persons should be excluded from health care settings.

Severely Immunocompromised definition

Severely immunocompromised is defined as patients with severe primary immunodeficiency; patients who have received a hematopoietic cell transplant, until at least 12 months after finishing all immunosuppressive treatment or longer in patients who have developed graft-versus-host disease; patients undergoing treatment for acute lymphoblastic leukemia, within and until at least 6 months after completion of immunosuppressive chemotherapy; people who have received a solid organ transplant; people with human immunodeficiency virus (HIV) infection who have severe immunosuppression (for people ≤5 years of age, defined as a CD4+ T-lymphocyte percentage <15%; for people >5 years of age, defined as a CD4+ T-lymphocyte percentage <15% or a CD4+ T-lymphocyte count <200 lymphocytes/mm3); and patients younger than 12 months whose birthing parent received biologic response modifiers during pregnancy.

The above are meant to provide guidance regarding PEP therapy. Specific questions should be directed to the CW Infectious Disease Provider On-Call.

Please call the Physician Referral Line to contact that individual 414-266-2470.

References

2024. "Measles", Red Book: 2024–2027 Report of the Committee on Infectious Diseases, Committee on Infectious Diseases, American Academy of Pediatrics, David W. Kimberlin, MD, FAAP, Ritu Banerjee, MD, PhD, FAAP, Elizabeth D. Barnett, MD, FAAP, Ruth Lynfield, MD, FAAP, Mark H. Sawyer, MD, FAAP

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Please contact clinicalguidelines@childrenswi.org for questions or comments.

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Medical Disclaimer

This Clinical Guideline (CG) is designed to provide a framework for evaluation and treatment. It is not intended to establish a protocol for all patients with this condition, nor is it intended to replace a clinician's judgement. Adherence to this CG is voluntary. Decisions to adopt recommendations from this CG must be made by the clinician in light of available resources and the individual circumstances of the patient. Medicine is a dynamic science; as research and clinical experience enhance and inform the practice of medicine, changes in treatment protocols and drug therapies are required. The authors have checked with sources believed to be reliable in their effort to provide information that is complete and generally in accord with standards accepted at the time of publication. However, because of the possibility of human error and changes in medical science, neither the authors nor Children's Hospital and Health System, Inc., nor any other party involved in the preparation of this work warrant that the information contained in this work is in every respect accurate or complete, and they are not responsible for any errors in, omissions from, or results obtained from the use of this information.