

# MEASLES

## IDENTIFICATION, TESTING, AND MANAGEMENT OF SUSPECTED CASES

***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**  
**Your Local Health Department**

### 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 <b>3</b> days after rash onset and within <b>4-10</b> days.  |
|               | PCR | Urine                                   |   | <b>Within 10 days of rash onset.</b><br>*Collecting a urine specimen along with an NP/OP swab may improve test sensitivity, especially if at the end of the PCR detection window. |
|               | IgM | Serum                                   |    | <b>OPTIONAL:</b> Collect with specimen for PCR. Can be negative up to 3 days after rash onset. IgM <b>can be detected for 6-8 weeks after acute measles.</b>                      |
| Immunity      | IgG | Serum                                   |  | IgG testing is used when assessing evidence of immunity, can be detected <b>~2 weeks</b> after MMR vaccination.   |