



CLINICAL GUIDELINES PROGRAM

NEW YORK STATE DEPARTMENT OF HEALTH AIDS INSTITUTE | HIV · HCV · SUBSTANCE USE · LGBT HEALTH

HAV–HIV Coinfection

Medical Care Criteria Committee, updated August 2018

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HAV-HIV Coinfection

Purpose of This Guideline

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This guideline on hepatitis A virus (HAV) and HIV coinfection was developed by the New York State (NYS) Department of Health (DOH) AIDS Institute (AI). Its purpose is to inform primary care providers and other clinical practitioners in NYS about HAV/HIV infection and to identify opportunities for screening, vaccination, and post exposure prophylaxis. This guideline aims to achieve the following goals:

- Increase the numbers of NYS residents with HIV who are screened and vaccinated for HAV, and who are managed effectively after HAV exposure.
- Support the *NYSDOH Prevention Agenda 2013–2018* to decrease the burden of HAV by educating providers on the importance of HAV vaccination.
- Integrate current evidence-based clinical recommendations into the healthcare-related implementation strategies of the *Ending the Epidemic initiative*, which seeks to end the AIDS epidemic in New York State by the end of 2020.

The Burden of HAV

The total annual reported cases of HAV in the United States decreased consistently from 13,397 in 2000 to 1,239 in 2014 [CDC 2016]; the overall decline corresponded with inclusion of HAV vaccination in the recommended pediatric immunization panels for those 2 to 18 years of age. Since 2014, however, the number of cases reported in the United States has increased, reaching 2,007 in 2016 [CDC 2016].

In 2013, in New York State there were 60 reported cases of HAV among individuals 20 years of age and older outside of New York City, and 80 cases reported in New York City [NYSDOH 2013a and b]. More recently, the NYSDOH and the New York City Department of Mental Health and Hygiene have issued advisories on increases in HAV infection and noted the following:

- 36 cases of HAV reported in New York State (exclusive of New York City), January through June 2018, representing a 58% increase over the average number of cases during the same period in each of the previous 3 years. Risk factors included consumption of raw seafood, travel, drug use, unstable housing/homelessness, and being a man who has sex with men (MSM) [NYSDOH 2018].
- New York City reported a 10-fold increase in HAV among MSM in 2017 as compared with previous years [NYC DOHMH 2017].

The Role of NYS Primary Care Providers

Primary care clinicians have an important role in providing immunizations to individuals with HIV. The goal of this guideline is to provide standards for clinicians in NYS to screen and vaccinate for HAV and to provide post exposure prophylaxis as appropriate in individuals with HIV. See the NYSDOH AI guideline *Primary Care Approach > Immunizations for Adults with HIV > HAV*.

Development of This Guideline

This guideline was developed by the NYSDOH AI Clinical Guidelines Program, which is a collaborative effort between the NYSDOH AI Office of the Medical Director and the Johns Hopkins University School of Medicine, Division of Infectious Diseases.

Established in 1986, the goal of the Clinical Guidelines Program is to develop and disseminate evidence-based, state-of-the-art clinical practice guidelines to improve the quality of care provided to people with HIV, hepatitis C virus, and sexually transmitted infections and to improve drug user health and LGBT health throughout NYS. NYSDOH AI guidelines are developed by committees of clinical experts through a consensus-driven process.

References

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Transmission and HAV Disease

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The modes of transmission are well established: ingestion of contaminated water and food, such as raw clams or oysters; oral-anal contact; person-to-person spread via fomites, such as shared utensils or bath towels; or, very rarely, blood or blood product transfusion. Approximately 40% of cases occur in individuals who have had known contact with a person with HAV; 10% of cases are related to food and/or waterborne disease outbreaks or international travel; and 50% of cases have no identified source. MSM are at increased risk for HAV infection, and limited data suggest low rates of HAV vaccination in this population [Diamond et al. 2003; Urbanus et al. 2009; Cotter et al. 2003], particularly among young MSM [Diamond et al. 2003; Urbanus et al. 2009].

Severity of Disease

The incubation period of HAV infection averages 28 days (range 15 to 50 days). Although HAV does not cause chronic hepatitis, it is not a benign disease; the morbidity in adults is substantial. Young children tend to have asymptomatic or minimally symptomatic disease, whereas older children and adults have more severe illness, with jaundice occurring in approximately 70% of cases [Cuthbert 2001]. Adults with acute HAV lose an average of 30 workdays [WHO 2000], and approximately 40.8% of patients with reported cases of acute HAV required hospitalization in 2013 [CDC 2013]. Overall case fatality is low, ranging from 0.3%–0.6% for all ages and up to 1.8% among adults aged >50 years [CDC 2015].

HAV does not cause more severe clinical illness in people with HIV than in people without. Patients with HIV may have significantly higher HAV viral load levels and significantly prolonged durations of HAV viremia as compared with people who do not have HIV [Gallego et al. 2011], which may result in a prolonged duration of risk of HAV transmission to others.

Disease Management in the Setting of HIV

Introduction

- Whenever possible, ART should not be interrupted in patients with HIV/HAV coinfection; when interruption of ART is indicated for management of severe or fulminant liver disease, clinicians should consult with a care provider experienced in the treatment of hepatitis and HIV. (A3)

Patients with HIV and acute HAV infection rarely require even temporary interruption of ART. Cessation of ART should be avoided whenever possible because of the potential long-term consequences, such as reduced viral suppression when ART is reinstated [SMART Study Group 2008; Lutwick 1999]. In the rare instances when interruption of ART is indicated for management of fulminant liver disease, clinicians should consult with a provider experienced in the treatment of hepatitis and HIV.

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Prevention

Medical Care Criteria Committee, updated August 2018

✓ RECOMMENDATIONS

Pre-Exposure Vaccination

- Clinicians should obtain HAV IgG for individuals with HIV indicated below and should administer the HAV vaccine to those who are HAV antibody-negative.
- When vaccinating patients with HIV, clinicians should:
 - Administer the full HAV vaccination series, consisting of an initial dose and a second dose 6 to 12 months later, to ensure maximal antibody response (A1)
 - Administer the HAV vaccine early in the course of HIV infection for patients with CD4 counts ≥ 200 cells/mm³ (A1)
 - Defer vaccination for patients with CD4 counts < 200 cells/mm³ or who have symptomatic HIV disease until immune reconstitution after initiation of ART in an attempt to maximize the antibody response (B2)
 - Obtain a post-vaccination antibody measurement in patients who are at increased risk for HAV-related morbidity and mortality. (B3)
- Patients who should receive hepatitis A vaccination:
 - Persons with chronic liver disease or conditions that can lead to chronic liver disease (e.g., chronic HBV, chronic HCV, alcohol abuse, or genetic liver diseases). Persons with chronic liver disease are at increased risk for severe infection if they become co-infected with HAV. (A3)
 - MSM (A3)
 - Travelers to countries with high or intermediate endemicity of infection.* [Because of the complexity involved in interpreting travel-associated HAV infection risk, some experts advise people traveling outside the United States to consider HAV vaccination regardless of their destination.] (A2)
 - Illicit drug users, particularly injection drug users (A3)
 - Persons who live in a community identified by the local health department as experiencing an outbreak of HAV infection (B3)
 - Persons who have clotting-factor disorders (B3)
 - Persons who want to reduce their risk for HAV infection (B3)
 - Persons at occupational risk who are not otherwise required to receive HAV vaccination (C3)

Post-Exposure Immune Globulin

- Clinicians should administer a single dose of immune serum globulin (0.1 mL/kg IM) as HAV post-exposure prophylaxis to susceptible HIV-infected patients within 2 weeks of an exposure to close personal contacts with serologically confirmed HAV infection (i.e., through a blood test), including:
 - Household and sexual contacts (A2)
 - Individuals who have shared illicit drugs with someone with HAV (A2)
- Patients for whom HAV vaccination is also indicated should receive the HAV vaccine concurrently with immune serum globulin to protect against future infection.
- Clinicians must report all suspected or confirmed hepatitis A infections to the local health department of the area where the patient resides according to NYS requirements (also see *NYSDOH Communicable Disease Reporting Requirements*).
 - Infections that occur among food-handlers or in other settings that pose a high risk of transmission are immediately reportable by telephone to the local health department.

Note: Hepatitis A vaccine at the age-appropriate dose is preferred over immune globulin; however, for optimal protection, adults aged > 40 years, immunocompromised people, and people with chronic liver disease or other chronic medical conditions planning to depart to an area in < 2 weeks should receive the initial dose of vaccine along with immune globulin (0.1 mL/kg IM) at a separate injection site. For additional information regarding HAV vaccination for travelers, see *CDC Health Information for International Travel, Infectious diseases related to travel: Hepatitis A*.

Pre-Exposure Vaccination

Infection with HAV can be prevented by active immunization prior to exposure with either of the two currently licensed vaccines, which are considered equivalent in efficacy. HAV vaccines are highly immunogenic in immunocompetent adults, with >95% seroconversion. However, the seroconversion rates and the geometric mean serum antibodies in individuals with HIV are lower than in those without HIV, with response rates from 50% to 95% [Weissman et al. 2006; Shire et al. 2006; Wallace et al. 2004; Kemper et al. 2003; Rimland and Guest 2005; Mena 2013]. HAV vaccine appears to have no effect on the course of HIV infection or on plasma HIV viral load. A combined hepatitis A and B vaccine is also available and can be used in persons susceptible to both hepatitis A and B. It is given in three total doses at 0, 1, and 6 months.

Administration of HAV vaccine is preferred when CD4 counts are ≥ 200 cells/mm³ to maximize response to the vaccine. An effective antibody response may not occur in up to 15% of immunocompromised patients [Wallace et al. 2004; Mena et al. 2013]. This Committee recommends follow-up HAV antibody testing for patients who are at increased risk for HAV-related morbidity and mortality (see above) to verify vaccine efficacy and to identify those who should be counseled to avoid infection because of continued susceptibility.

Post-Exposure Immune Globulin

Immune serum globulin is the recommended HAV post-exposure prophylaxis for patients with HIV and should be given to individuals who are susceptible to HAV infection within 2 weeks after an exposure to an HAV-infected household contact, sexual partner, or needle-sharing partner [CDC 2008; CDC 2007]. Consideration should also be given to patients with HIV who are providing other types of ongoing, close personal contact with a person with HAV (e.g., a regular babysitter or caretaker) [7,8]. A single dose of 0.1 mL/kg IM is effective in preventing infection or attenuating HAV infection that might result from such an exposure. Concurrent administration of HAV vaccine with immune serum globulin is indicated for individuals at risk for future infection (see above).

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All Recommendations

Medical Care Criteria Committee, updated August 2018

✓ RECOMMENDATIONS

Disease Management in the Setting of HIV

- Whenever possible, ART should not be interrupted in patients with HIV/HAV coinfection; when interruption of ART is indicated for management of severe or fulminant liver disease, clinicians should consult with a care provider experienced in the treatment of hepatitis and HIV. (A3)

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 - MSM (A3)
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 - Illicit drug users, particularly injection drug users (A3)
 - Persons who live in a community identified by the local health department as experiencing an outbreak of HAV infection (B3)
 - Persons who have clotting-factor disorders (B3)
 - Persons who want to reduce their risk for HAV infection (B3)
 - Persons at occupational risk who are not otherwise required to receive HAV vaccination (C3)

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✓ RECOMMENDATIONS – CONTINUED**Post-Exposure Immune Globulin**

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 - Household and sexual contacts (A2)
 - Individuals who have shared illicit drugs with someone with HAV (A2)
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