MEASLES

IDENTIFICATION, TESTING, AND MANAGEMENT OF SUSPECTED CASES

SARPY/CASS Health Department

Triage febrile rash illnesses by phone, or immediately upon arrival, assess the need for control measures

PATIENT MUST MEET BOTH CRITERIA

- Prodrome: fever (100.4*F or higher) / cough / runny nose (coryza) / red, watery eyes (conjunctivitis)
- Followed in 2-4 days by: generalized descending maculopapular rash beginning at hairline / face lasting for usually 5-6 days
  Koplik spots inside cheeks (may / may not be present prior to rash)

AND

- Risk factors for measles (history of international travel, contact with travelers or links to known outbreak or case), or no/unknown immunity status

No to any of the criteria

Consider other viral/bacterial differential diagnoses and manage as clinically indicated.

YES to BOTH Criteria

MINIMIZE RISK OF TRANSMISSION AS SOON AS POSSIBLE

- Measles is highly airborne infectious: Identify febrile rash illnesses prior to, or immediately upon arrival to expedite evaluation in a negative pressure room, when possible, or a private room to minimize congregate exposures
  - *Conduct exam in room that can be left vacant with the door closed for at least 2 hours after patient departure*
- Avoid waiting room (use side / back entrance)
- Staff evaluating patient should have presumptive evidence of measles immunity and should wear N-95 masks
- Contact infection control preventionist, if available
- Request patient wear surgical mask

IMMEDIATELY CALL (24/7) upon suspicion for public health reporting and follow-up guidance

Sarpy/Cass Health Department 402-339-4334

Testing

PREFERRED SPECIMENS to be collected **as soon as possible**

- *Within 3 days of Rash Onset*- Nasopharyngeal (NP) or throat swab in universal viral transport media **and** Urine in a sterile cup, if able to self void, for RT-PCR
- *Within 4-10 days of Rash Onset*- Urine in sterile cup (*catheterize, if necessary*) for RT-PCR; ideally with a Nasopharyngeal (NP) or throat swab in universal viral transport media for RT-PCR

[OPTIONAL] SERUM SPECIMENS consider collecting if **> 72 hours AFTER rash onset**

- Measles specific IgM (*Caution: clinical interpretation of IgM*)

***Measles IgG testing should only be considered when testing for PRIOR measles immunity (natural or vaccination) and should NOT be used for active infection**

Measles RT-PCR available at certain commercial labs or through NE Public Health Laboratory after prior authorization by NE-DHHS Public Health

Suspect Case Management:

- Isolate patient immediately
- Exclude from childcare/school/workforce for at least 4 days after rash onset
- Reassess isolation based on diagnosis and provide supportive treatment

If POSITIVE: Measles PCR test OR High Suspicion for ACTIVE INFECTION (after Public Health consultation)

- Notify receiving facilities of diagnosis
- Identify patients/visitors/staff that shared congregate space exposure and review measles immunity status
- Exclude all health care staff without immunity evidence from day 5 through day 21 following exposure
- Recommend vaccine within 3 days, or immunoglobulin within 6 days of exposure as indicated
- Clean surfaces that may be contaminated with an EPA-registered disinfectant for health care settings

Measles Tests

When to Collect?

Acute Disease	PCR	Nasopharyngeal (NP) or Throat (OP) Swab 	As soon as possible upon suspicion of measles: ideally **3** days after rash onset and within **4-10 days.**
Acute Disease	PCR	Urine 	**Within 10 days of rash onset.** *Collecting a urine specimen along with an NP/OP swab may improve test sensitivity, especially if at the end of the PCR detection window.
Acute Disease	IgM	Serum 	Collect with specimen for PCR. Can be negative up to 3 days after rash onset. IgM **can be detected for 6-8 weeks after acute measles.**
Immunity	IgG	Serum 	IgG testing is used when assessing evidence of immunity, can be detected **~2 weeks** after MMR vaccination.