



**APRIL 4, 2011**

## **HEALTH ADVISORY**

### **Measles Outbreak in Hennepin County, Minnesota**

The North Dakota Department of Health is providing the following information regarding measles cases in Minnesota. There have been 15 confirmed cases of measles reported in Minnesota. Twelve of the cases have been linked to a case that acquired infection in Kenya (13 total), one case acquired infection in Florida and one case acquired infection in India. Cases have ranged in age from 4 months to 51 years. Five of the cases were too young to receive vaccine, six were of age but were not vaccinated, one was vaccinated and three have unknown vaccine status. There have been eight hospitalizations and no deaths. There have been two known exposures to North Dakota residents, but no cases reported. North Dakota has not had a measles case since 1987.

Although measles is no longer an endemic disease in the United States, it remains endemic in most countries of the world, including some countries in Europe. International travel highlights the ongoing risk of measles importations, the risk of spread in susceptible populations, and the need for a prompt and appropriate public health response. Because of the severity of the disease, people with measles commonly present in a physician's office or emergency rooms and pose a risk of transmission to other patients and health-care personnel in these settings. Health-care providers should remain aware that measles cases may occur in their facility and that transmission risks can be minimized by ensuring that all health-care personnel have evidence of measles immunity and that appropriate infection control practices are followed. Evidence of natural measles infection, measles immunity, or receipt of two doses of measles vaccine should be documented for all health-care workers. Health-care facilities should consider recommending a dose of MMR vaccine for unvaccinated workers born before 1957 who are at risk for occupational exposure to measles and who do not have a history of measles disease or laboratory evidence of measles immunity.

Measles is an acute disease characterized by fever, cough, coryza, conjunctivitis and a maculopapular rash lasting more than three days. Measles transmission is primarily person to person via large respiratory droplets, but airborne transmission can occur. Respiratory droplets can remain infectious for approximately two hours in the environment. The incubation period for measles is usually 10 to 12 days, although symptoms may occur as early as seven or late as 21 days after exposure. Serological testing for measles is available from the NDDoH Division of Laboratory Services. IgM acute serum testing should be sent to the lab at onset of symptoms, along with a completed laboratory slip indicating vaccination history. Measles virus also can be isolated from clinical specimens, such as urine, nasal washes or nasopharyngeal secretions.

The clinical case definition for measles is:

- A generalized maculopapular rash lasting  $\geq 3$  days.
- A temperature  $\geq 101^{\circ}\text{F}$ .

- Cough, coryza or conjunctivitis (the three Cs).

Providers should consider a diagnosis of measles if a patient has a rash-like illness and has recently traveled internationally or to areas with ongoing measles outbreaks, such as Hennepin County. The simplest method of establishing the diagnosis of measles is testing for IgM antibody on a single serum specimen obtained during the first encounter with a person suspected of having the disease. The sensitivity of measles IgM varies and may be diminished during the first 72 hours after rash onset. If the lab result is returned negative but patient has a generalized rash lasting more than 72 hours, the measles IgM test should be repeated. International travel or contact with individuals who have recently traveled abroad should be taken into account when considering a diagnosis of measles. When a health-care provider is testing for measles infection, patients also should be tested for rubella infection, because the two diseases can present with similar symptoms.

To prevent transmission of measles in health-care settings, stringent airborne infection control precautions should be followed. Suspected measles patients (i.e., people with febrile rash illness) should be removed from emergency departments and clinic waiting areas as soon as they are identified, placed in a private room with the door closed, and asked to wear a surgical mask if tolerated. In hospital settings, patients with suspected measles should be placed immediately in an airborne infection (negative pressure) isolation room if one is available and, if possible, should not be sent to other parts of the hospital for examination or testing purposes.

Two doses of measles vaccine as a combination MMR separated by at least four weeks are routinely recommended for all children age 12 months and older. Two doses of MMR are required for all children attending kindergarten through grade 12 in North Dakota. Two doses of MMR also are required for people attending colleges in North Dakota. All adults born in 1957 and after should have documentation of at least one dose of MMR or other evidence of measles immunity. Birth before 1957 generally is considered acceptable evidence of immunity to measles.

Susceptible individuals with a known or highly probable exposure, depending on timing and age, should be vaccinated with MMR vaccine or IG to prevent or modify measles. MMR if administered within 72 hours of initial measles exposure, may provide some protection. IG is indicated for susceptible household contacts of measles patients, particularly those for whom the risk of complications is increased and who cannot receive MMR vaccine (i.e., infants age 12 months or younger, pregnant women or immunocompromised people). If administered within six days of exposure, IG can prevent or modify measles in a susceptible person. More information about the ACIP recommendations for measles vaccination and the elimination of measles can be found at [www.cdc.gov/mmwr/preview/mmwrhtml/00053391.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/00053391.htm).

The number and age of cases highlights the ongoing risk of measles in unvaccinated people, the risk that unvaccinated people pose by transmitting measles to others, including infants too young to be vaccinated and others medically contraindicated to be vaccinated. Maintaining high levels of vaccination is pertinent in controlling the spread of measles. Timely and aggressive application of isolation, quarantine (when needed), post exposure vaccination or immune globulin prophylaxis and other important control measures is critical.

Please heighten your suspicion of measles and report any suspect cases of measles immediately to the NDDoH. As mandated by North Dakota law, any suspect cases of measles must be

immediately reported to the NDDoH by phone at 701.328.2378, or confidential fax at 701.328.0355.

For general information about measles, visit the NDDoH website at [www.ndhealth.gov/Disease/Documents/faqs/Measles2.pdf](http://www.ndhealth.gov/Disease/Documents/faqs/Measles2.pdf). Pictures of individuals with measles can be found at <http://www.cdc.gov/measles/about/photos.html>.

Please contact the NDDoH Division of Disease Control at 701.328.2378 or toll-free at 800.472.2180 with any questions or concerns regarding this issue.

*Categories of Health Alert messages:*

- *Health Alert conveys the highest level of importance; warrants immediate action or attention.*
- *Health Advisory provides important information for a specific incident or situation; may not require immediate action.*
- *Health Update provides updated information regarding an incident or situation; no immediate action necessary.*
- *Health Information provides general information that is not necessarily considered to be of an emergent nature.*

*This message is being sent to local public health units, clinics, hospitals, physicians, tribal health, North Dakota Nurses Association, North Dakota Long Term Care Association, North Dakota Healthcare Association, North Dakota Medical Association, and hospital public information officers.*