

## Health Advisory:

### Measles Cases Identified in Southwestern Missouri

May 12, 2010

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  
May 12, 2010

**FROM: MARGARET T. DONNELLY  
DIRECTOR**

**SUBJECT: Measles Cases Identified in Southwestern Missouri**

On May 10, 2010, the Missouri Department of Health and Senior Services (DHSS) reported two laboratory-confirmed cases of measles among residents of southwestern Missouri. The two cases involved an adult and a child of the same family who had recently returned from a trip to Venezuela. The child had not received a measles vaccine, and the vaccination status of the adult has not been confirmed. Persons with measles are considered contagious from 1 to 2 days prior to onset of symptoms (about 4 days before rash onset) to 4 days after the appearance of the rash. Therefore, potential transmission of the measles virus to unknown susceptible persons may have occurred.

If any patient presents with signs/symptoms suggestive of measles, he/she should be immediately isolated and appropriately evaluated by a health care professional. 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. Health care providers should not rule out the possibility of measles based on a history of documented or undocumented measles immunization.

Any individual suspected of having measles should be immediately reported to the Springfield/Greene County Health Department at 417/864-1658, or to DHSS 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 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 Springfield/Greene County Health Department at 417/864-1658, or to DHSS's Bureau of Communicable Disease Control and Prevention at 573/751-6113, or 866/628-9891.

Office of the Director  
912 Wildwood  
P.O. Box 570

Jefferson City, MO 65102  
Telephone: (800) 392-0272  
Fax: (573) 751-6041

Web site: <http://www.dhss.mo.gov>

## 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, are considered to be pathognomonic for measles. They are seen from 1-2 days before until 1-2 days after the onset of the rash, and appear as punctuate 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 the prodrome through the first 3-4 days of the rash.