# Hepatitis B Virus Screening and Vaccination in Patients with HIV: A Survey of Physicians' Current Clinical Practice

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## BACKGROUND

- HBV and HIV co-infection is associated with high morbidity and mortality
- Guidelines and recommendations for vaccination and post-vaccination monitoring vary

**2013 IDSA Recommendations**

- Check anti-HBs concentrations 1-2 months after completion of the vaccine series
  - If <10 mIU/mL, administer either:
    - Another 3-dose series (standard or high dose)
    - 1 dose followed by repeat anti-HBs is testing

**STUDY AIM**

Evaluate current HBV screening, vaccination, and monitoring practices of physicians who care for patients living with HIV

## METHODS

- Web-based survey consisting of demographic questions and two sets of case-based questions
- Distributed to:
  - UCSD ID division
  - IDSA members
  - Twitter and Facebook social networks

Physicians who care for patients living with HIV have **varied approaches to hepatitis B virus** screening, vaccination, antibody monitoring, and management of isolated core antibody.

| Preferred timing of HBV vaccination in a patient newly diagnosed with HIV getting started on ART | |
|---|---|
| Vaccinate immediately | 58 (78%) |
| Postpone vaccination until HIV VL is suppressed | 14 (19%) |
| Defer vaccination since the patient is on ART | 1 (1%) |
| Other | 1 (1%) |
| **Preferred initial HBV vaccination series for susceptible individuals living with HIV** | |
| Energix-B or Recombivax HB | 21 (29%) |
| Heplisav-B | 31 (42%) |
| Any of the above | 21 (29%) |
| **Preferred dose & schedule if using Engerix-B or Recombivax HB for initial vaccine series** | |
| Standard dose at 0, 1, and 6 months | 62 (90%) |
| Double dose at 0, 1, and 6 months | 7 (10%) |
| Standard or double dose at 0, 1, 2, and 6 months | 0 (0%) |
| **Preferred intervention if patient does not seroconvert after first vaccination series** | |
| No further intervention | 4 (6%) |
| Repeat with Engerix-B or Recombivax-HB at standard dose at 0, 1, and 6 months | 15 (22%) |
| Repeat with Engerix-B or Recombivax-HB at double dose at 0, 1, and 6 months | 19 (28%) |
| Repeat with Engerix-B or Recombivax-HB at standard dose at 0, 1, 2, and 6 months | 2 (3%) |
| Repeat with Engerix-B or Recombivax-HB at double dose at 0, 1, 2, and 6 months | 0 (0%) |
| Repeat with Heplisav-B | 29 (42%) |
| **Preferred hepatitis B immunity monitoring after successful vaccination with seroconversion** | |
| No further monitoring | 57 (83%) |
| Check HBsAb yearly, and repeat series if titer drops below 10mIU/mL | 12 (17%) |
| **Preferred management of positive isolated hepatitis B core antibody** | |
| No further intervention | 16 (22%) |
| Initiate hepatitis B vaccination | 18 (24%) |
| Give a single dose of Engerix-B or Recombivax HB with HBsAb titer check 1 month later | 7 (9%) |
| Check HBV DNA level | 33 (45%) |

## RESULTS

- 74 clinicians from 26 states participated
- 42% would use Heplisav-B over older HBV vaccine formulations
- Majority would repeat a vaccination series if the patient does not seroconvert
- 17% would monitor HBsAb yearly

**ISOLATED HEPATITIS B CORE ANTIBODY**

- Majority (45%) would check an HBV DNA level
- 24% would initiate a vaccination series
- 22% would not pursue further intervention

## CONCLUSION

Standard HBV vaccination and antibody monitoring recommendations informed by efficacy and cost-effectiveness data could be beneficial in the care of patients living with HIV

## FUTURE RESEARCH TOPIC IDEAS

- Chart review of actual vaccine and monitoring practices
- Outcomes of patients with isolated hepatitis B core antibody
- Evaluation of safety and efficacy of Heplisav-B in patients living with HIV