

Hepatitis A and B Incidence Hits All-Time Low

BY MICHELE G. SULLIVAN
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The rates of new acute hepatitis A and B infections in the United States have plummeted to the lowest levels since their respective peaks in 1971 and 1985, according to a recent report by the Centers for Disease Control and Prevention.

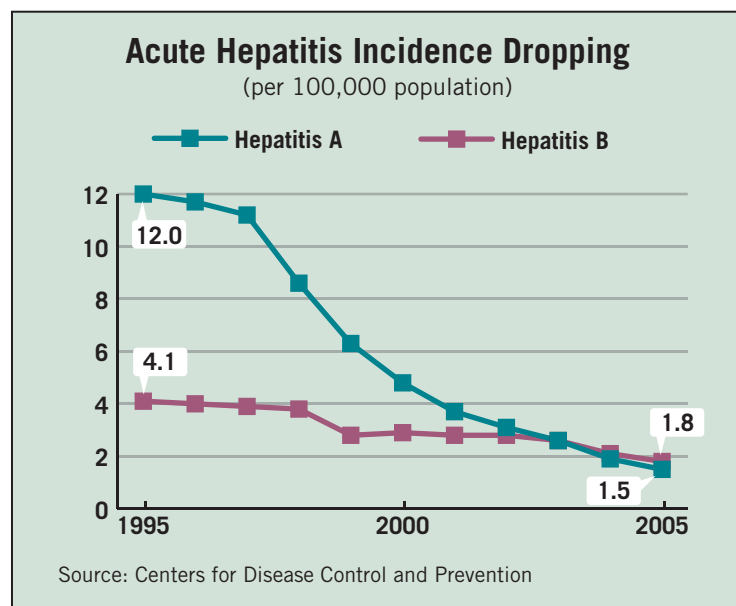
The incidence of hepatitis A for 2005—the latest year for which full data are available—was a historic low of 1.5/100,000 U.S. population, based on a total of 4,488 confirmed cases as reported to the National Notifiable Diseases Surveillance System each year, according to the CDC report (MMWR 2007;56:[No. SS-3]).

This is an 88% drop from 1995, when the disease's incidence was 12.0/100,000 with 31,582 new cases. That year, effective vaccines against hepatitis A first became available in the United States. The highest incidence of new hepatitis A infections ever recorded was 28.9/100,000, based on 59,606 cases in 1971; the 2005 rate is a 95% decline from that peak.

Similarly, the 2005 incidence of hepatitis B was 1.8/100,000 (5,494 cases), an 84% drop from the peak hepatitis B year of 1985, when the rate was 11.5/100,000 (26,654 cases).

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

Dr. Hua Chen, of the Univer-



sity 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 Anne-Marie Wasley, Sc.D., the report's lead author, expressed a more cautious outlook, but said the numbers illustrate the beneficial impact of a national vaccine strategy aimed at eradicating hepatitis.

"We feel that if we keep applying these recommendations, strengthening them where they are weak, and reaching out to high-risk 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, according to Dr. Wasley.

Since the hepatitis A incidence of 12.0/100,000 in 1995, the annual rate has declined steadily, reflecting a 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: The national hepatitis A new-cases rate dropped 47% from 1995 (12.0/100,000) to 1999 (6.3/100,000); from 1999 to 2005, the decrease accelerated to 74%.

The 2005 recommendation to include hepatitis A as part of the routine childhood vaccination schedule will "provide the foundation for eventual consideration of elimination of indigenous hepatitis A virus transmission in the U.S.," the report noted.

The similarly dramatic decline

in new cases of hepatitis B is associated with the 1991 launch of a national four-step program to eliminate its transmission, the CDC noted. The key elements of that program were universal vaccination of 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. The national hepatitis B new-cases rate had dropped 38% from 1985 (11.5) to 1991 (7.1/100,000); from 1991 to 2005, the decrease accelerated to 75%.

In addition to the dramatic declines in hepatitis A and B, the report notes a similar 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 shown since its peak, also in 1985, when a 1.8/100,000 incidence (4,192 new cases) was recorded. In 2005, the rate fell to just 0.2/100,000 (671 cases), an 89% decrease and also a historic low for the nation.

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."

The problem is not vaccine availability, Dr. Chen said, but instead it is an issue of education and accessibility. "Adults with sexually transmitted disease and illegal drug users are the two biggest populations at risk right now. These are precisely the adults who don't self-identify as a high-risk population. They remain unaware of their risk and do not communicate this with their physicians—if they even have a physician. It's a huge challenge to public health to effectively reach them and get them vaccinated."

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," Dr. Chen said.

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 warned, physicians will be dealing with the existing chronic infections for years to come. "There are more than 3 million people in this country who have chronic hepatitis, and that is an enormous health care burden," she said. ■

Hepatitis A Infections Linked to Adopted Ethiopian Children

BY JOHN R. BELL
Associate Editor

The Centers for Disease Control and Prevention issued a health advisory urging families who adopt children from Ethiopia to make sure all family members are vaccinated for hepatitis A, which is endemic throughout the African continent.

The advisory, issued July 19 via the CDC's Clinician Outreach and Communication Activity (COCA) Listserv, said the agency had received an undisclosed number of reports of hepatitis A in adults and children "linked" to children adopted from Ethiopia. "Other household members and caregivers of children adopted from Ethiopia should consider being vaccinated before adopted children are brought to the United States," the advisory warned.

Most children younger than the age of 6 years do not get sick from hepatitis A virus infection, but they can spread it to

older children and adults, who often become ill, the CDC says. Symptoms usually last up to 2 months, but there is no chronic disease. Older persons and those with chronic liver disease can have more serious illness. Overall mortality is 0.3%, but it is 1.8% in those aged 50 years and older.

If adopted children, household members, or others who have been in contact are experiencing symptoms of hepatitis A (fatigue, abdominal pain, loss of appetite, nausea, jaundice), they should contact a physician. Persons exposed to hepatitis A who have not previously been immunized should contact their physician or local health department to see if they should receive an immunization or immunoglobulin that might prevent illness, the CDC said.

According to the U.S. Department of State, Ethiopia in 2003 was the 15th most common source country for foreign adoptions; in 2006, it was 5th. (See box.) Last year, Ethiopia accounted for 732 (4%) of

20,679 foreign adoptions overall into the United States.

The CDC also urged persons traveling to Ethiopia or other areas with a high incidence of hepatitis A to be vaccinated against the disease before travel.

According to the World Health Organization, Africa as a whole is considered to have "very high" endemicity of hepatitis A, and most hepatitis A patients there are younger than 5 years. Most adults in endemic countries, however, are immune to the disease. (The report is available at www.who.int/csr/disease/hepatitis.)

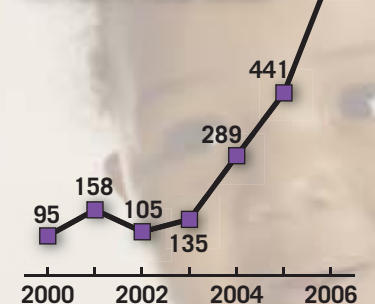
A 1990 study found a higher than expected incidence of the disease among missionaries in sub-Saharan Africa (Am. J. Trop. Med. Hyg. 1990;43:527-33). An earlier study found that 84% of Ethiopians were positive for hepatitis A surface antigen (Am. J. Epidemiol. 1986;123:344-51).

"CDC also recommends that all children [at least] 1 year of age receive the he-

patitis A vaccine," the advisory noted. This is part of the U.S. Childhood and Adolescent Immunization Schedule. ■

U.S. Adoptions From Ethiopia

Number of visas issued



Note: Based on the number of immigrant U.S. visas issued to orphans.
Source: U.S. Department of State