Possible Measles Exposures in the St. Louis Area

On March 18, 2018, the Missouri Department of Health and Senior Services (DHSS) received a report of a confirmed case of measles who traveled to the St. Louis area while infectious. The case’s travel itinerary during the infectious period was reported as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>March 13, 2018</td>
<td>11:00 AM-3:00 PM</td>
<td>The Magic House; Kirkwood, MO</td>
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<tr>
<td>March 13, 2018</td>
<td>3:30 PM-4:15 PM</td>
<td>Racanelli’s New York Pizzeria; Kirkwood, MO</td>
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<tr>
<td>March 13-14, 2018</td>
<td>4:15 PM-11:00 AM</td>
<td>Homewood Suites; Chesterfield, MO</td>
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On March 19, 2018, a public health investigation was initiated by St. Louis County Department of Public Health and DHSS to identify and contact persons known to be potentially exposed to measles. However, potential transmission of the measles virus to unknown susceptible persons who had contact with the case may have occurred.

Measles is a highly contagious, acute viral illness that is transmitted by contact with an infected person through coughing and sneezing. Patients are considered to be contagious from 4 days before until 4 days after the rash appears. Immune Globulin (IG) can be administered to exposed individuals within 6 days of exposure to prevent or reduce the symptoms of measles infection for those without evidence of immunity. Health care providers that may see patients concerned about an exposure should consider having IG on hand in the event it is needed, both for this contact investigation event and in the future.

Health care providers should maintain a high index of suspicion for measles among febrile patients with a rash. Patients with clinical signs/symptoms compatible with measles (febrile rash plus cough, coryza, and/or conjunctivitis) should be asked about the exposures detailed above, recent travel abroad and contact with returning travelers, or contact with someone with a febrile rash illness. Their vaccination status should also be verified. Immunocompromised patients may not exhibit a rash, or may exhibit an atypical rash. The incubation period for measles from exposure to fever is usually about 10-12 days and from exposure to rash onset is usually 14 days (range, 7 to 21 days).

Persons who have been exposed to measles should contact their health care provider if they develop cold-like symptoms with a fever and/or rash. They should NOT go to any health care facility without calling first. The suspect case should be kept separated from others to prevent further spread. (Note that measles virus can remain infectious in the air for up to 2 hours after an infected person leaves an area such as a waiting room.) Isolate suspect measles case-patients and immediately report suspected cases to the local public health agency, or to DHSS at 573/751-6113 or 800/392-0272 (24/7). To ensure prompt public health response, do not wait for laboratory confirmation.

Detection of measles-specific IgM antibody and measles RNA by real-time polymerase chain reaction (RT-PCR) are the most common methods for confirming measles.
infection. Healthcare providers should obtain both a serum sample and a throat swab (or nasopharyngeal swab) from patients suspected to have measles at first contact with them.

The Missouri State Public Health Laboratory (MSPHL) provides laboratory support for the diagnosis of measles infections occurring in Missouri. MSPHL will only test specimens that are approved by state public health officials. A specimen for molecular detection by RT-PCR should be collected and submitted to MSPHL along with the initial serum specimen, and include NP swab, throat swab, or urine (see the CDC instructions below). Please note that a RT-PCR specimen should NOT be substituted for a serum specimen. Serum specimens submitted to MSPHL will be tested for measles IgM and rubella IgM as requested by the investigating epidemiologist. The RT-PCR specimen will be referred to a Vaccine Preventable Disease (VPD) Reference Laboratory. VPD laboratories are established in cooperation with public health laboratories and the Centers for Disease Control and Prevention [CDC] to provide reference testing and surge capacity.

The sensitivity of measles IgM assays varies, and may be diminished during the first 72 hours after rash onset. If the result is negative for measles IgM and the patient has a generalized rash lasting more than 72 hours, a second serum specimen should be obtained and the measles IgM test should be repeated (AAP. Red Book, 2015; p. 537).

For questions regarding storage and shipping of all samples, please contact the MSPHL Virology Unit at 573-751-3334.

Measles serology instructions:
http://health.mo.gov/lab/measlesrubella.php

CDC measles RT-PCR instructions (do NOT ship specimens directly to CDC):
https://www.cdc.gov/measles/lab-tools/rt-pcr.html

For further guidance, please refer to:
https://www.cdc.gov/measles/hcp/index.html
https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm?s_cid=rr6204a1_w

Questions should be directed to DHSS’ Bureau of Communicable Disease Control and Prevention at 573/751-6113 or 800/392-0272 (24/7).