



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

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To: North Carolina Clinicians  
From: Zack Moore, MD, MPH, State Epidemiologist  
Wendy Holmes, RN, Head, Immunization Branch  
Subject: Confirmed Measles in Wake County (2 pages)  
Date: June 18, 2018

**Summary:**

A case of measles has been diagnosed in an unvaccinated Wake County resident who became ill after traveling internationally. Onset of rash was on June 10<sup>th</sup> and measles was confirmed by laboratory testing at the North Carolina State Laboratory of Public Health on Saturday, June 16<sup>th</sup>.

The patient sought care at multiple healthcare sites during June 8–14 while infectious; details are available at the [Wake County website](#). While every effort is being made to identify persons who were exposed, it is possible that additional cases could occur among unrecognized contacts at these or other locations.

**Background:**

Measles is a highly infectious acute viral illness that can be spread through coughing, sneezing, and contact with respiratory secretions of an infected person. Illness begins 7–21 days after exposure with a fever  $\geq 101$  °F, cough, coryza, and conjunctivitis. Koplik spots may be visible on the buccal mucosa. After 3–7 days of illness, a maculopapular rash begins on the face and spreads to the rest of the body. Persons with measles are contagious from four days prior to rash onset (with the rash onset considered day zero) through four days after rash onset.

**Recommendations:**

The following recommendations are provided for North Carolina clinicians in order to rapidly identify any additional cases and control the spread of infection:

- Consider the diagnosis of measles in anyone presenting with a febrile rash illness (fever  $\geq 101$  °F) and compatible symptoms of cough, coryza, conjunctivitis, or Koplik spots.
- **Contact the state Communicable Disease Branch (919-733-3419; available 24/7) or your local health department immediately if measles is suspected** to discuss laboratory testing and control measures.
- Immediately implement airborne isolation precautions for any patient with suspected or confirmed measles. Rooms that had been occupied by a suspect or confirmed measles patient should not be used for two hours after the patient leaves.

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LOCATION: 225 North McDowell St., Raleigh, NC 27603  
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www.ncdhhs.gov • TEL: 919-733-7301 • FAX: 919-733-1020

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- Notify EMS and/or the receiving facility prior to transporting or referring patients with suspected or confirmed measles to avoid additional exposures.
- Only health care personnel with documented immunity to measles (written documentation of two doses of measles containing vaccine, or laboratory evidence of immunity) should attend to patients with suspected or confirmed measles. Health care personnel without presumptive evidence of immunity who are exposed to measles should be offered the first dose of MMR vaccine and excluded from work from day 5 after the first exposure to day 21 following after their last exposure.

### **Diagnosis:**

Detection of measles-specific IgM antibody and measles RNA polymerase chain reaction (PCR) are the most common methods for confirming measles infection.

- Obtain both a serum sample and a throat swab (or nasopharyngeal swab) from patients suspected to have measles at first contact with them.
  - The likelihood of detecting measles virus is greatest when samples are collected on the first day of rash through the 3 days following onset of rash. However, virus may still be recovered through day 10 following rash onset.
  - If measles IgM is negative from a serum sample collected  $\leq 3$  days after rash onset, a second serum sample collected 3–10 days after symptom onset is recommended.
  - Note that serologies and virologic results can be difficult to interpret in individuals who have recently been vaccinated.
- Contact the Communicable Disease Branch to discuss testing at the North Carolina State Laboratory of Public Health (SLPH). Testing at SLPH is available ONLY with prior approval from the Communicable Disease Branch. Testing for measles IgM is also available through some commercial laboratories.

### **Vaccination:**

As a reminder, vaccination with MMR vaccine is the best way to protect against measles. MMR vaccine, if administered within 72 hours of initial measles exposure, and immunoglobulin, if administered within six days of exposure, may provide some protection or modify the clinical course of disease among susceptible persons. However, vaccination should be offered at any interval following exposure in order to offer protection from future exposures.

Clinicians should provide MMR vaccine to all unvaccinated patients who are eligible for this vaccine, particularly if they are traveling to countries where measles has not been eliminated. Health care workers should be immunized with two doses of MMR. This recent case is an opportunity to vaccinate your patients and to verify compliance. State-supplied MMR vaccine can be used at any local health department to vaccinate contacts of the current measles case regardless of the contact's insurance type.

For additional information, please visit [www.cdc.gov/measles/hcp/index.html](http://www.cdc.gov/measles/hcp/index.html) or contact the Communicable Disease Branch epidemiologist on call at 919-733-3419.