State of Alaska Epidemiology **Bulletin**

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Bulletin No. 6
April 27, 2000
Measles in Anchorage: Be Alert

Case Report: On April 24, a 33-year-old Anchorage resident presented to the emergency room of a local hospital with fever and rash. The patient's symptoms began on April 17 when she felt nauseated. The following day, she developed fever, headache, and body ache. On April 22, a rash began on her neck. The rash spread to her head, face, arms, and trunk. In the emergency room, the patient had a temperature of 102.8°F, rash, cough, coryza, and small white punctate lesions on the buccal mucosa. Because measles was strongly suspected, urine and a throat swab (for viral culture) and blood (for serology) were collected. On April 25, the State Virology Laboratory reported that the serum specimen was positive for measles-specific IgM antibody.

The patient had documentation of a single dose of measles vaccine at 9 years of age. Since the average interval between exposure to measles and appearance of rash is 14 days (range: 7-18 days), the most likely date of exposure was April 8 (range: April 4-15). She had no recognized exposure to measles and had returned to Anchorage on April 6 after spending a week in Northern California. The California Department of Health Services was not aware of any measles cases in the areas the patient visited. Prior to this case, no measles had been reported in Anchorage since 1998.

In order to limit the spread of measles, the Anchorage Department of Health and Human Services identified and notified family members and other household contacts, close co-workers of the patient, as well as persons in the hospital emergency room while the patient was evaluated. Recommendations were made to these persons according to measles control guidelines (see Epidemiology Bulletin No. 20, October 7, 1998).

Comments: This is the first measles case identified in Alaska since 1998 when a school-based outbreak occurred in Anchorage. Fortunately, almost all Alaska school children have received two doses of measles vaccine and spread within schools is now extremely unlikely. However, because rubeola virus is highly contagious, it is possible that additional cases will occur. Health-care providers should be alert for patients presenting with signs or symptoms suggesting measles.

Symptoms of measles: Patients usually present after a 3-4 day prodrome of fever, conjunctivitis, cough, and coryza with a generalized maculopapular rash that begins on the face and spreads downward. Patients are highly infectious beginning a day or two before the prodrome until up to 4 days after rash onset.

Evaluation procedure: Patients with suspected measles should be seen in a manner which ensures that other persons will not be unnecessarily exposed to rubeola virus. If a parent or patient telephones with a report of symptoms suggesting measles, the patient can be seen either in their car, at a back or side door, or in an examination room that can be ventilated and left empty for 1 hour after the visit. No suspected cases should be allowed in a waiting room with other patients or, unless special arrangements are made, sent to a laboratory for specimen collection.

Specimen collection: Since the clinical diagnosis of measles often is not reliable, it is critical to collect appropriate laboratory specimens to confirm the diagnosis. A throat swab (placed in viral transport media) and urine specimen should be collected at the first suspicion of measles. In addition, serum should be obtained on or after the fourth day of rash. All specimens should be sent to the State Virology Laboratory (there is no charge for testing).

Public health recommendations:

1. Alaska health care providers, and particularly those in Anchorage, should maintain a high index of suspicion for measles. Although the source of the case-patient's infection has not been determined, her exposure most likely occurred in Anchorage. Susceptible persons exposed to the case-patient while she was infectious (April 15-26) might have rash onset during April 22 - May 14.

2. Routine childhood measles vaccination should continue. The first dose of measles-mumps-rubella (MMR) vaccine should be given at 12-15 months of age, with the second dose at 4-6 years.

3. Parents of school children with religious exemptions to measles vaccination should discuss with their health care provider having their child(ren) vaccinated.

4. Persons directly exposed to measles should be managed according to the recommendations previously published (Epidemiology Bulletin No. 20, October 7, 1998). Directly exposed persons include those who live or work in a household where there is measles, attend a school or child-care facility where there is measles, have an identifiable contact with a measles case, or are identified as being exposed at a health care facility. Persons known to have been exposed to the reported case-patient have been notified.

5. All patients suspected to have measles or who have a febrile rash illness should be immediately reported to the State Section of Epidemiology at 1-907-269-8000 during business hours or 1-800-478-0084 after hours. Do not wait for laboratory confirmation before reporting.

(Thanks to Eva Carey, MD for promptly reporting measles.)