Assessing the Knowledge of Hepatitis B in the Sacramento Asian Community

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ABSTRACT

INTRODUCTION: Hepatitis B (HBV) is a major global health problem disproportionately affecting the Asian population in the United States. Past research that focused on Asian health care disparities has shown a poor understanding of HBV knowledge and screening among Asian-Americans.

AIM: The aims of this study are to explore the current knowledge of HBV transmission, disease progression, and attitudes toward screening within the Sacramento Asian community.

METHODS: We conducted a cross sectional survey as part of an aggressive outreach to educate and screen Asians for HBV in the Sacramento area. Demographic data also included age, education, and income. Additional questions included knowledge of modes of transmission, natural history and main sources of medical information regarding HBV.

RESULTS: We surveyed 127 Vietnamese, Chinese, and Hmong participants. Of 7 questions dealing with modes of transmission, our cohort has an average of 3.7 +/- 1.7 correct answers; this was not significantly better than a historic survey. Participants reported main sources of HBV knowledge were physicians, family or friends, and events at church or community centers and 60% stated they did not talk to family and friends about HBV. Despite aggressive attempts at education in the community, knowledge of HBV transmission remains suboptimal and the lack of discussion among family and friends supports the possibility of persistent stigma in community. Further work is required to target areas of need.

PROJECT OVERVIEW

Chronic Hepatitis B (CHB) is a major global health problem disproportionately affecting Asians. Up to 40% with CHB are at risk of cirrhosis, or liver cancer and 25% are at risk of premature death from consequences of CHB (1, 2). Significant populations of the Asian community, particularly recent immigrants from endemic areas, are at high risk of CHB. Previous surveys have demonstrated a lack of knowledge about HBV in this population (3).

This project was undertaken in cooperation with 2 CDC-sponsored studies, the Thousand Asian American Study (TAAS) and Sacramento Collaborative to Advance Testing and Care of HBV (SCRATCH B). The purpose of these CDC-funded, UC Davis-led, and IRB-approved projects was to educate and screen at-risk Asians for HBV.

AIM: This survey was conducted to evaluate the knowledge among Asians regarding transmission and natural history of HBV in the Sacramento area.

METHODS

Asians who had consented to the TAAS and SCRATCH B study were invited to participate in this survey to assess HBV knowledge. Student volunteers were recruited from the Hepatitis Committee at Paul Hom Asian Clinic (PHAC) and Vietnamese Cancer Awareness Research and Education Society (VN CARES), UC Davis affiliated student-run clinics for underserved Asians. This committee historically has been active in HBV outreach, and routinely provides information and educational sessions in the community and in clinic in English, Chinese, Vietnamese, and Hmong.

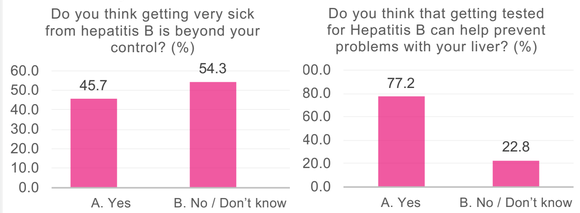
Surveys were administered in the participant's preferred language. Those who were unable to read had the survey read to them. There were 22 questions, including 7 about transmission, 2 about natural history of the disease, and 2 about the attitudes surrounding HBV. Surveys were adapted from previously validated surveys (3, 4). Surveys took approximately 30 minutes to administer. Post-survey education was provided by VN CARES and PHAC volunteers using medically-accurate and language-appropriate HBV teaching materials. Survey data was de-identified and entered in a secured RedCap database. Student's t-test and Pearson's chi-squared test was used to determine statistical significance.

RESULTS

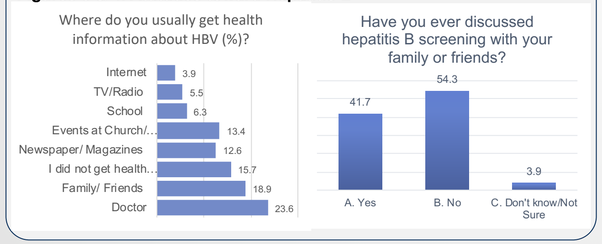
Table 1. Characteristics of the Asian Participants Who Completed the Survey

		Respondents (N = 127)
Age	<20	1 (0.8%)
	21-30	11 (8.7%)
	31-40	9 (7.1%)
	41-50	20 (15.7%)
	51-60	39 (30.7%)
	>60	47 (37.0%)
Ethnicity	Chinese	27 (21.3%)
	Hmong	16 (12.6%)
	Vietnamese	78 (61.4%)
	Other	6 (4.7%)
Highest level of education	No formal education	14 (11%)
	Elementary school	15 (11.8%)
	Some high school	20 (15.7%)
	High school graduate/GED	40 (31.5%)
	College and above	37 (29.1%)
	Refuse	1 (0.8%)
Household income	Less than $10,000	49 (38.6%)
	$10,000-$20,000	47 (37.0%)
	$20,000 -$50,000	24 (18.9%)
	$50,000-$100,000	0 (0.0%)
	More than $100,000	3 (2.4%)
	Don't know	3 (2.4%)
	Refused	1 (0.8%)
Insurance status	Insured	101 (79.5%)
	Uninsured	26 (20.5%)
Recruited from	Community	64 (50.3%)
	Clinic	63 (49.6%)

Figures 1 & 2. Knowledge of Participants Regarding Hepatitis B Natural History



Figures 3 & 4. Attitudes toward Hepatitis B



RESULTS

Figure 5. Awareness of Hepatitis B Risk

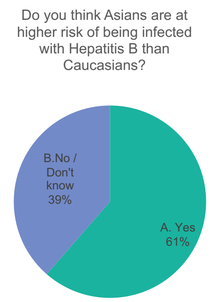


Figure 6. Hepatitis B Transmission Knowledge Score

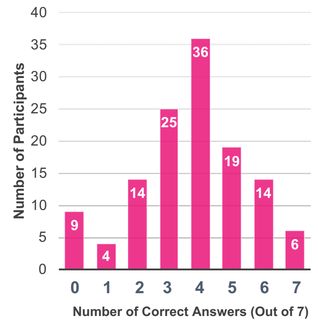


Table 2. Knowledge of Participants Regarding Hepatitis B Transmission

Knew that hepatitis B can be transmitted:	
By sharing needles	81.9%
By sexual intercourse	61.4%
At childbirth	66.9%
Knew that hepatitis B cannot be transmitted:	
By smoking cigarettes	24.4%
By being near a person who coughs	21.3%
By sharing food or utensils	40.9%
By shaking hands	74.8%
Transmission knowledge score (range 0-7) (Mean +/- SD)	3.72 +/- 1.7

Table 3. Subgroup Analysis

	Group 1	Group 2	p value
	Clinic	Community	
Knowledge Score	3.4	3.6	0.407
	Insured	Uninsured	
Knowledge Score	3.6	3.8	0.647
	Low-income (<$20K)	Higher-income (>$20K)	
Knowledge Score	3.7	3.7	0.805
	Less than HS education	HS education and above	
Knowledge Score	2.9	4.1	0.000602
Have discussed HBV with family/friends	26.5%	51.3%	0.00590

RESULTS

Cohort: Within this cohort, the majority were Vietnamese, 80% were over 40 years old, 60% had completed at least high school education, and over 90% reported annual household income <$50,000.

Hepatitis B Transmission Knowledge: Mean knowledge score was 3.72 correct out of 7 questions regarding HBV transmission. Only 30% of this cohort correctly answered at least 70% of questions. On average, 70% incorrectly believed that HBV can be transmitted by saliva, sharing needles, and cigarettes. Almost 40% were not aware that HBV could be spread during sexual intercourse. Almost 40% of participants did not know Asians were at increased risk of HBV infection.

Attitudes toward Hepatitis B: Despite perceived preventative benefits of testing, 45% believe that getting sick from HBV is out of their control. The most common source of HBV information was their physician. Almost as many cited friends and family as source of HBV information. However, over half of participants reported not discussing HBV with their family and friends.

Subgroup analysis: When we evaluated responses from clinic vs community, insured vs uninsured, and low vs higher income, there were no differences in mean knowledge scores. But when we evaluated those with at least high school education, there was a significant difference. Those with more education had more responses correct and spoke about HBV with family and friends more.

DISCUSSION

Despite ongoing distribution of HBV related literature and focused educational events in the Sacramento Area, there are still many gaps of knowledge. It is especially concerning that 40% of participants were unaware that Asians were at higher risk of HBV infection. Other gaps include the lack of awareness that HBV can be transmitted from mother to baby and sexually. It is interesting that those with more education had a better understanding of HBV than those with less education. More educated individuals tended to speak with family members about HBV more than those with less education and lower scores on our knowledge questionnaire. The reason for lack of discussion with family members is of concern as almost 20% said that they received valuable information about HBV from family members. This suggests that the "stigma" of HBV is still an issue for many in the Asian community.

Our findings emphasize the continued need for (1) HBV education and screening, (2) improved teaching strategies among the Asian population aimed at those with less formal education, (3) ongoing efforts to destigmatize HBV and promote discussion within families, and (4) ongoing conversations with physicians as to their importance in education of the population at risk for HBV.

Future Aims: Devise a program of ongoing education using different venues such as newspaper articles and focused educational sessions in the offices of physicians and other community health providers. Possible teaching interventions include offering classes addressing HBV to at-risk populations, continued medical education to community health providers, and basic articles with illustrations in local publications and at all health centers. Dissemination of HBV education on multiple fronts may lead to an improved knowledge of HBV transmission and progression and decrease stigma.

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