

Health Advisory:

Measles Case Identified in Eastern Missouri

April 22, 2009

This document will be updated as new information becomes available. The current version can always be viewed at <http://www.dhss.mo.gov>

The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

Health Updates provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

Health Advisory
April 22, 2009

**FROM: MARGARET T. DONNELLY
DIRECTOR**

SUBJECT: Measles Case Identified in Eastern Missouri

On April 21, 2009, the Missouri Department of Health and Senior Services (DHSS) reported a single laboratory-confirmed case of measles in a resident of eastern Missouri. The adult was part of a group attending a multistate youth program in Maryland (held approximately from April 4 - 11, 2009). Missouri's case is just one of several cases identified from attendees of this conference. The total number of potentially exposed participants (youth and staff) is approximately 620. These participants reside throughout the United States, including Missouri, and returned home on or near April 11. Organizers of the youth group are working with health officials to notify persons who attended the conference of this potential exposure. DHSS is contacting identified exposed individuals who have returned to Missouri.

The Missouri's measles case is reported as not having received measles vaccine. Once measles was suspected, the ill person was isolated for the duration of infectivity. Individuals known to have had contact with the case are being contacted by public health officials. Persons who may develop symptoms should obtain medical evaluation and are being instructed to contact their health care provider before presenting in order to ensure that proper infection control measures are taken.

Health care providers should not rule out the possibility of measles based on a history of documented or undocumented measles immunization. If any patient presents with signs/symptoms suggestive of measles, he/she should be immediately isolated and appropriately evaluated. This evaluation must include obtaining a serum specimen for measles serological testing. The specimen, or a portion of the specimen, should be sent to the Missouri State Public Health Laboratory for testing. In the first 72 hours after rash onset, up to 20 percent of tests for IgM may give false-negative results. Tests that are negative in the first 72 hours after rash onset should be repeated. Any individual suspected of having measles should be immediately reported to the local public health agency, or to the Missouri Department of Health and Senior Services at 800-392-0272 (24 hours a day - 7 days a week).

To prevent measles, children (and some adults) should be vaccinated with the measles, mumps, and rubella (MMR) vaccine. Two doses of this vaccine are needed for complete protection. Children should be given the first dose of MMR vaccine at 12 to 15 months of age. The second dose can be given 4 weeks later, but is usually given before the start of kindergarten at 4 to 6 years of age. The "Recommended Immunization Schedules" can be obtained from the Centers for Disease Control and Prevention's web site located at: <http://www.cdc.gov/vaccines/recs/schedules/default.htm>.

The next page provides a summary of the clinical features of measles. Questions should be directed to the local public health agency, or to DHSS's Bureau of Communicable Disease Control and Prevention at 573/751-6113, or 866-628-9891.

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Measles: Summary of Clinical Features

The **incubation period** of measles, from exposure to onset of prodrome, averages 10-12 days (range 7-18 days). From exposure to rash onset averages 14 days (range, 7-18 days, can be up to 21 days on rare occasions).

The **prodrome** lasts 2-4 days (range 1-7 days). It is characterized by fever, which increases in stepwise fashion, often peaking as high as 103°-105°F. This is followed by the onset of cough, coryza (runny nose), and/or conjunctivitis.

Koplik's spots, a rash (enanthem) present on mucous membranes, is considered to be pathognomonic for measles. It occurs 1-2 days before the rash to 1-2 days after the rash, and appears as punctate blue-white spots on the bright red background of the buccal mucosa.

The measles **rash** is a maculopapular eruption that usually lasts 5-6 days. It begins at the hairline, then involves the face and upper neck. During the next 3 days, the rash gradually proceeds downward and outward, reaching the hands and feet. The maculopapular lesions are generally discrete, but may become confluent, particularly on the upper body. Initially, lesions blanch with fingertip pressure. By 3-4 days, most do not blanch with pressure. Fine desquamation occurs over more severely involved areas. The rash fades in the same order that it appears, from head to extremities.

Other symptoms of measles include anorexia, diarrhea (especially in infants), and generalized lymphadenopathy.

Approximately 30% of reported measles cases have one or more complications. Some of these complications can be severe, and potentially fatal. Death from measles has been reported in approximately 1-3 per 1,000 reported cases in the United States in recent years. As with other complications of measles, the risk of death is higher among young children and adults. Pneumonia accounts for about 60% of deaths. The most common causes of death are pneumonia in children and acute encephalitis in adults.

Measles transmission is primarily person to person via large respiratory droplets. Airborne transmission via aerosolized droplet nuclei has been documented in closed areas (e.g., office examination rooms) for up to 2 hours after a person with measles occupied the area.

Measles is highly communicable, with >90% secondary attack rates among susceptible contacts. Measles may be transmitted from 4 days prior to 4 days after rash onset. Maximum communicability occurs from onset of prodrome through the first 3-4 days of rash.