

Evaluating a patient presenting with a fever and rash¹

START HERE

Needs ALL 3:

- ☐ Fever²
- ☐ Generalized, maculopapular rash
- ☐ No vesicular lesions / vesicles³

No

Measles unlikely. If vesicular rash, consider varicella or alternative cause of rash.
If measles still suspected, contact local health department for guidance.

Yes

Epidemiologic risk for measles in the 21 days before rash?
ANY of the following:

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

No

Measles clinical criteria?⁴

- ☐ Fever² and rash
AND
- ☐ Cough, runny nose, OR conjunctivitis

No

Measles unlikely.
If measles still suspected, contact local health department for guidance.

Yes

Received MMR vaccine in the last 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

*or other measles-containing vaccine

No

Yes

Measles is uncommon among people with age-appropriate vaccination. Measles can occur among vaccinated people, but generally during intense exposure (e.g., day care or household exposure).

If measles is suspected based on clinical presentation or severity of illness, contact the [local health department](#) for guidance.

Suspect measles.
Immediately contact [local health department](#) or IDPH to discuss testing options.
See Laboratory Testing Recommendations.

Contact your [local health department](#) to report all suspect cases of measles and to discuss testing options. IDPH may also be reached at 217-782-2016 or after-hours for emergencies at 217-782-7860.

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:
 - ☐ Generalized maculopapular rash
 - ☐ Fever
 - ☐ Cough, coryza (runny nose), or conjunctivitis (also known as the “3 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/>