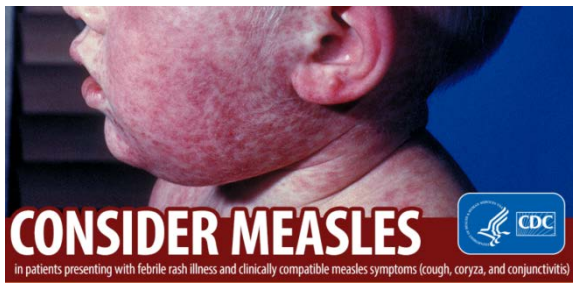
Should I Test for Measles?

A guide for Tennessee healthcare providers

TN Department of Health

Updated April 25, 2019 due to confirmed case in TN

1. **Clinical case definition**: Acutely ill patient with generalized, maculopapular rash; temperature ≥101°F or 38.3°C; and cough, coryza, or conjunctivitis. **Prodrome** definition: acute fever plus cough, runny nose or conjunctivitis but without rash. In classic measles, fever begins 3-7 days before rash. Rash starts on face and moves downward.
2. **Isolate**
   - At home: the patient stays home and out of the public through 4 days after the onset of rash.
   - Airborne precautions in a hospital setting, preferably an airborne infection isolation room at negative pressure. If unavailable, keep patient in a room with a closed door (but not a positive pressure room) and do not use room for 2 hours after the patient leaves. Patient is to remain masked in the isolation room. All staff attending to patient wear N95 masks and need 2 documented doses of MMR or proof of immunity (or risk furlough).
3. **Call**
   - Call your local health department. https://www.tn.gov/health/health-program-areas/localdepartments.html or the state CEDEP on-call phone (available 24/7). **615-741-7247**
4. **Collect**
   - Collect nasopharyngeal or pharyngeal specimen. Use synthetic (non-cotton) swabs and place in liquid viral transport media. Brands of synthetic swabs include Dacron and Copan. This is the same type of swab and media used for influenza PCR testing. Refrigerate specimens after collection, and transport on ice. Blood for serologic testing is collected by venipuncture or by finger/heel stick. Use tubes without additives—either a plain, red–top tube or a serum separator tube. The preferred volume for rubeola IgM and IgG testing at CDC is 0.5–1 ml of serum to allow for re–testing; however, testing may be done with as little as 0.1 ml (100 ul), if necessary.
5. **Determining susceptibility**: Any individual without documented immunity is assumed to be susceptible. Documentation of immunity is possible through 3 methods
   - Documentation of 1+ doses of measles vaccine after 1967 and since 1st birthday (Healthcare workers required documentation of 2 doses after the 1st birthday, spaced at least 28 days apart)
   - Documented laboratory confirmation of immunity or disease (+ rubeola IgG).
   - Born before 1957 (if a healthcare worker, birth before 1957 does not apply as a criterion for immunity).
   - Susceptible persons who MMR or immune globulin after contact with a case should be evaluated as susceptible if they present with prodromal symptoms.



Patient presents with fever and cough (with or without a rash)
MASK IMMEDIATELY!

Meets clinical case definition[1]

Isolate[2]
Call[3]
Collect[4]

No rash, but symptoms consistent with prodrome[1]

Take thorough patient history to determine:
- **clinical course[1]**
- **susceptibility to measles[5] and**
- **potential exposure to measles in the 7-21 days before illness began[6]**

Documented Immunity[5]

Isolate[2]
If appropriate, recommend self-isolation at home until symptoms resolve
If requiring hospitalization, isolate in negative pressure
Call[3]
Collect [4]
May consider serology (IgM) or PCR testing

Susceptible/ Unknown Immunity[5]

Isolate[2]
Verify immunity status (if possible)[5]
Call[3]
Collect[4]

6. **Determining potential exposure to measles:** Taking a thorough history of the patient's movements in the 7-21 days before their illness will assist public health staff in determining whether the patient had known exposure, possible exposure, or no specific exposure:
   - Known exposure to a case: close contact of a confirmed case or at a known exposure site (location/time) where an infectious case had been within 7-21 days of the onset of illness.
   - No specific exposure risk: Patient did not visit a known area of public exposure in the 7-21 days before illness, no standard risk factors, including no international travel or contact with an ill person with recent international travel.