



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

PLEASE COPY THIS FOR ALL HEALTH CARE PROVIDERS IN YOUR PRACTICE

TO: Primary Care Staff, Infectious Disease, Emergency Medicine, Internal Medicine, Pediatrics, Family Medicine, Laboratory Medicine, and Infection Control Personnel

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SUBJECT: Measles: Information and Testing

Summary:

- There are no reported measles cases confirmed in Connecticut as of today's date.
- The average incubation period of measles (from contact with a case until onset of rash) is 14 days, with a range of 7–21 days.
- Cases are considered infectious from 4 days before rash onset through 4 days after.
- The Connecticut Department of Public Health (DPH) is working with local health departments and healthcare providers to investigate all reports of suspected measles.
- All suspected measles cases must be reported to the DPH Immunization Program at (860) 509-7929 and to the local health department where the patient resides.
- All requests for testing from the Department of Public Health Laboratory (DPHL) must be reported and approved by the Immunization Program.
- The DPHL is no longer performing IgM or IgG serological testing for measles.
- DPH recommends measles testing include both serum for IgM and IgG testing AND a respiratory specimen for RT-PCR testing.

Children or adults born since 1957 who do **not** have documented evidence of receiving a measles-containing vaccine or documented evidence of laboratory confirmed measles are considered to be **highly susceptible** to measles. All people in this age group are recommended to receive two doses of a measles-containing vaccine.

Recommendations

1. Consider measles as a diagnosis in anyone with a febrile rash illness and clinically compatible symptoms (cough, coryza, and/or conjunctivitis) who has recently traveled abroad or who has had contact with someone with a febrile rash illness. Immunocompromised patients may not exhibit rash or may exhibit an atypical rash.

The characteristic measles rash is classically described as a generalized, maculopapular, erythematous rash that begins several days after the fever starts. The fever usually peaks around the time of rash onset. The rash starts on the head and neck before spreading to cover most of the body, often causing itching. The measles rash appears two to four days after the initial symptoms and lasts for up to eight days. The rash is said to "stain", changing color from red to dark brown, before disappearing. Koplik's spots seen inside the mouth are pathognomonic (diagnostic) for measles, but are not often seen because they are transient and may disappear within a day of arising.

2. **Immediately notify** the DPH Immunization Program of **any** patient that you suspect could have measles by telephone at (860) 509-7929 or during evenings, weekends, or holidays call (860) 509-8000. **Please obtain a travel history (out-of-state and international) during patient evaluation that includes the 21 days prior to rash onset.**
3. **Collect patient samples to confirm measles diagnosis:**
 - a. **Take blood** for serological confirmation (IgM and IgG testing) and send to the commercial laboratory of your choice. Serologic testing for diagnostic purposes is no longer available at DPHL. If serum is collected, it should ideally be drawn at least 72 hours past rash onset and submitted to the facility's normal reference laboratory. Serologic testing can create false positive measles IgM results from cross reacting to other viruses, including erythrovirus (parvovirus), rubella, human herpes virus 6 (including roseola), and rheumatoid factor antibodies (may be generated with tuberculosis, trypanosomiasis, EBV (mono), CMV, influenza A and hepatitis A).
 - b. An oropharyngeal or nasopharyngeal swab should be collected for detection of measles RNA by RT-PCR or virus isolation. **This test is more specific for measles than IgM serology** and is useful for public health to determine from which region of the world the virus was introduced. **Samples are sent to the Centers for Disease Control and Prevention (CDC) for testing, and must be coordinated with the Immunization Program.** For more information on sample collection visit www.cdc.gov/measles and click on the "Lab Tools" tab.
 - c. Requests for measles serologic testing that are strictly for rule-out purposes (low index of suspicion, does not meet clinical case definition, no travel or contact with cases), should be directed to a clinical laboratory. In this instance, samples for RT-PCR testing can be collected, stored, and forwarded for testing if IgM serology is positive.
4. **Isolate suspect measles case-patients and immediately to minimize transmission:**
 - a. Be alert for new measles cases - make sure all staff, particularly triage nurses, have a high index of suspicion for patients presenting with a febrile rash illness.
 - b. If other patients are in the waiting room when they arrive, give the suspected case a mask and take him/her directly to a consulting room (that room should not be used for another patient for at least two hours after the consultation).
5. **In general practice:**
 - a. See suspected measles patients at home if possible.
 - b. If not possible, make their appointment the last of the day to minimize contact with other patients in the waiting room.
 - c. If a patient needs to be sent to hospital, give them a mask to wear and telephone ahead and let the Emergency Department or Ambulance staff (if applicable) know that you are referring a case of suspected measles.
6. **Seek advice from the DPH regarding the management of susceptible contacts:**
 - a. On DPH advice, follow up all persons who have been in the waiting room **at the same time** as an infectious case (if infection control precautions were not implemented) and **for two hours** after the visit. These people are considered to be exposed to the measles virus.
 - b. **To prevent measles in susceptible contacts give:**
 - Measles-mumps-rubella (MMR) vaccine if within 72 hours of first contact with the patient to those 6 months of age and older without contraindications; OR
 - Immune globulin if longer than 72 hours but within 6 days from contact to those under 6 months of age or who have contraindications to MMR vaccine.
7. **Check vaccination records for:**
 - a. Your staff - All staff born during or since 1957 should have documentation of two doses of measles containing vaccine. If documentation is not available, consider giving two doses of MMR vaccine or checking a titer.

- b. Your patients - Ideally all patients born during or since 1966 should have received two doses of a measles-containing vaccine.
- c. Currently MMR vaccine is routinely recommended at 12–15 months and 4–6 years of age.
However, the second dose of MMR vaccine can be given sooner, as long as at least 28 days have passed since the first dose.
- d. For those who travel abroad, CDC recommends that all U.S. residents older than 6 months be protected from measles and receive MMR vaccine, if needed, prior to departure.
 - i. Infants 6 through 11 months old should receive 1 dose of MMR vaccine before departure.†
 - ii. Children 12 months of age or older should have documentation of 2 doses of MMR vaccine (separated by at least 28 days).
 - iii. Teenagers and adults without evidence of measles immunity** should have documentation of 2 appropriately spaced doses of MMR vaccine.

† Infants who receive a dose of MMR vaccine before their first birthday should receive 2 more doses of MMR vaccine, the first of which should be administered when the child is 12 through 15 months of age and the second at least 28 days later.

** One of the following is considered evidence of measles immunity for international travelers: 1) birth before 1957, 2) documented administration of 2 doses of live measles virus vaccine (MMR, MMRV, or measles vaccines), 3) laboratory (serologic) proof of immunity or laboratory confirmation of disease.

The CDC will be updating national measles case counts every Monday at the following web site:

<http://www.cdc.gov/measles/cases-outbreaks.html>.