Infectious Diseases

Hepatitis A and B Incidence Hits All-Time Low

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he rates of new acute hepatitis A and B infections in the United States have plummeted to the lowest levels ever recorded, and may herald the eventual elimination of the diseases in this country.

New infections from both viruses declined in 2005 to more than 80% below the previously recorded nadir, according to a new report issued by the Centers for Disease Control and Prevention.

The incidence of hepatitis A for 2005—the latest year for which full data are available—was just 1.5/100,000, and the incidence of hepatitis B was only 1.8/100,000. Both were the lowest rates ever recorded in the United States, the report noted (MMWR 2007;56:[No. SS-3]).

"The trend has been very impressive," Dr. Emmet B. Keeffe, professor of medicine and chief of hepatology at Stanford (Calif.) University Medical Center, told this news organization. "We are having a significant impact on this disease in the United States, and we could see its eradication."

Dr. Hua Chen of University of Houston agreed. "I'm very optimistic about it. I really believe these diseases could be eliminated within 10 or 20 years," said Dr. Chen, an expert on hepatitis vaccine research.

CDC epidemiologist Annemarie Wasley, Sc.D., who prepared the report, expressed a more cautious outlook, but said the numbers illustrate the beneficial impact of a national vaccine strategy aimed at eradicating hepatitis.

"While it's difficult to predict the future, we feel that if we keep applying these recommendations, strengthening them where they are weak, and reaching out to highrisk groups, we can continue this downward trend to an even lower incidence of new infection," she said in an interview.

The decrease in new infections is related directly to recent expansions in the recommendations for routine hepatitis A vaccination in young children and to ongoing hepatitis B vaccination strategies, Dr. Wasley said. "The significant progress we're seeing in the reduction of new infections is concentrated primarily in younger age groups, and most probably reflects the impact of our universal vaccination strategies."

Only 4,488 acute symptomatic cases of hepatitis A were reported to the National Notifiable Diseases Surveillance System in 2005, according to the report. The disease incidence peaked in 1995, when more than 31,500 cases (12/100,000) were reported.

Rates have declined steadily since then, reflecting the 1996 recommendation to vaccinate those at increased risk of infection (international travelers, men who have sex with men, drug users, and children living in communities with high rates of disease). A 1999 recommendation to implement routine vaccination for children in 11 states with high infection rates contributed to the effect: New infections dropped from more than 17,000 in 1999 to fewer than 9,000 in 2002.

The 2005 recommendation to include hepatitis A as part of the routine childhood

vaccination schedule probably will help to perpetuate the downward trend. That recommendation will "provide the foundation for eventual consideration of elimination of indigenous hepatitis A virus transmission in the U.S.," the report noted.

Hepatitis A has shown a cyclical pattern in the United States since record keeping began in 1966, the report said. The 2005 rate of new infection is more than 80% lower than any previously recorded low in that cycle.

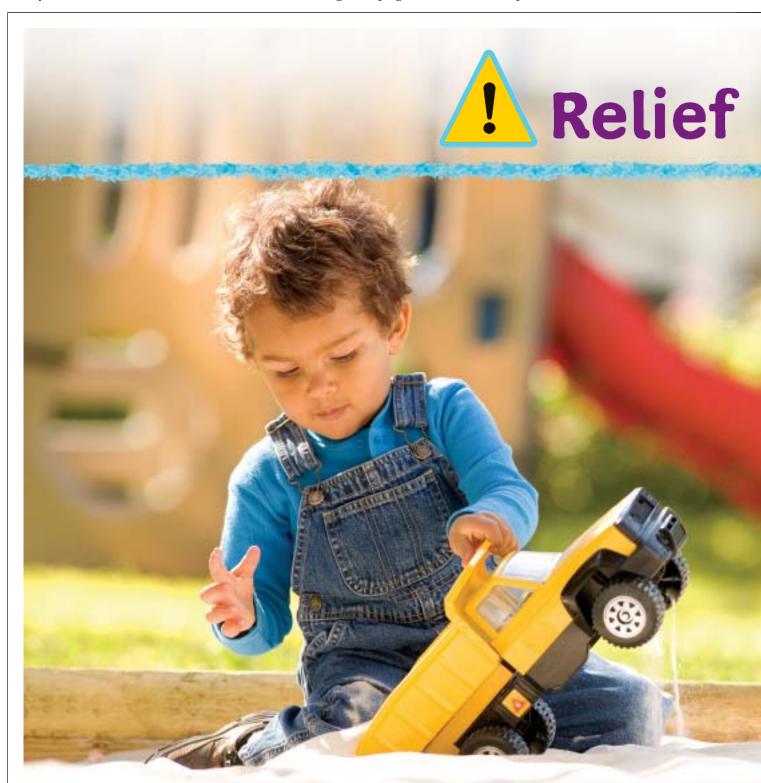
Hepatitis B also showed a similarly dramatic decline in 2005, with 5,494 acute symptomatic cases. This amounted to an 80% decline since 1991, when more than 24,000 cases were reported.

The decline in this disease is associated with the national four-step program to eliminate transmission of hepatitis B, launched in 1991.

The key elements of that program were universal vaccination of all newborns, routine screening of all pregnant women with prenatal treatment of those infected, routine vaccination of all unvaccinated children and adolescents, and vaccination of all at-risk adults.

In addition to the dramatic declines in hepatitis A and B, the report notes a significant decline in hepatitis C. This finding is probably because of risk-reduction behaviors and the decline in needle sharing among injectable drug users, Dr. Wasley said.

Hepatitis C continued the decline it has



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shown since its peak in 1985, when almost 27,000 new cases occurred. In 2005, only 671 cases were reported, for an overall national rate of just 0.2/100,000.

But despite the good news, challenges remain. Unfortunately, Dr. Wasley said, rates of hepatitis B among 24- to 44-year-olds remain unacceptably high. Most of the occurrences in this age group are associated with high-risk behaviors, including intravenous drug use, male/male sex, and multiple sexual partners.

"The vaccine has always been recommended for people with these risk factors, but the challenge is getting it to them—and that's one of the things we need to focus on in the future."

Her recent review of more than 6,000 respondents to the National Health and Nutrition Examination Survey examined factors affecting hepatitis vaccination rates (Curr. Med. Res. Opin. 2006;22:2489-96). Among those with high-risk behaviors, being single, male, and uninsured had significant negative associations with hepatitis vaccination. "The people who need it most are the ones who don't have it." said Dr. Chen.

Dr. Keeffe agreed. "These are hard

populations to penetrate and elicit compliance from. Doctors who work in these environments, such as STD clinics or inner cities with large indigent populations, need to try and increase the delivery of vaccine to these patients."

But even if new hepatitis infections become a relic of the past, Dr. Wasley said, physicians will be dealing with the existing chronic infections for years and years to come. "We can't forget that there are more than 3 million people in this country who have chronic hepatitis, and that is an enormous health care burden."

