

Rubella No Longer a Major Threat, but Keep Up Vaccinations

There is currently no evidence of autism or other harm linked to use of the MMR vaccine.

BY DOUG BRUNK
San Diego Bureau

Rubella virus is no longer a major public health threat in this country, but U.S. clinicians should remain vigilant in their vaccination efforts, according to Julie Gerberding, M.D., director of the Centers for Disease Control and Prevention.

In 2004, only nine cases of rubella were reported in the United States. These cases were in mothers who became infected in their respective countries of origin and who then brought the virus to the United States, and in children who were born to families from other parts of the world, Dr. Gerberding said during a media advisory on rubella sponsored by the Centers for Disease Control and Prevention.

"This is a major milestone in the path toward eliminating rubella in other parts of the world, including the Western hemisphere and other regions that have committed [to] this very important health goal," she said.

Despite the achievement, Dr. Gerberding advised clinicians in the United States and elsewhere to remain vigilant about vaccinating children. "Because we are at constant risk for reintroduction of the virus from other parts of the world, we cannot afford to relax our emphasis on immunization now," she remarked.

"This is exactly the time when we need to strengthen our emphasis on immunization even further," Dr. Gerberding added.

Vaccination is also recommended for adolescents and adults without documented evidence of immunity—especially expectant mothers.

Thirty years ago, a rubella epidemic in the United States caused an estimated 12.5 million cases of rubella and 20,000 cases of congenital rubella syndrome, which caused thousands of fetal deaths and left scores more babies deaf, blind, and mentally challenged.

The incidence of rubella in the United States declined sharply after the rubella vaccine was licensed in 1969. By 1983, fewer than 1,000 cases were reported per year, and 2001 marked the first year in which fewer than 100 cases were reported.

Dr. Gerberding credited the current success to "the wonderful peo-

ple in the immunization communities across the United States who have been working hard to vaccinate children."

She added that "there is amazing progress under way in other parts of the Western hemisphere, but there are still parts of the world where immunization is not common enough to prevent children from developing congenital rubella syndrome."

Even though rubella vaccine is available as a single preparation, the CDC recommends that it be given as an MMR vaccine.



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The first dose should be given on or after the first birthday, and the second dose should be given between the ages of 4 and 6 years, or when the child starts kindergarten or first grade.

In 2003, the ministers of health of all countries in the Americas resolved to eliminate rubella and congenital rubella syndrome by 2010. Mirta Roses Periago, M.D., who directs the Pan American Health Organization, reported that there were about 1,600 cases of rubella in the Americas in 2004.

"Most of the countries in the region have incorporated the [MMR] vaccine, but many others are catching up in terms of deciding to immunize the population," Dr. Periago said during the media advisory. "The success is also opening the possibility for improving the access to other populations for influenza, for the [human] papillomavirus vaccine, and the HIV-AIDS vaccine."

Despite the claims of studies published in the late 1990s that suggest an association between MMR and the development of autism and other developmental problems in children, Dr. Gerberding said, "right now there is no evidence of autism or other harm associated with the MMR vaccine in the area of developmental delays or disabilities. The evidence indicates that this is a safe and effective vaccine. It saves lives. It also protects children now and will protect them as they become adults." ■

Tetanus Has Steeply Declined, but Diabetics, Elderly Are Still at Risk

BY ALICIA AULT
Contributing Writer

WASHINGTON — The incidence of tetanus has declined precipitously in recent decades, as have deaths from the toxin, but the elderly, diabetics, and injection-drug users are still at risk, according to research presented at the National Immunization Conference, sponsored by the Centers for Disease Control and Prevention.

Pamela Srivastava of the CDC's National Immunization Program, reported the results of an epidemiologic look at tetanus from 1972 to 2001. During that period, 1,842 cases of tetanus were reported to the CDC, Ms. Srivastava said.

Tetanus occurs from exposure to *Clostridium tetani*, a bacterium that releases a toxin initially causing headache, fever, sore throat, muscle spasms, and stiffness in the neck, arms, and legs. Left unchecked, the toxin will spread and lead to the characteristic "lockjaw," as well as rigidity of other muscles. *C. tetani* can live for years in soil and feces. Infection usually comes through wounds. Historically, tetanus occurred more frequently in the southeast, and primarily in the summer, but most regional differences have disappeared, and there is not as much seasonal variation, either, she said.

The incidence of the infection has been on the decline in the United States, dropping 59% from 1972 to 2001. During that time, the case fatality rate decreased by 64%, she said.

Vaccination history was reported for 932 of the 1,842 cases. Among those, 644 (49%) were unvaccinated, and the case death rate was 28%. Among the 172 (18%) who had received one or

two doses of vaccine, the death rate was 17%. Among the 114 persons (12%) who had received three or more doses, the death rate was 4%.

The number of cases and death rates were highest among people aged 60 or older, in whom the incidence was 0.78 per million and the death rate was 40%. She hypothesized that there was a low prevalence of immunity and high incidence of tetanus in the elderly, at least early in the study period, because they more likely had not received a primary immunization series. The incidence in the elderly declined some from 1991 to 2001.

Patients with diabetes were at increased risk for dying from tetanus. From 1987 to 2001, diabetic patients accounted for 13% of all cases and 29% of all deaths. Of the diabetics with tetanus, 44% died, Ms. Srivastava said.

There may be more people at risk, because a surprising number of tetanus cases come from nonacute, or chronic wounds, she said. About 16% of all the cases reported were from nonacute wounds; 76% were from acute wounds, and the rest from other sources.

Tetanus also has been steadily increasing over the decades in injection drug users. From 1992 to 2001, there was a threefold increase from previous decades, driven partly by an epidemic among users in California. During that decade, they accounted for 12% of all adult cases, Ms. Srivastava said.

Tetanus is not a high-cost disease in this country, costing only about \$12 million a year, but it is severely disabling, and 78% of those affected are hospitalized. That argues for making sure vaccinations are up to date, she said. ■

Rapid Testing, Widespread Antibiotic Use Stopped Wis. Pertussis Outbreak

WASHINGTON — Wisconsin health authorities stopped a spiraling outbreak of pertussis by advocating faster testing and use of antibiotics in all suspect cases, a state health official reported at the National Immunization Conference sponsored by the Centers for Disease Control and Prevention.

Jeffrey Davis, M.D., of the Wisconsin Division of Public Health, gave the details of the epidemic, which lasted from May 2003 until February 2004 and occurred primarily in Fond du Lac County. In the 5 years before the outbreak, there had only been five cases of pertussis in Wisconsin.

Cases were defined using the Centers for Disease Control and Prevention's (CDC) definition of pertussis: a cough illness lasting more than 2 weeks with paroxysms, whoop, or posttussive vomiting. Cases were confirmed by patient follow-up interviews and/or lab confirmation by isolating *Bordetella pertussis* in culture, or through a positive polymerase

chain reaction (PCR) assay.

During the outbreak, there were 313 cases reported in the county (in a total population of 97,296); 193 were confirmed in the lab, and 120 were confirmed by epidemiology. Just over half the cases were in females, and the median age was 14 years. Of those with confirmed pertussis, 43% were aged 10-14 years; the incidence rate exceeded 1,000 per 100,000 in that cohort, he said.

The health department determined that the outbreak probably started with two unvaccinated adolescents using a high school weight room. Of the initial 53 cases, 55% were linked to that weight room, Dr. Davis said.

Universal pertussis boosters would probably have prevented the outbreak because it likely began with two unvaccinated adolescents, he said.

During the epidemic's initial peak in mid-October, the health department alerted physicians to keep a close eye on potential cases. As the

number of new cases continued to rise into November, the department issued another alert, suggesting more testing and use of antibiotics in any suspect cases.

That alert led to a sharp decline in cases. During the first peak, it took a median of 10.5 days between the onset of cough and initiation of antibiotics. By the last peak, medication was generally started within 4 days of cough onset. More than 5,000 courses of antibiotics were dispensed; 90% of the prescriptions were for azithromycin.

As physicians became more aware, they stepped up reporting, Dr. Davis said.

PCR testing by the health department allowed for a rapid response—results were generally back to physicians within 24-48 hours.

Although the health department was able to respond and stop the outbreak's spread, it was costly—about \$2,000 per case, Dr. Davis said.

—Alicia Ault