



**Health Care Facility Infection Control Recommendations
For Suspected Measles Patients**

July 25, 2019

Fundamentals to prevent measles transmission:

- Ensure healthcare personnel (HCP) have presumptive evidence of immunity. (see Definitions)
- Rapidly identify and isolate patients with known or suspected measles.
- Adhere to Standard and Airborne Precautions (use of a respirator for HCP).
- Promote respiratory hygiene (surgical mask for patient) and cough etiquette (cover your cough) with visual alerts and readily available supplies (mask, hand sanitizer, tissues).
- Appropriately manage exposed patients, visitors and ill HCP.
- **Call Epidemiology at 269-8000 or (after 5:00 PM) 800-478-0084 for any suspected measles case**

Healthcare providers should **suspect measles in patients** with a febrile rash illness and clinically compatible measles symptoms characterized by a prodrome of fever, cough, coryza, and conjunctivitis – the 3 C’s, a pathognomonic enanthema (Koplik spots) followed by a maculopapular rash that starts on the head and descends in persons with recent (in prior 3 weeks) history of:

- Travel outside of Alaska within the United States, transit through U.S. international airports, or interaction with foreign visitors, including at U.S. tourist attractions; or
- Travel internationally; or
- Exposure to another person with a febrile rash illness; or
- Not having been immunized to measles or has unknown immune status

If measles is suspected, please use the following infection control measures below to minimize potential exposures.

1. If patient calls facility before arrival + measles is suspected + an airborne infection isolation (negative pressure) room is not available:

- a. Refer patient to facility with airborne infection isolation room, if possible.
- b. If referral elsewhere is not possible and medical evaluation is necessary, but not urgent, try to schedule the patient at the end of the day.
- c. If measles testing is indicated, but patient does not require urgent medical evaluation, collection of a throat or NP swab for measles PCR testing may be obtained while the patient is in their car or otherwise outside of the facility.
- d. Otherwise, ask patient to alert you before entering the facility and provide a surgical mask to the patient before entry. If patient cannot wear a surgical mask, other practical means of source containment should be implemented (e.g., place a blanket loosely over the heads of infants and young children suspected to have measles as they transit through common areas.)
- e. Have the patient (and their family) bypass the waiting area if possible, and do not allow the patient to remain in the waiting area or other common areas.

- f. Healthcare personnel (HCP) should use respiratory protection (i.e., a respirator such as N95 mask) regardless of their presumptive immunity status, when assessing a patient with suspected measles. HCP should be medically cleared and fit-tested for respirator use.
- g. Immediately place patient in private room with the door closed. If feasible, have patient wear a regular/surgical (not an N95 or respirator) mask for the duration of time spent in the room.
- h. Evaluate patient as quickly as possible and discharge patient home or transfer the patient to a facility with an airborne infection isolation room as soon as feasible.
 - a. If there is a need to transport the patient with suspected measles within or between healthcare facilities:
 - i. Limit transport of patients with known or suspected measles to essential purposes, such as diagnostic and therapeutic procedures that cannot be performed in the patient's room or in the facility.
 - ii. Use a transportation route and process that includes minimal contact with persons not essential for the patient's care.
 - iii. ***Notify the HCP in the receiving area of the impending arrival of the patient and of the precautions necessary to prevent transmission. When transport outside the facility is necessary, inform the receiving facility and the transport vehicle.***
 - i. After the patient leaves the room, it should remain vacant for the appropriate time (up to 2 hours) to allow for 99.9% of airborne-contaminant removal (see Appendix).

2. If patient does not call ahead before entering facility + measles is suspected + an airborne infection isolation room is not available:

- a. Mask the patient immediately. If patient cannot wear a surgical mask, other practical means of source containment should be implemented (e.g., place a blanket loosely over the heads of infants and young children suspected to have measles while they are transiting through common areas).
- b. Bypass the waiting room if possible, and do not allow patient (and their family) to remain in the waiting area or other common areas
- c. Immediately place patient in a private room and keep the door closed.
- d. Healthcare personnel (HCP) should use respiratory protection (i.e., a respirator such as N95 mask) regardless of their presumptive immunity status when assessing a patient with suspected measles. HCP should be medically cleared and fit-tested for respirator use.
- e. Evaluate patient as quickly as possible. If measles testing is indicated, collect a throat or NP swab for PCR testing.
- f. Discharge patient home or transfer the patient to a facility with an airborne infection isolation room as soon as feasible.
 - a. If there is a need to transport the patient with suspected measles within or between healthcare facilities:
 - i. Limit transport of patients with known or suspected measles to essential purposes, such as diagnostic and therapeutic procedures that cannot be performed in the patient's room or in the facility.

- ii. Use a transportation route and process that includes minimal contact with persons not essential for the patient's care.
- iii. ***Notify the HCP in the receiving area of the impending arrival of the patient and of the precautions necessary to prevent transmission. When transport outside the facility is necessary, inform the receiving facility and the transport vehicle.***
- g. After the patient leaves the room, it should remain vacant for the appropriate time (up to 2 hours) to allow for 99.9% of airborne-contaminant removal (see Appendix).

3. If measles is suspected + the facility has an airborne infection isolation room:

- a. Mask the patient immediately prior to or upon entry to the facility. If patient cannot wear a surgical mask, other practical means of source containment should be implemented, e.g., place a blanket loosely over the heads of infants and young children suspected to have measles while they are transiting through common areas.
- b. Bypass the waiting area if possible, and do not allow patient (and family) to remain in the waiting area or other common areas.
- c. Immediately place patient in airborne infection isolation room.
- d. Healthcare personnel (HCP) should use respiratory protection (i.e., a respirator such as N95 mask) regardless of their presumptive immunity status when assessing a patient with suspected measles. HCP should be medically cleared and fit-tested for respirator use.
- e. Evaluate patient as quickly as possible. If measles testing is indicated, collect a throat or NP swab.
- f. Patient may remove mask when in the airborne infection isolation room, but they should don it again prior to leaving the room when exiting the facility or during transit to another part of the facility.
- g. After the patient leaves the room, it should remain vacant for the appropriate time (up to 2 hours) to allow for 99.9% of airborne-contaminant removal (see Appendix).

4. For all suspect measles cases:

- a. Allow only healthcare personnel with documentation of two doses of live measles vaccine or laboratory evidence of immunity (measles IgG positive) to enter the patient's room, if possible.
- b. Healthcare personnel (HCP) should use respiratory protection (i.e., a respirator such as N95 mask) regardless of presumptive immunity status when assessing a patient with suspected measles. HCP should be medically cleared and fit-tested for respirator use.
- c. Do not allow susceptible people into the patient room, if possible.
- d. If there is a need to transport the patient with suspected measles within or between healthcare facilities:
 - i. Use a transportation route and process that includes minimal contact with persons not essential for the patient's care.
 - ii. ***Notify HCP in the receiving area of the impending arrival of the patient and of the precautions necessary to prevent transmission.*** When transport outside the facility is necessary, inform the receiving facility and the transport vehicle HCP in advance about

airborne precautions being used. Instruct suspect measles patients and exposed persons to inform all healthcare providers of the possibility of measles prior to entering a healthcare facility so that appropriate infection control precautions can be implemented.

- e. If patient was not immediately placed in an airborne infection isolation room, patients, visitors, and staff who were in the same air space area as the measles patient during the time the patient was in your facility and for up to two hours after the patient left the area are considered possibly exposed even if the measles patient was masked.
- f. Document potentially exposed staff and patients. If measles is confirmed in the suspect measles patient, potentially exposed people will need to be assessed for measles immunity.

Recommendations for Cleaning and Disinfecting Environmental Surfaces in Patient Care Areas

- Standard cleaning and disinfection procedures
- EPA-registered disinfectants per manufacturer's instructions for more product information see: <https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>
- No special management of waste is required
 - Follow federal and local regulations for management of regulated medical waster

For more information on measles and measles testing, please see:

<http://dhss.alaska.gov/dph/Epi/id/Pages/measles/default.aspx>

Definitions:

Healthcare personnel (HCP): "HCP" includes all paid and unpaid persons working in healthcare settings who have the potential for exposure to patients and/or to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air. HCP include but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, contractual staff not employed by the healthcare facility, and persons not directly involved in patient care, but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g., clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel).

Exposure to measles for HCP in healthcare settings: HCP exposures to measles in a healthcare setting include spending any time while unprotected (i.e., not wearing recommended respiratory protection):

- In a shared air space with an infectious measles patient at the same time, or
- In a shared air space vacated by an infectious measles patient within the prior 2 hours* See Appendix

Healthcare settings: "Healthcare settings" refers to places where healthcare is delivered and includes, but is not limited to, acute care facilities, long-term acute care facilities, inpatient rehabilitation facilities, nursing homes and assisted living facilities, home healthcare, vehicles where healthcare is delivered (e.g., mobile clinics), and outpatient facilities, such as dialysis centers, physician offices, and others.

Presumptive evidence of immunity to measles for HCP includes:

Written documentation of vaccination with 2 doses of measles virus-containing vaccine (the first dose administered at age ≥ 12 months; the second dose no earlier than 28 days after the first dose); OR

- Laboratory evidence of immunity (measles immunoglobulin G [IgG] in serum; equivocal results are considered negative); OR
- Laboratory confirmation of disease; OR
- Birth before 1957.
- Consider vaccinating HCP born before 1957 who do not have other evidence of immunity to measles.
- During a measles outbreak (**AK SOE will determine when an “outbreak” status is warranted**), 2 doses of measles virus-containing vaccine are recommended for all HCP, regardless of year of birth.

This resource adapted from healthcare infection control recommendations for suspected measles patients released by the California Department of Public Health, April 2019.

Reference

- CDC Interim Infection Prevention and Control Recommendations for Measles in Healthcare Setting, July 2019. Available at: <https://www.cdc.gov/infectioncontrol/guidelines/measles/index.html>
- CDC Guidelines for Isolation Precautions <http://www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html>
- CDC Guidelines for Environmental Infection Control in Health Care Facilities <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm>

Appendix

*Air changes/hour (ACH) and time required for airborne-contamination removal by efficiency

ACH	Time (mins.) required for removal 99% efficiency	Time (mins.) required for removal 99.9% efficiency
2	138	207
4	69	104
6+	46	69
8	35	52
10+	28	41
12+	23	35
15+	18	28
20	14	21
50	6	8

<https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1>