



# Metrics and Outcomes Report

## Hepatitis B Virus Reading Room

*CME Outfitters Journal Club*

*Launch: November 20, 2014*

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*Designed, Analyzed and Prepared By: CME Outfitters, LLC*





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## Educational Outcomes Analysis

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**Primary Care Providers who participated in the CME Outfitters Journal Club Hepatitis B Reading Room are 35.08% (effect size .54) more likely to implement evidence-based treatment in their patients than their colleagues and rate in the 71<sup>st</sup> percentile for treatment behaviors**

This analysis presents educational outcomes data for a CME Outfitters Journal Club released November 20, 2014. The initial offering consisted of a live webcast featuring Kris V. Kowdley, MD and Steven-Huy Han, MD discussing a 2011 article from *Digestive Diseases and Science* titled “The Management of Chronic Hepatitis B in Asian Americans” in which Dr. Kowdley and Dr. Han were authors. This article was chosen after suggestion from Dr. Kowdley and also a survey to primary care physicians (N=150). The Journal Club featured a 30-minute live Q&A and endured as a web replay through November 20, 2015. The target audience for the activity was primary care physicians, nurses, nurse practitioners, physician assistants, pharmacists, and other health care professionals with an interest in hepatitis B.

### Learning Objectives

- Gain knowledge of treatment guidelines by the American Association for the Study of Liver Diseases and implement first-line agents in appropriate patients with hepatitis B infection.
- Implement identification and screening strategies in patients at high risk for hepatitis B virus infection, in order to meet quality measures published by the U.S. Department of Health & Human Services by 2016.

### Methods

This activity had pre-activity survey questions, an immediate posttest, and a three-month follow-up outcomes survey that utilized a case vignette to assess whether the therapeutic decisions were consistent with clinical data presented in the content of the educational activity. Physician beliefs surrounding barriers and future educational needs were also collected. Chi-square tests were conducted to identify significant difference between responses before and after the activity. In addition, overall mean scores and pooled standard deviations were calculated for both groups. These were used to calculate the educational effect size using Cohen’s *d* formula. Pearson’s *r* was calculated to assess any correlation between knowledge or practice patterns in relation to external treatment recommendations.

### Top Outcomes Data and Activity Impact

#### Baseline knowledge

- Prior to the education, 88.46% (SE 1.10%) of participants reported screening patients of Asian descent for HBV  $\leq$  25% of the time.
- Only 7.69% (SE 3.93%) of clinicians reported initiating first-line HBV treatment according to AASLD guidelines in over half of their patients with HBV.
- 30.77% (SE 4.84%) report not informing at least 50% of their patients that they are infected with HBV or providing patient education on the diagnostic and treatment implications of their HBV serologic findings.
- Of participants who treat patients with HBV, 28.0% (SE 4.98%) were able to correctly identify the 2 most important factors in determining the treatment approach for chronic HBV infection.

- 64.29% (SE4.25%) were able to correctly identify which HBV serology results indicated a need for antiviral therapy.
- Overall, prior to the activity participants demonstrated 41.02% (SE 3.69%) baseline knowledge signaling that we were reaching to correct audience with clear need for education.

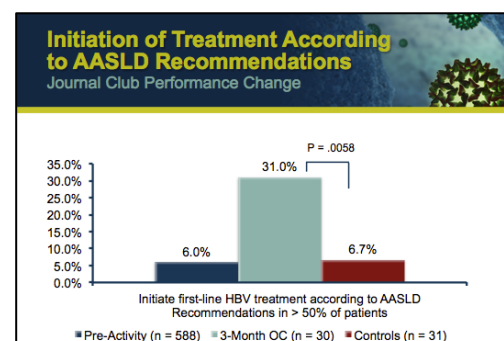
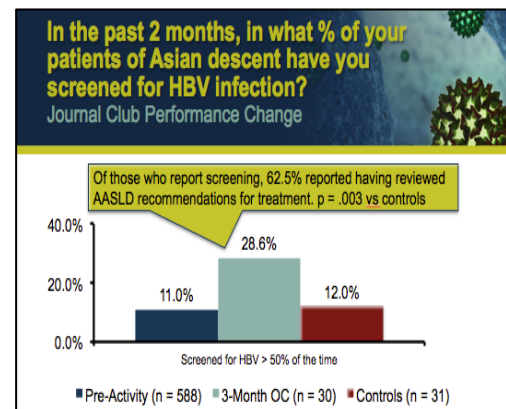
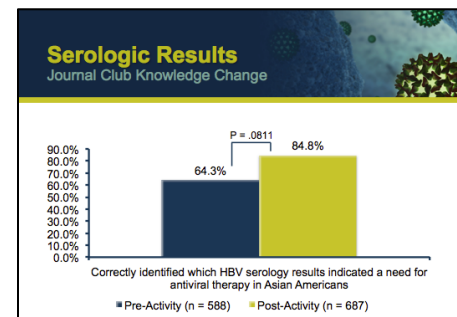
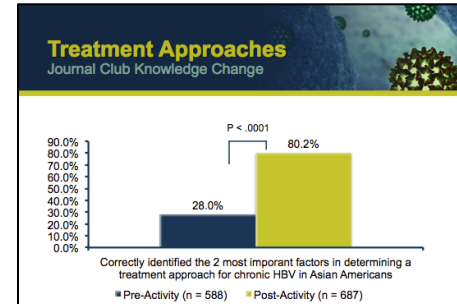
### Immediate post-activity knowledge gains:


- Participants demonstrated statistically significant knowledge gains in their ability to correctly identify the 2 most important factors in determining the treatment approach for chronic HBV infection in Asian Americans.
- Participants demonstrated a slightly significant shift in knowledge in their ability to correctly identify which HBV serology results indicated a need for antiviral therapy for chronic HBC infection in Asian Americans.
- Overall, the shift in knowledge due to the educational content is considered statistically significant ( $p < 0.0001$ ) due to 84.76% (SE 0.21%) accuracy in knowledge-based question queried post-activity.

### Analysis of 3-month post-activity outcomes

Knowledge and review of the AASLD recommendations played an interesting role in post-activity performance measures. Prior to the activity, only 11% of participants reported that they screened patients of Asian descent for HBV infection greater than 50% of the time. After the educational activity, when asked the percentage of Asian patients they had screened for HBV infection in the past two months, 28.6% indicated that they screened Asian patients for HBV greater than 50% of time. Only 12% of nonparticipants screened greater than 50% of the time. Of respondents who reported screening greater than 50% of the time, 62.5% of participants had reviewed the AASLD recommendations. This difference versus controls was statistically significant ( $p = 0.003$ ). This indicates a clear impact of the educational content on participants, although additional education is needed to increase screening rates among Asian populations at risk.

The activity focused on initiation of treatment in alignment with the AASLD treatment recommendations. Prior to the activity, participants performed poorly—only 6% reported that they initiated first-line HBV treatment according to AASLD recommendations greater than 50% of the time. Nonparticipant controls reported rates of recommendation-guided treatment decisions (6.7%) similar to the pre-activity responses. Three months





following the educational intervention, participants AASLD recommended treatment decisions in greater than 50% of patients grew to 31.0%. The difference between participants and nonparticipants was statistically significant ( $p = .0058$ ). This performance change underscores the value of CME education that offers the opportunity to discuss current treatment recommendations with trusted key opinion leaders and authors.

## **Future Educational Needs**

Based on statistically significant differences between participants and nonparticipants with regard to practices patterns in relation to their knowledge of the AASLD recommendations for managing chronic HBV in Asian Americans discussed in Tong MJ, et al., further dissemination and education about the value and application of the recommendations is suggested to reinforce proper practice behaviors and generate awareness in those primary care providers unfamiliar with the recommendations.

Although significant gains were made, there is much room for improvement among primary care providers in both screening of Asian Americans for HBV infection, and initiation of recommendation-guided treatment.

## **Conclusions**

The 2014/2015 Journal Club, *The Hepatitis B Reading Room* developed and executed by CME Outfitters was effective in improving knowledge and performance for primary care providers. Overall, participants of the educational content are 16.68% more knowledgeable than their colleagues who did not participate (effect size .23) and rate in the 60<sup>th</sup> percentile for knowledge.

Participants statistically significantly outperformed nonparticipants and are 35.08% more likely to implement evidence-based care in their patients than their colleagues (effect size .54) and rate in the 71<sup>st</sup> percentile for treatment behaviors.

Of the 4,346 total participants, approximately 60% or 2,608 identified as primary care, family, or general practice clinicians, seeing an average of 5 patients per month with HBV. This represents a potential patient impact of 13,000+ patients in primary care practice settings.

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