

# Efficacy of Virtual Seminar in Reducing Hepatitis B Related Stigma



WAYNE STATE  
School of Medicine

Authors: Andrew S. Kao<sup>1</sup>, Kaycee Ching<sup>1</sup>, Qingyu Mao<sup>1</sup>, Philip Ma<sup>1</sup>, Cindy Nguyen<sup>1</sup>, Jocelyn Ang<sup>2</sup> MD

<sup>1</sup>Medical Student, Wayne State University School of Medicine

<sup>2</sup>Division of Infectious Disease, Children's Hospital of Michigan, Wayne State University School of Medicine

## INTRODUCTION

- Hepatitis B (HBV) is a viral infection that causes acute and chronic disease, which can progress to liver cirrhosis and hepatocellular carcinoma.
- According to WHO, 257 million people were living with chronic hepatitis B and 887,000 deaths were the result of hepatitis B infection in 2015.<sup>[1]</sup>
- Asian Americans and Pacific Islanders are the most affected racial groups in the United States, representing 5% of the population yet making up about 50% of those living with HBV.<sup>[2]</sup>
- In addition, the lack of understanding of HBV's routes of transmission (mother-to-child, sexual, blood, needles) contributes to the fear of close contact with those with chronic infection and the preconception of patients as heavy drug users or sexually promiscuous.<sup>[3]</sup>
- HBV-related stigma may present as a barrier to treatment and worsen prognosis in people with chronic viral infection.<sup>[3]</sup>
- The high prevalence of HBV, especially in the Asian American community, and its associated health disparities calls for the need to increase awareness, reduce stigma, and prepare medical students to serve diverse patient populations as future physicians.

## OBJECTIVES

With pre- and post-seminar questionnaires, we aim to assess the efficacy of virtual seminars in improving student understanding of Hepatitis B disease related stigma and transmission perception among WSUSOM first- and second-year medical students.

## METHODS

- Twenty-five M1 and twenty-five M2 from Wayne State University School of Medicine (WSUSOM) signed up for a virtual Hepatitis B seminar that counted as 2 hours credit for clinical service requirement.
- Students completed the pre-seminar questionnaire prior to the session.
- Students received thirty minutes of didactic lecture from Dr. Janilla Lee, a Hepatitis B researcher and expert from University of Michigan Health System.
- Students engaged in case studies in randomly assigned small group breakout rooms.
- Everyone reconvened and discussed the case studies.
- Students completed the post-seminar questionnaire after the session.

- Multiple Choice Questionnaire:
- What school year are you in?  
a. M1 b. M2
  - What is your gender?  
a. Male b. Female c. Other
  - Which cultural group has the highest prevalence of chronic Hepatitis B?  
a. Caucasian b. Asian c. Hispanic d. Native American
  - How is Hepatitis B typically transmitted? (Select all that apply)  
a. Needles b. Kissing or Handshake c. Vertical Transmission (Mother-to-child) d. Sexual Transmission
  - What are the signs and symptoms of chronic hepatitis B?  
a. Fatigue b. Gastrointestinal abnormalities c. Infection lasting a minimum of 5 months d. Asymptomatic
  - A person no longer needs Hepatitis B vaccine if completed the series before  
a. True b. False
  - What prophylaxis is currently available for pregnant women?  
a. Tenofovir disoproxil fumarate (TDF) b. Zidovudine c. Azithromycin d. Chloramphenicol
  - If a young Asian American woman presents with clinical symptoms of Hepatitis B, which of the following is a likely transmission route of her infection?  
a. Sexual Transmission b. Needle Injury c. Vertical Transmission

Figure 1. Pre- and Post-Seminar Questionnaire

## RESULTS

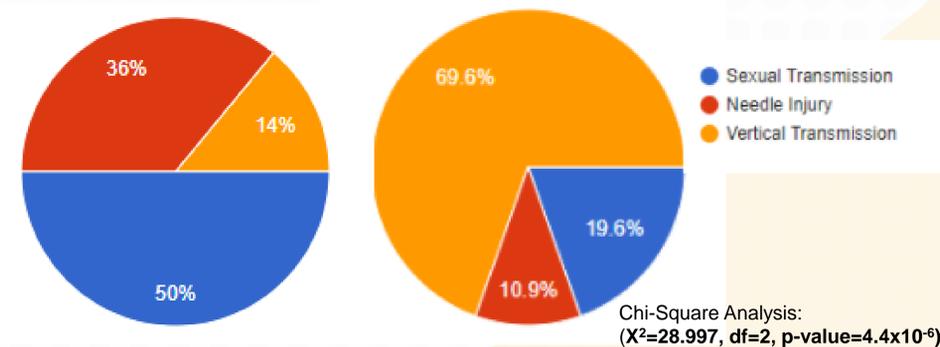


Figure 2. Pre- (left) and Post- (right) Seminar Response to question 8: If a young Asian American woman presents with clinical symptoms of Hepatitis B, which of the following is a likely transmission route of her infection?

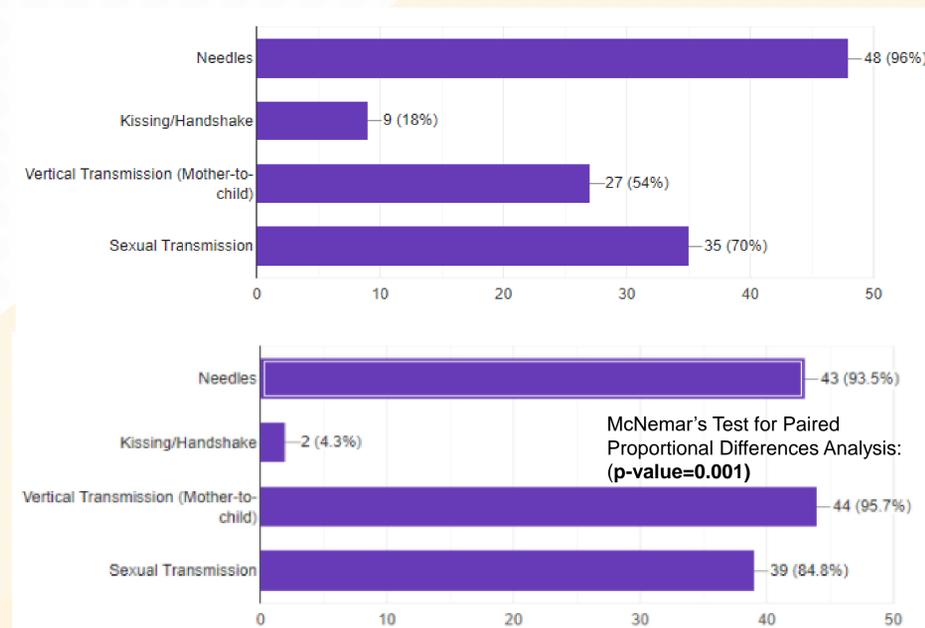


Figure 3. Pre- (above) and Post- (below) Seminar Response to question 4: How is Hepatitis B typically transmitted? (Select all that apply)

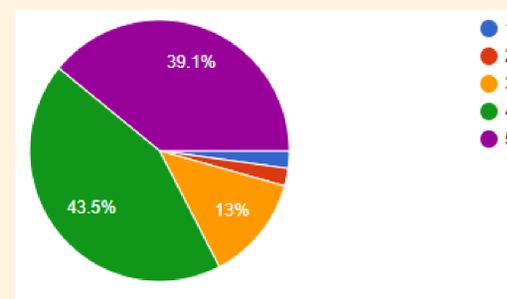


Figure 4. Post-Seminar Response: On a scale of 1-5 (least to most), how helpful was this session towards your understanding of Hepatitis B?

## DISCUSSION

- Our results ( $p\text{-value}=4.4 \times 10^{-6}$ ) indicated a significant change in student perception of HBV transmission route in a young Asian American patient. [Fig 2]
- In the pre-seminar questionnaire, most participants selected sexual transmission (49.1%) as the most likely route of transmission, whereas the post-seminar questionnaire student response has changed to indicate that vertical transmission (69.6%) as the most likely cause. [Fig 2]
- The initial preferential selection of horizontal (sexual) transmission may reflect preconceived notions of stigma.<sup>[4]</sup>
- Post-seminar results ( $p\text{-value}=0.001$ ) also showed a significant change with a 41.7% increase in selecting vertical transmission as a likely route of HBV transmission, and a 13.7% reduction in selecting close-contact (kissing, handshake) transmission. [Fig 3]
- Most participants self-reported the seminar as helpful in contributing their knowledge of HBV. [Fig 4]
- Overall we see that a virtual educational case-study seminar was an effective method to increase student awareness to combat misconceptions towards patients with Hepatitis B. [Fig 2-4]
- Limitations include previous knowledge of liver pathology and HBV though the second-year medical school curriculum.
- Future sessions will offer additional insight on the role that medical education seminars play in improving student perception of patients with infectious diseases.

## CONCLUSION

- A significant change in HBV-related stigma perception elucidates the need to increase awareness of possible preconceived notions towards patients with infectious diseases in a clinical setting.
- Improvement in student understanding of Hepatitis B disease transmission demonstrates the effectiveness of education seminars.

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