



Children who travel outside of U.S. at risk for measles

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Recent reports from the Centers for Disease Control and Prevention (CDC) of measles in young children emphasize the need for physician awareness of the risks of measles acquired during international travel and of the importance of early vaccination.

In January and February, seven cases of measles were reported in 6- to 23-month-old U.S. children who recently had traveled internationally. Four of them experienced complications so severe that they were hospitalized. Although all seven children were eligible for vaccination before travel, none had received the measles, mumps and rubella (MMR) vaccine.

A measles outbreak also was confirmed in Hennepin County, Minn., and 13 epidemiologically linked measles cases had been identified as of April 1.

Most involved young children, and eight were hospitalized. The index patient was an unimmunized 30-month-old who developed measles after returning from Kenya. Vaccination status was known for 11 patients; five were too young to have been vaccinated, and six were unvaccinated.

Although measles was eliminated in the United States in 2000, it continues to be common in many developed and developing countries. This includes Western Europe, a common destination for U.S. travelers. Unvaccinated U.S. travelers, especially infants and young children, are at risk for being exposed to measles. Infected U.S. residents returning from international travel or infected foreign visitors to the United States put others at risk for measles, leading to outbreaks.

Signs and symptoms of measles

Measles is highly contagious and is spread by contact with an infected person through coughing and sneezing. After an infected person leaves the area, the virus remains contagious for up to two hours in the air and on surfaces. In 2008, an unvaccinated child with measles infected four other infants and children during a visit to his pediatrician in San Diego. One of the infants required hospitalization.

Signs and symptoms of measles are characterized by the “3 C’s”: cough, coryza (or runny nose) and conjunctivitis and include high fever and maculopapular erythematous rash. The rash appears two to five days after symptoms start and usually begins on a person’s face at the hairline and spreads downward to the neck, trunk, legs, arms and feet. Measles also may be complicated by otitis, diarrhea or pneumonia. Encephalitis and death may occur.

Infants and young children are at greater risk for severe measles, death

or sequelae such as pneumonia or subacute sclerosing panencephalitis.

Physicians should consider measles in any child presenting with a febrile rash illness compatible with measles, especially if the child recently traveled internationally or has been exposed to a person with a febrile rash illness.

When a case is suspected, the patient should be isolated promptly to avoid spread of the infection and immediately reported to the local health department. Specimens should be obtained for testing, including viral specimens for genotyping, which can help determine the source of the virus. Viral specimens should be sent to state health laboratories.

Preventing measles

Measles is preventable through MMR vaccine, which has a long safety record. Prior to measles vaccination in the United States, an average of 450 deaths, 48,000 hospitalizations, 7,000 seizures and 1,000 children with permanent brain damage or deafness were reported every year.

Physicians can help prevent measles by understanding the risks, knowing how to recognize and diagnose the disease, and recommending on-time MMR vaccination (at 12 months of age) for patients and parents of young children before they travel internationally (see sidebar).

RESOURCES

- AAP Red Book Online, <http://aapredbook.aapublications.org/current.dtl>
- “Diseases & the Vaccines that Prevent Them: Measles,” www.cdc.gov/vaccines/vpd-vac/measles/downloads/dis-measles-color-office.pdf
- CDC’s Immunization Schedules, www.cdc.gov/vaccines/recs/schedules/
- For details on reporting suspected cases of measles, visit www.cdc.gov/vaccines/pubs/surv-manual/chpt07-measles.htm#8.

What physicians should know

Measles should be considered in any child presenting with fever, rash, and cough, coryza or conjunctivitis, especially if the child recently traveled internationally or was exposed to a person with a clinically consistent febrile rash illness.

The Centers for Disease Control and Prevention (CDC) recommends that international travelers of all ages be up-to-date with their vaccinations.

The CDC and Academy recommend two doses of MMR vaccine for children, the first dose at 12 through 15 months and the second dose at 4 through 6 years of age.

For children traveling internationally, the CDC and Academy recommend an accelerated MMR vaccine schedule:

- Children 12 months or older should receive a first dose of MMR at age 12 months and a second dose separated by at least 28 days.
- Children 6 to 11 months old should receive one dose of vaccine. Since immune response to doses given before 12 months of age varies, this dose is not considered a valid dose, and a child receiving a dose at this age should get a normal two-dose series of MMR vaccine starting at age 12 months (total of three doses).
- Depending on the epidemiology of the outbreak, including the age group affected, state health departments may take the following actions: recommend MMR vaccine for infants 6-11 months of age or accelerate the second dose of MMR vaccine for children 12 months of age or older who have received only one dose or both.



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