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## Rubella Identified in Alaska after 11-Year Absence

On January 23, an alert Cordova physician assistant (PA) reported a suspected case of rubella in an un-vaccinated child who had recently returned from a trip to Florida. The Section of Epidemiology began an immediate investigation.

### Case Report

On January 23, an 8-year-old Cordova student presented to the PA with malaise, fever, coryza, postauricular and anterior cervical lymphadenopathy, conjunctivitis, and a maculopapular rash. The rash began on his face on January 18 and spread to his trunk. He was un-vaccinated and had a religious exemption from school immunization requirements. The family flew to Florida for a 3-week vacation on December 26, 2003. From January 26, the child attended the children's portion of the religious convention with about 50 other children (aged 6-12) from around the world. He spent about 9 hours a day with this group. The family then returned to Alaska. A blood specimen drawn on January 28 was positive for rubella IgM at the State Public Health Laboratory – Fairbanks on January 30.

### Investigation

Household members were evaluated for history of immunization or rubella disease. All siblings had previously received one MMR. A pregnant aunt had received one MMR and had a positive titer on record at her health care provider. Immunization records of all students attending the school are currently being examined so that students with either a medical or religious exemption to MMR can be notified, offered vaccination, and instructed to watch for symptoms of rubella over the next 3 weeks. All pregnant women who work at the school are being identified in order to determine their status with regards to serological immunity to rubella. Intensive surveillance for any febrile rash illness was established at the school. Secondary cases would be expected to occur between now and the end of February.

### Discussion

Rubella is a mild illness that may be easily misdiagnosed or overlooked. A 1-5 day prodrome of low-grade fever, headache, malaise, mild coryza and conjunctivitis usually precedes the maculopapular rash. However, the rash may be the first or only manifestation of rubella. Post-auricular, occipital, and posterior cervical lymphadenopathy, which typically develops 5-10 days before rash onset, is characteristic. The incubation period is typically 14-17 days, with a range of 14-21 days. Transmission is by respiratory droplet spread or direct contact with case-patients. Patients are infectious for about one week before and at least four days after rash onset.

Congenital rubella syndrome (CRS) occurs in up to 90% of infants born to susceptible women who are infected with rubella during the first trimester of pregnancy. This risk of a single congenital defect falls to 10-20% by the 16<sup>th</sup> week of pregnancy, and defects are rare when the maternal infection occurs after the 20<sup>th</sup> week of gestation. CRS defects include spontaneous abortion, congenital malformations of major organ systems, deafness, cataracts, microcephaly, mental retardation, and bone disease.

This is the first confirmed case of rubella in Alaska since 1993 when a foreign exchange student was identified with rubella in Anchorage.<sup>1</sup> This case again emphasizes the importance of immunizations in the school setting. All students should have their immunization status recorded in their school health record. Schools should be able to quickly identify all un-immunized students so that they may be advised of any known exposure to vaccine-preventable diseases and offered vaccination. To prevent CRS, pregnant women should be aware of their rubella immunization status and should receive a rubella titer prior to becoming pregnant.

### Recommendations

1. All immunization records of children who attend the affected school should be immediately evaluated. Parents of children who are un-immunized for rubella should be notified of a potential exposure to this case or rubella and offered an MMR for their child.
2. Any pregnant women at the school or who have children in the school should be identified and evaluated for immunity to rubella (presence of rubella-specific IgG antibody). If the woman is not immune, there should be further consultation in conjunction with her primary health care provider to determine the risk (if any) to the fetus.
3. Cordova health care providers should be alert to cases of febrile rash illness throughout February; any suspect case should be immediately reported to the Section of Epidemiology at 907-269-8000 during business hours or 1-800-478-0084 after hours. The patient should be isolated and a blood specimen drawn for serologic confirmation. The presence of rubella-specific IgM antibody is diagnostic, but it usually is not detectable until the third or fourth day of rash.
4. Testing of suspected cases and pregnant women identified during this investigation will be conducted free-of-charge through the State Public Health Laboratory - Fairbanks.

### Reference

1. Section of Epidemiology. Rubella Returns: A Subtle but Serious Rash Illness. *Epidemiology Bulletin*, February 3, 1993; No. 8.