**Vaccine Has Stopped Most, but Not All, Varicella**

**BY MIRIAM E. TUCKER**
Senior Writer

Varicella is still around despite the vaccine—and in some cases it can still be fatal, according to the Centers for Disease Control and Prevention. Varicella vaccination is more than 95% effective against severe disease, and, since 1996, has been recommended for routine administration to children aged 12-18 months and to all susceptible persons aged 13 years and older. For children aged 19-35 months, national estimates of varicella vaccine coverage increased from 26% in 1997 to 85% in 2003, resulting in substantial reductions in varicella morbidity and mortality.

In two Varicella Active Surveillance Project sites—Antelope Valley, Calif., and West Philadelphia, Pa.—the number of reported cases dropped by approximately 85% during 1995-2003, and hospitalizations by about 70%.

Yet, cases are still occurring among both vaccinated and unvaccinated individuals, as are a small number of varicella-related deaths among those not vaccinated or whose vaccination status is unknown, the CDC said in two separate reports (MMWR 2005;54:272-6).

**Decline in Tetanus Incidence Belies Risk Among Diabetics, Elderly**

**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 throughout the body, leading to painful muscle spasms. Diagnostics include headache, fever, sore throat, muscle spasms, and stiffness in the neck, arms, and legs.

Of the 1,842 cases reported, 114 (6%) were unrecognized, and the case fatality 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 more than three doses, the death rate was 4%

The number of cases and death rates were highest among people aged 60 or older, when the incidence was 0.78 per million and the death rate was 40%, Ms. Srivastava said. 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 were less likely to have received a primary immunization. The death rate in the elderly decreased subsequent to 1991 to 2001, however.

Patients with diabetes were at increased risk for dying from tetanus. Looking at one slice of the study period (1987-2001) diabetics 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 the decades in injection drug users. From 1992 to 2001, there was a threefold increase from previous decades, due partly to an epidemic among users in California. During that decade, they accounted for 12% of all adult cases, Ms. Srivastava said.

And although there tend to be no differences in incidence overall among ethnic groups, that equality disappears among injection drug users, where Hispanic accounts for 48% of cases, she 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.

**EBV Is One of Several Viruses Masquerading as Mumps**

**BY KATE JOHNSON**
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Children vaccinated for MMR who present with mumps-like illnesses have other identifiable viral etiologies about 14% of the time, according to results of a Finnish study.

“While one is trying to establish the cause of mumps-like symptoms in a patient, it would be worthwhile to test for antibodies to EBV [Epstein-Barr virus] and the parainfluenza viruses, if not for antibodies to other viruses as well,” wrote Irja Davidkin, Ph.D., and colleagues from the National Public Health Institute in Helsinki (J. Infect. Dis. 2005;191:719-23).

“No attempt to verify the etiology of mumps-like disease is important for active surveillance in a population in which mumps is no longer endemic and also for evaluation of the success of an MMR vaccination program,” they noted.

The study analyzed frozen serum samples from 601 children and adolescents who had reported mumps-like illness but in whom mumps had been ruled out. Their symptoms usually included swelling of the parotid gland and low-grade fever.

A previous study of 848 patients with mumps-like symptoms, which included the 601 non-mumps patients, had confirmed mumps in 2% (17) of cases, while inadequate sample collection or storage accounted for the remaining 210 cases.

Among the 601 non-mumps cases, antibody testing revealed an acute viral infection in 84 (14%) patients; the remaining patients could not be diagnosed. EBV was the most commonly identified viral infection, occurring in 7% of patients, which was half of the diagnosed group. Parainfluenza types 1, 2, and 3 were made up another 4% of the diagnosable cases, adenovirus was seen in 3% of cases, and enterovirus was seen in 2% of cases. Additionally 0.3% of patients were diagnostically with parvovirus, and human herpes virus was seen in 4% of a subgroup of children under 4 years old.

A total of 14 patients were diagnosed with parvovirus, and 20 with viral infections, and 2 patients had three diagnoses.

The authors noted that although adenovirus infection appears to have been associated with mumps cases seen in 1987-1993 and infection had been previously reported only in HIV-positive patients, this study indicates it should be considered for inclusion as a cause for mumps-like symptoms in otherwise healthy children and adolescents.