# Evaluating a patient presenting with rash when there is no local measles transmission[1]

## START HERE

**Needs all three:**

- Fever[2]
- Generalized, maculopapular rash
- No vesicular lesions/vesicles[3]

NO → **Measles is unlikely. If vesicular rash, consider varicella or alternative cause of rash.**

YES ↓

**Epidemiological risk for measles in the 21 days before the rash? Any of the following:**

- International travel in the past 21 days
- Domestic travel in the past 21 days to an area with known measles transmission
- Known exposure to measles

NO → **Measles clinical critera?[4]**

- Fever[2] and rash

**AND**

- Cough, runny nose, or conjuctivits

NO → **Measles is unlikely. If measles is still suspected, contact Health Department for guidance.**

YES ↓

**Suspect measles. Immediately contact Health Department to discuss testing options. See Testing Recommendations.**

**Received MMR vaccine in the past 21 days?**

YES → **Likely a reaction to MMR vaccination[5]**

NO ↓

**Prior measles vaccination?**

- Age ≤6 years: 1 dose MMR*
- Age >6 years: 2+ doses MMR

YES → **Measles is uncommon among people with age-appropriate vaccination. Measles can occur among vaccinated people, but generally during intense exposure (e.g., daycare or household exposure). If measles is suspected based on clinical presentation or severity of illness, contact Health Department for guidance.**

*or other measles-containing vaccine

**Vermont Department of Health**
**Infectious Disease Epidemiology (24/7):**
**802-863-7240, option 2**

VERMONT
DEPARTMENT OF HEALTH

# Notes

1. This testing algorithm is intended to be used by bedside providers in settings where there is not local measles transmission. This assumes that the pre-test probability for most people without known epidemiologic risk for measles and who do not meet case criteria will be low. In settings with active measles transmission, the threshold at which to pursue testing may be lower, and a more permissive algorithm could be considered.
2. Either a measured or patient/family-reported fever is adequate; fever may not be measured at the time of healthcare evaluation due to normal fluctuation or to use of antipyretics (e.g., ibuprofen).
3. A vesicular rash is not consistent with measles, and should prompt consideration for other causes of rash (e.g., varicella/chickenpox)
4. Measles clinical criteria (per CSTE* case definition) include ALL of the following:
    a. Generalized maculopapular rash
    b. Fever
    c. Cough, coryza (runny nose), or conjunctivitis (also known as the three C's)
5. Up to 5% of MMR recipients will get a short-lived, mild febrile rash. This is more common with the first dose of MMR. People who experience this vaccine reaction are not contagious to others around them. If a person has received MMR within 21 days before rash onset, but also has epidemiologic risk for measles, then specialized testing may be required and should be discussed with local or state public health authorities.

*CSTE: Council of State and Territorial Epidemiologists: https://ndc.services.cdc.gov/case-definitions/measles-2013/