



Bulletin No. 18  
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Measles Alert and Control Measures

During September 16-23, 1998 the Municipality of Anchorage Department of Health and Human Services and the Alaska Department of Health and Social Services, Section of Epidemiology have received reports of 42 persons with febrile rash illness. Among these 42, seven cases of measles (rubeola) have been laboratory confirmed. Based on the symptoms and epidemiologic information, it is likely that many of the remaining 35 ill persons also will be confirmed as having measles. Overall, 31 of the 42 persons reported had one dose of MMR (measles, mumps, and rubella) vaccine; none of the seven confirmed cases had two doses of MMR.

The outbreak was first recognized at Service High School where 20 students and 1 staff member have been ill. Ill persons with possible measles have also been identified at several other schools in the Anchorage area. Special clinics have been held at Service High School to provide a second dose of MMR vaccine to students and, when indicated, staff members.

**Outbreak control measures:**

**1. Vaccination is the most important strategy for outbreak control.** Recent experience in Alaska and elsewhere has shown that school-based measles outbreaks can occur among students with only one dose of measles vaccine. This is because up to 5% of persons remain susceptible to measles after a single vaccination. Therefore, after consultation with the US Centers for Disease Control and Prevention and members of the public health and medical community in Anchorage, the Alaska Division of Public Health has adopted emergency measures (Table 1).

Table 1. Outbreak Control Measures for Anchorage
a. All students enrolled in public or private schools in Anchorage will be required to have two doses of measles vaccine or a valid medical or religious exemption by November 16, 1998.
b. Students not in compliance will be excluded from school.
c. Students with medical or religious exemptions will be excluded from school until 21 days after rash onset of the last case of measles at their school.

Measles vaccine is routinely given as MMR and public health authorities recommend that MMR be administered when measles vaccination is needed. In order to provide vaccinations to the large number of students who will need a second MMR, a series of special clinics is being scheduled, detailed information will be available on the Municipality of Anchorage measles hotline at 343-6996.

2. Anchorage public or private school employees born in 1957 or later who work in buildings used by students, should have documentation of two doses of MMR. **Persons born prior to 1957 are not likely to be susceptible to measles and do not need vaccine.** Pregnant women should not be given MMR (see recommendations below).

3. It is not possible to control measles outbreaks by restricting travel, school activities, or community events. Accordingly, athletic events and other school programs should not be cancelled or postponed. Likewise, there is no need for schools outside Anchorage to limit participation in events with Anchorage schools.

4. Persons **residing in a household with a person having possible measles** need individual follow-up:

- 0-6 months of age – immune globulin (IG) is indicated for infants at extremely high risk for complications or if the mother either has measles or is likely to be susceptible to measles.
- 6-12 months of age – give MMR. The MMR needs to be repeated at 12-15 months of age and again prior to school entry. If exposure occurred 4-6 days previously, and the infant meets the criteria listed for the 0-6 month infants, IG should also be given. The follow-up MMR must be delayed until at least 5 months after administration of IG.
- 12 months of age and older – These persons should have two doses of MMR. Persons with a history of physician diagnosed measles or born before January 1, 1957 do not need any MMR.
- Pregnant women born after January 1, 1957 who have less than two documented doses of MMR should be given IG within 6 days of exposure.
- Immunosuppressed persons (e.g., leukemia, lymphoma, high-dose steroids) born after January 1, 1957 who have less than two documented doses of MMR should be given IG. Asymptomatic HIV infection is not a contraindication to MMR.

5. Targeted vaccination of schoolchildren is the most effective strategy for stopping the outbreak. **Vaccination of the general population of Anchorage is not recommended.** Children should continue to routinely be given their first dose of MMR at 12-15 months of age. If a possible case of measles occurs in a household or daycare, recommendations to vaccinate children as young as 6 months of age will be made on a case-by-case basis.

**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 so 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).

<p><b>Reporting:</b> 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.</p>
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