Updated Recommendations from the Advisory Committee on Immunization Practices (ACIP) for Use of Hepatitis A Vaccine in Close Contacts of Newly Arriving International Adoptees

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On February 25, 2009, the Advisory Committee on Immunization Practices (ACIP) recommended routine hepatitis A vaccination for household members and other close personal contacts (e.g., regular babysitters) of adopted children newly arriving from countries with high or intermediate hepatitis A endemicity. This new recommendation complements previous ACIP recommendations for hepatitis A vaccination for persons traveling from the United States to countries with high or intermediate hepatitis A endemicity (*1*,*2*) (including persons with travel related to international adoption), and postexposure prophylaxis for contacts of persons with hepatitis A (*1*). This report introduces the new recommendation and outlines the underlying epidemiologic and programmatic rationale.

Rationale and Methods

Hepatitis A virus (HAV) can produce either asymptomatic or symptomatic infection in humans after an average incubation period of 28 days (range: 15--50 days) (*3*). Peak infectivity occurs during the 2-week period before onset of jaundice or elevation of liver enzymes, when concentration of virus in stool is highest (*4*). Illness caused by HAV typically has an abrupt onset that can include fever, malaise, anorexia, nausea, abdominal discomfort, dark urine, and jaundice. The likelihood of having symptoms with HAV infection increases with age. Fewer than 10% of infections among children aged 0--4 years result in jaundice; this percentage increases to 30%--40% among children aged 5--9 years, 60%--80% among youths aged 10--17 years, and 80%--90% among adults aged ≥18 years (*5*). When signs and symptoms occur, typically they last <2 months, although 10%--15% of symptomatic persons have prolonged or relapsing disease lasting up to 6 months (*6*). The case-fatality rate for HAV infection increases with age: 1.8% for persons adults aged >50 years compared with 0.6% for persons aged <50 years. The case-fatality rate is also increased among persons with chronic liver disease, who are at increased risk for acute liver failure (*7*).

In making its recommendation, ACIP considered the likelihood that a child adopted by parents in the United States might be actively infected with HAV and shedding virus at the time of adoption. During 1998--2008, approximately 18,000 children (range: 15,583 to 22,884) were adopted from foreign countries by families in the United States each year.* Approximately 99.8% of these children came from countries where hepatitis A is considered to be of high or intermediate endemicity (*2*), and approximately 85% of were aged <5 years. Country-specific policies pertaining to foreign adoption are changing constantly, leading to rapid changes in the numbers of international adoptees entering the United States from various countries. Although South Korea

was the most common country of origin for adoptions in the United States in the early 1990s, Russia and China became prominent in international adoption in the late 1990s, and currently the largest numbers of adopted children come from Guatemala, China, Russia, and Ethiopia. The incidence of HAV infection is highest in these countries among children aged <5 years, when HAV infection is likely to be asymptomatic.

ACIP also considered recent reports of HAV infection among persons in close contact with new adoptees from countries of high or intermediate hepatitis A endemicity. Such persons are at greater risk for HAV infection. In 2007, CDC was notified of a case of fulminant hepatitis A in a nontraveling household contact of an asymptomatic Ethiopian adoptee confirmed to have acute hepatitis A (immunoglobulin M [IgM] antibody to HAV [anti-HAV] positive). This case prompted further investigation that led to identification of 20 other cases of acute hepatitis A among persons who had close personal contact with newly arriving internationally adopted children and no history of traveling abroad (*8*). Two acute hepatitis A cases were identified among traveling parents who had not been vaccinated. This same study found that 98% of parents traveling to pick up their children had been vaccinated against hepatitis A in accordance with existing ACIP recommendations (*8*).

Since 2007, CDC has received 14 additional reports of acute hepatitis A following exposure to nonjaundiced adoptees newly arriving from countries of high or intermediate hepatitis A endemicity. Although these numbers are small compared with the total number of hepatitis A cases (2,979) reported to CDC in 2007 (*9*), they likely represent an underestimate of the number of hepatitis A cases associated with international adoptions because contact with an international adoptee is not asked routinely as part of national hepatitis A surveillance. All of the 14 adoptee-associated cases identified since 2007 were in close contacts who had not been vaccinated against hepatitis A and had no history of travel and no other risk factors for hepatitis A. In one instance, both adoptive parents developed hepatitis A that required hospitalization (CDC, unpublished data, 2008). In another instance, a 2008 community outbreak with 12 hepatitis A cases was associated with an asymptomatic HAV-infected international adoptee; two infected contacts were hospitalized, and disease was identified among tertiary contacts in an elementary school (CDC, unpublished data, 2009).

Data from a study conducted at three adoption clinics in the United States, each screening 100--200 incoming adoptees for hepatitis A each year, indicate that 1%--6% of newly arrived international adoptees are acutely infected with HAV (non-jaundiced; IgM anti-HAV positive). A proportion of these adoptees represent a source of infection for susceptible close contacts (*9*). The risk for hepatitis A among close personal contacts of international adoptees is estimated at 106 (range: 90--819) per 100,000 household contacts of international adoptees within the first 60 days of their arrival in the United States (CDC, unpublished data, 2009). By comparison, according to surveillance data, the estimated rate of symptomatic hepatitis A in the U.S. general population in 2007 was 1.0 per 100,000 population (*10*).

Updated Recommendation

Based on this evidence, on February 25, ACIP updated its guidance by recommending hepatitis A vaccination for all previously unvaccinated persons who anticipate close personal contact (e.g., household contact or regular babysitting) with an international adoptee from a country of high or intermediate endemicity during the first 60 days following arrival of the adoptee in the United States. The first dose of the 2-dose hepatitis A vaccine series should be administered as soon as adoption is planned, ideally 2 or more weeks before the arrival of the adoptee.

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