

# Hepatitis A and B Incidence Hits All-Time Low

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The 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 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, 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,” she said.

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.

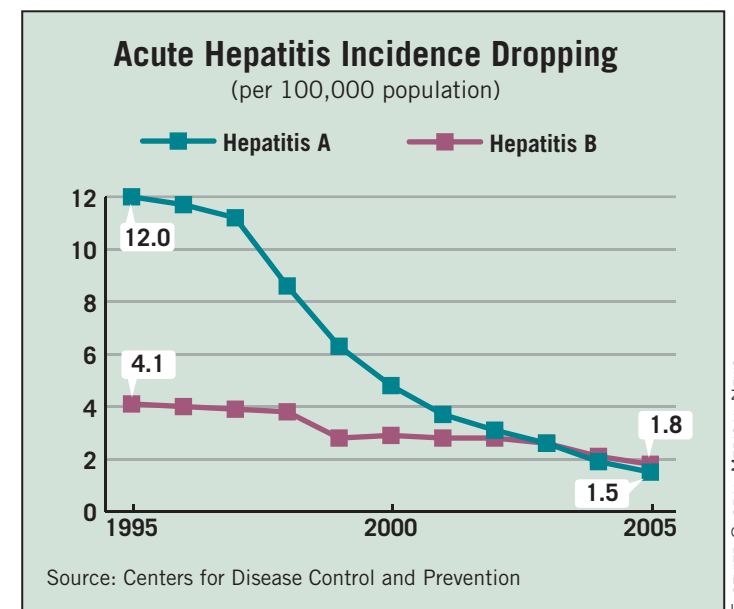
The decline in this disease is associated with the national four-step program to eliminate transmission of hepatitis B, launched in 1991.

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.

The report also 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 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.”



The problem is not vaccine availability, said Dr. Chen, 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,” 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,” she said. ■

## Feasibility of Hepatitis B Vaccine Standing Orders Questioned

BY PATRICE WENDLING  
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KANSAS CITY, MO. — Physicians support using risk-based standing orders for adult hepatitis B vaccinations, but see clear barriers to their implementation, results of a national survey show.

Prior studies show that age- and risk-based standing orders that authorize health care personnel to vaccinate by protocol without physician involvement have increased adult pneumococcal and influenza vaccination rates by 16%-97%, when done as part of a multicomponent strategy.

But unlike assessing adults for pneumococcal disease or influenza, using standing orders to assess for hepatitis B virus (HBV) risk factors requires obtaining potentially sensitive information, Dr. Allison Kempe and her associates reported in a poster at the National Immunization Conference sponsored by the Centers for

Disease Control and Prevention. Like HIV, HBV can be transmitted through unprotected sex with an infected person or through shared needles.

“This is a debate because some people think that risk-based criteria are far less effective than age-based criteria, and the CDC has decided to go with risk based,” Dr. Kempe, of the Children’s Hospital in Denver, said in an interview.

In December 2006, the CDC’s Advisory Committee on Immunization Practices recommended that practitioners in primary care settings implement standing orders to identify and vaccinate adults with HBV risk factors.

In September and October 2006, Dr. Kempe and her associates used a mail- or Internet-based questionnaire to survey family medicine and general internal medicine physicians on the feasibility of implementing HBV risk-based standing orders. Surveys were completed by 65%

(282 of 433) of family physicians and 79% (332 of 420) general internists. Responses generally did not differ by specialty, so data were combined.

Overall, 47% of respondents reported being “very supportive” and 37% “somewhat supportive” of risk-based standing orders.

“However, physicians reported significant barriers to risk-based approaches, suggesting that alternative strategies might be needed for hepatitis B vaccination to be successfully implemented,” the authors wrote.

Factors identified as “definite barriers” or “somewhat of a barrier” to standing orders included patients not disclosing sensitive information (definite 36%, somewhat 38%); nurses and medical assistants (MAs) being too pressed for time to assess risk (30%, 37%); risk screening negatively impacting patient flow (20%, 27%); risk screening requiring more knowledge than nurses or MAs have (16%, 30%); and the fact that because of the complexity of the

standing orders, nurses and MAs would still have questions about who should be immunized (15%, 31%).

The investigators did not perform a head-to-head comparison between risk- and age-based criteria, but feasibility was thought to be higher for age-based criteria, Dr. Kempe said. Just 25% of family physicians and 27% of internists thought risk-based criteria would be “very feasible” versus 38% and 37% for age-based criteria.

In a second analysis, most physicians reported that HBV vaccination was a “moderate priority” (42% of the family medicine physicians, 45% of the internists) or a “low priority” (39%, 28%) in their practices, Dr. Matthew Daley and his associates reported in a separate poster at the meeting.

A minority (37%) of respondents routinely use written questionnaires at an initial inpatient visit to assess sexual behavior or drug use, reported Dr. Daley, also of the Children’s Hospital. ■