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Rubella Outbreak at University of Alaska

During the first 21 weeks in 1980 the State of Alaska had reported only 2 cases of rubella, and only 4 cases of rubella were known to have occurred in 1979. However, during the first week in May, 3 students with illness clinically diagnosed as rubella were seen at the student health center at the University of Alaska in Fairbanks. These cases were reported to the Section of Communicable Disease Control on May 12, and an epidemiologic investigation was initiated in cooperation with the student health physician. Unfortunately, the school semester ended on May 9, and students had returned home, hampering our ability to find additional cases.

While serologic tests to confirm the diagnosis were pending on the initial cases, a letter was sent to all students living in the same dormitory as the students already diagnosed. Students were asked about vaccination history and the occurrence of any illness characterized by fever and rash. To date, information obtained from individuals who have returned questionnaires indicates there may have been at least 8 other cases. Further investigation will not be possible because the student body has dispersed. A significant possibility exists that rubella will be spread to other communities in the state. Many colleges and universities are now requiring proof of vaccination or serologic evidence of immunity to measles and rubella as a condition of attendance. Without such a requirement, future outbreaks of these diseases are inevitable.

The outbreak illustrates the susceptibility of adolescents and young adults to rubella. A significant portion of this group has had neither natural rubella infection nor immunization. They escaped infection due to the decreased prevalence of rubella that followed vaccine introduction in 1969, and finished school or reached 12 years of age before Alaska's stringent immunization requirements were instituted in 1977. While we have no concrete data on the size or makeup of the susceptible cohort, we do know that over 16% of the rubella tests performed by the State of Alaska Section of Laboratories produce "non-immune" results. Despite the considerable vaccination effort in young children, outbreaks of rubella continue to be reported in junior and senior high schools, colleges, the military, and places of employment - particularly hospitals.

Health professionals should be aware that the most recent rubella recommendations of the PHS Advisory Committee on Immunization Practices focus on more effective delivery of the vaccine to older individuals and, in particular, to females in the child-bearing age group. The following is excerpted from the rubella vaccine recommendations issued by the ACIP in January 1979:

"Increased emphasis should be placed on vaccinating ... susceptible adolescent and adult females in the child-bearing age group. Because of the theoretical risk to the fetus, females of child-bearing age should receive vaccine only if they are not pregnant and understand that they should not become pregnant for three months after vaccination. In view of the importance of protecting this age group against rubella, asking females if they are pregnant, excluding those who are, and explaining the theoretical risk to the others are reasonable precautions in a rubella immunization program.

“When reliable laboratory services are available, routine premarital serology for rubella immunity would enhance efforts to identify susceptible females before pregnancy. Prenatal or antepartum screening for rubella susceptibility should be undertaken and vaccine administered in the **immediate** postpartum period.

“In order to protect susceptible female patients and female employees, persons working in hospitals and clinics who might contact rubella from infected patients or who, if infected, might transmit rubella to pregnant patients should be immune to rubella.”

(Reported by Elizabeth F. Elsner, M.D., University of Alaska)