

Background

- Chronic HBV infection (CHB) disproportionately affects Asian-Americans
 - Prevalence of $\geq 10\%$
 - Incidence > 2 times that of Caucasian-Americans
- Hepatocellular carcinoma (HCC) in Asian-Americans
 - Risk is 2.7 times higher than in Caucasian-Americans
 - Second highest cause of cancer mortality in Asian-American men
 - Five-year survival rate is < 10%
- Fewer than 25% of Asian-American patients with CHB have been diagnosed
- 40-60% of Asian-Americans with CHB go unscreened

Objectives

- To determine the percentage of Asian patients living in the US screened for HBV infection by Asian-American primary care providers (PCPs)
- To survey HBV screening practices of Asian-American PCPs, including barriers and motivators for screening
- To determine if there are differences in HBV screening practices among Asian-American PCPs according to their country of birth

Study Design

- Web-based survey distributed to approximately 15,000 primary care providers (internists, family practitioners, general practitioners) in the US
- Inclusion Criteria
 - Asian-American PCPs
 - defined as living in the US and of self-reported Asian descent
 - $\geq 25\%$ patients of Asian descent
 - Residence in cities of high-density Asian populations
 - New York, Los Angeles, San Francisco, Chicago, Houston
- Survey collected questions about PCP and practice demographics, PCP knowledge of HBV, and PCP screening and HBV vaccination practices

Methods

- Recruitment of US-based physicians
 - From an existing medical market research firm internet panel
 - From a list derived from internet sites of PCPs in cities of interest (direct mail)
- Anonymous survey
- Electronic informed consent
- Respondents were compensated for their participation
- Study conducted by an external research organization

Data Collection

- PCP demographics
- Patient population followed in the PCP's practice
 - Total number of patients in practice (estimate)
 - Percent of Asian patients and foreign-born Asian patients
 - Asian patients diagnosed with CHB in the preceding 12 months
- HBV screening practices
 - Asian patients in practice who have ever been screened
 - Asian patients screened in past 6 months in the PCP's practice
 - Motivators and barriers to screening of Asian patients
- Percent of patient population who have received the HBV vaccination series
- PCP knowledge about HBV infection and chronic hepatitis B

Limitations of the Study

- Possible sample selection bias
- Requirement for internet access and computer proficiency
- Survey in English language only
- Geographic reach
- Response rate

Results

Table 1. Study Population

Total Asian PCPs invited	14,948
Number of PCPs entering survey <ul style="list-style-type: none">Self-identified as ineligible	430 (2.9%) 45
PCPs with informed consent entered survey <ul style="list-style-type: none">Ineligible: not of Asian descentIneligible: not IM/FP/GPs^aIneligible: < 25% Asian patients in practice	385 (2.6%) 4 2 93
Total Asian PCPs who met entry criteria <ul style="list-style-type: none">PCPs who completed the survey	286 (1.9%) 233 (1.6%)

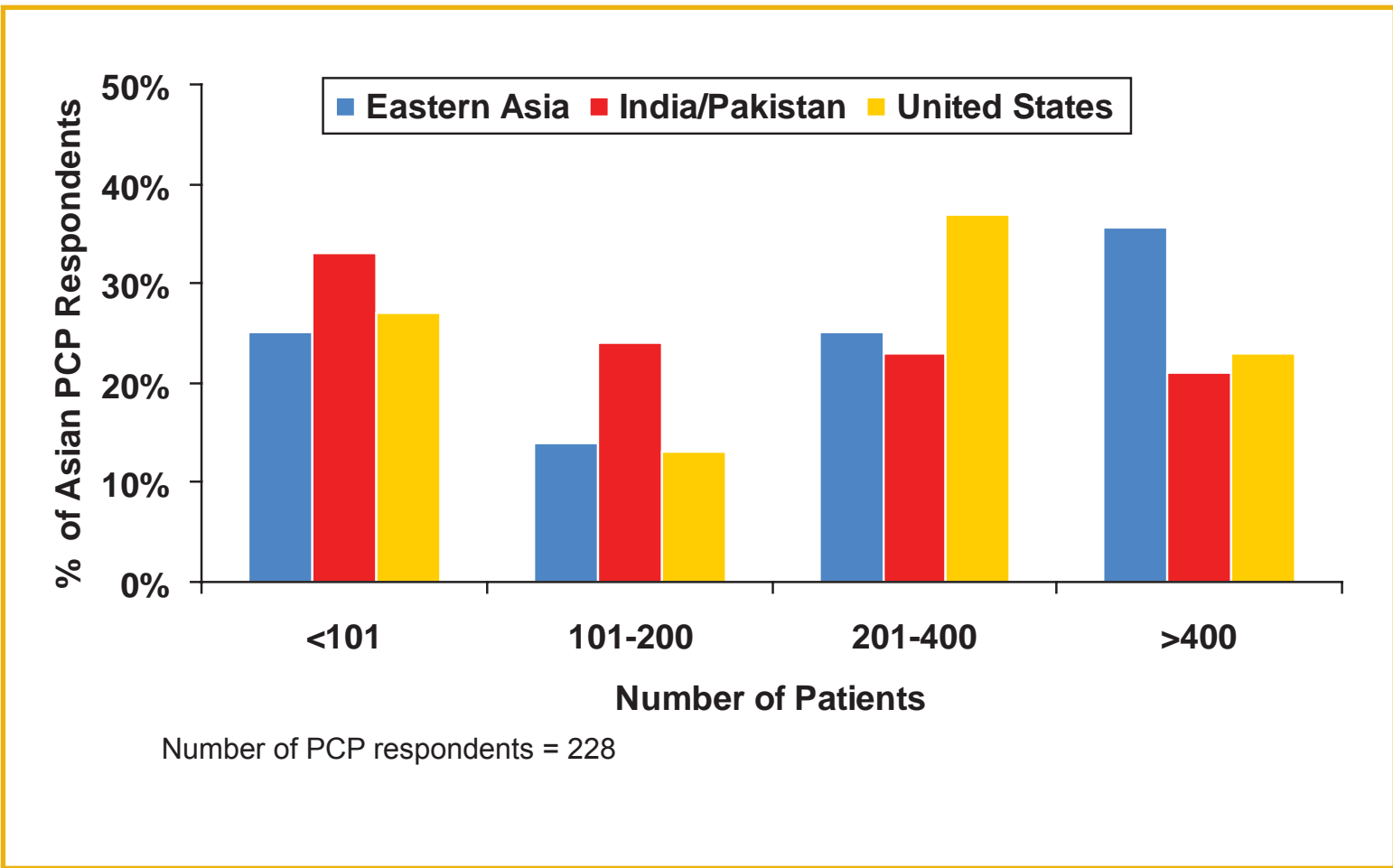
a. IM: Internal Medicine; FP: Family Practice; GP: General Practice

Table 2. Demographics- Physician Country of Birth

Characteristic	Country of Birth			
	Eastern Asia ^a (EA)	India/Pakistan (I/P)	United States (US)	Overall ^b
N (%)	115 (49.4)	83 (35.6)	30 (12.9)	228
Sex				
Male	80 (54.1)	45 (30.4)	23 (15.5)	148
Age				
≤ 40 years	45 (45.4)	37 (37.4)	17 (17.2)	99
41-50 years	44 (59.5)	22 (29.7)	8 (10.8)	74
51-60 years	21 (47.7)	20 (45.5)	3 (6.8)	44
> 61 years	5 (45.4)	4 (36.4)	2 (18.2)	11
Specialty				
Internal Medicine	67 (46.8)	53 (37.1)	23 (16.1)	143
Family/General Practice	48 (56.5)	30 (35.3)	7 (8.2)	85
Foreign Medical Graduates (FMG)	38 (35.2)	66 (61.1)	4 (3.7)	108

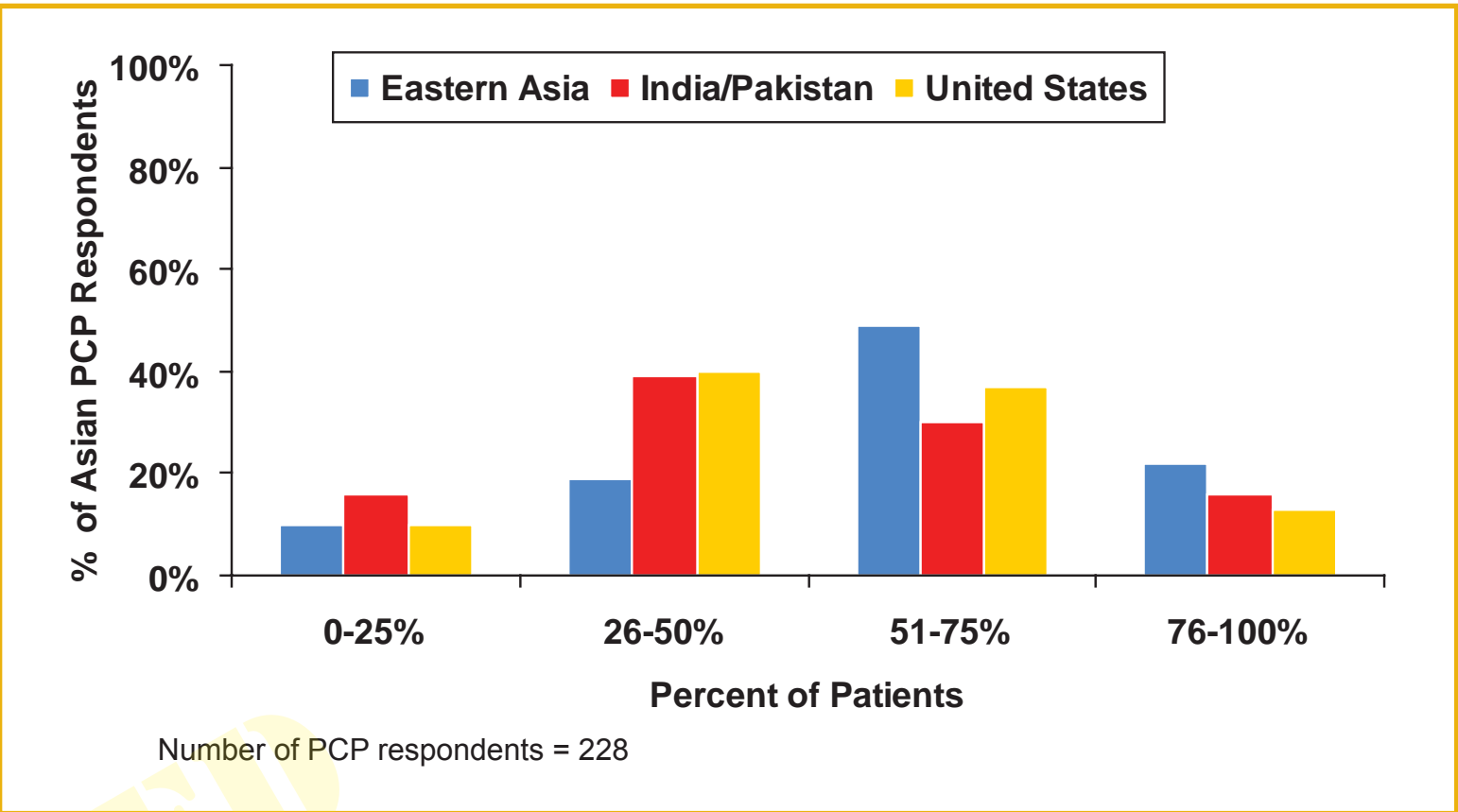
a. Eastern Asia (EA) includes Hong Kong, China, Taiwan, Japan, Vietnam, Korea, Philippines, and Thailand
b. 5 (2%) Respondents were born in non-represented countries and are not included in table

Figure 1. Number of Adult Asian Patients Followed by PCPs



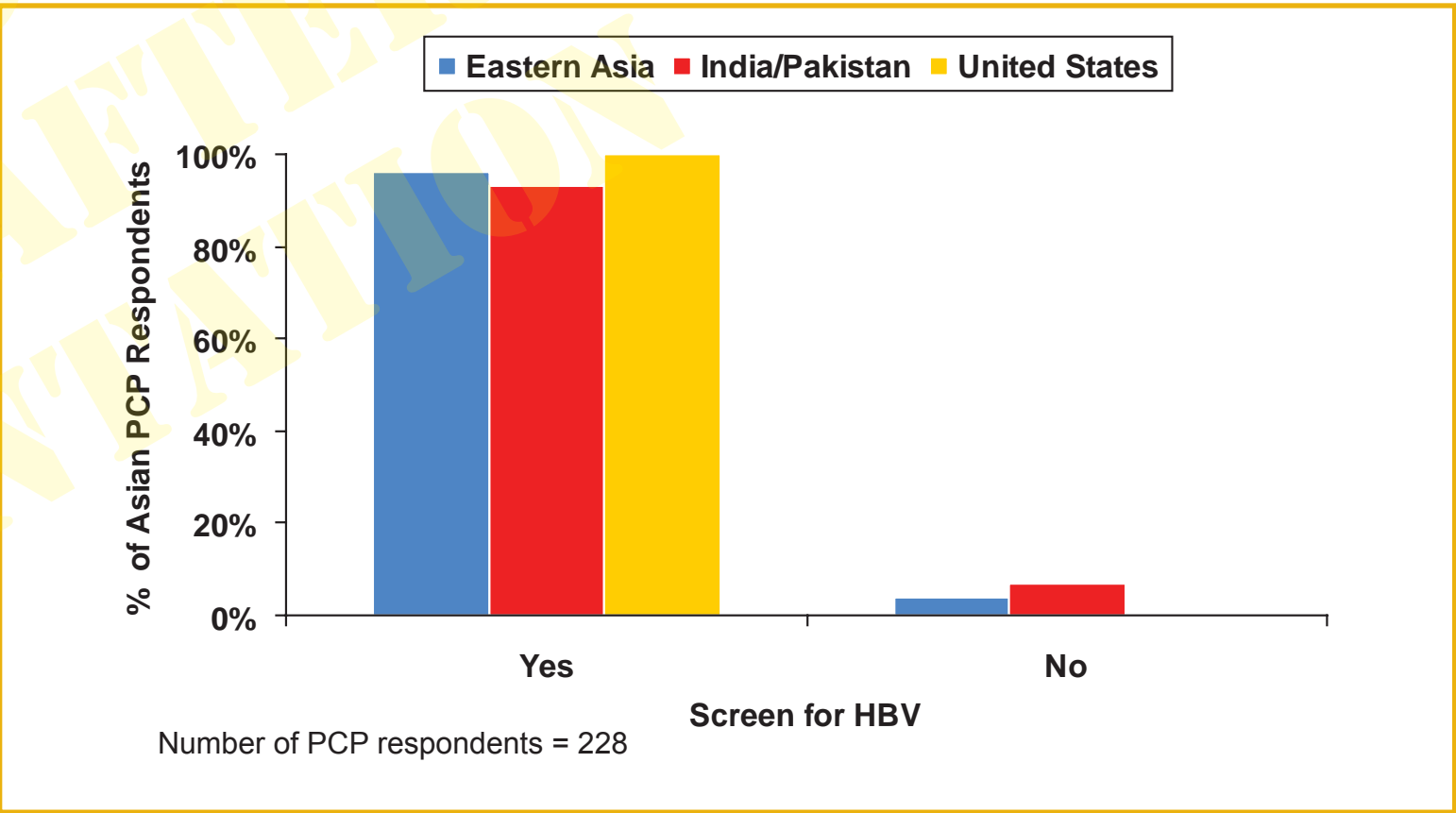
- EA PCPs have a larger percentage of practices that see greater than 400 patients compared to US and I/P born PCPs

Figure 2. Percent of Asian Patients Born Outside the US



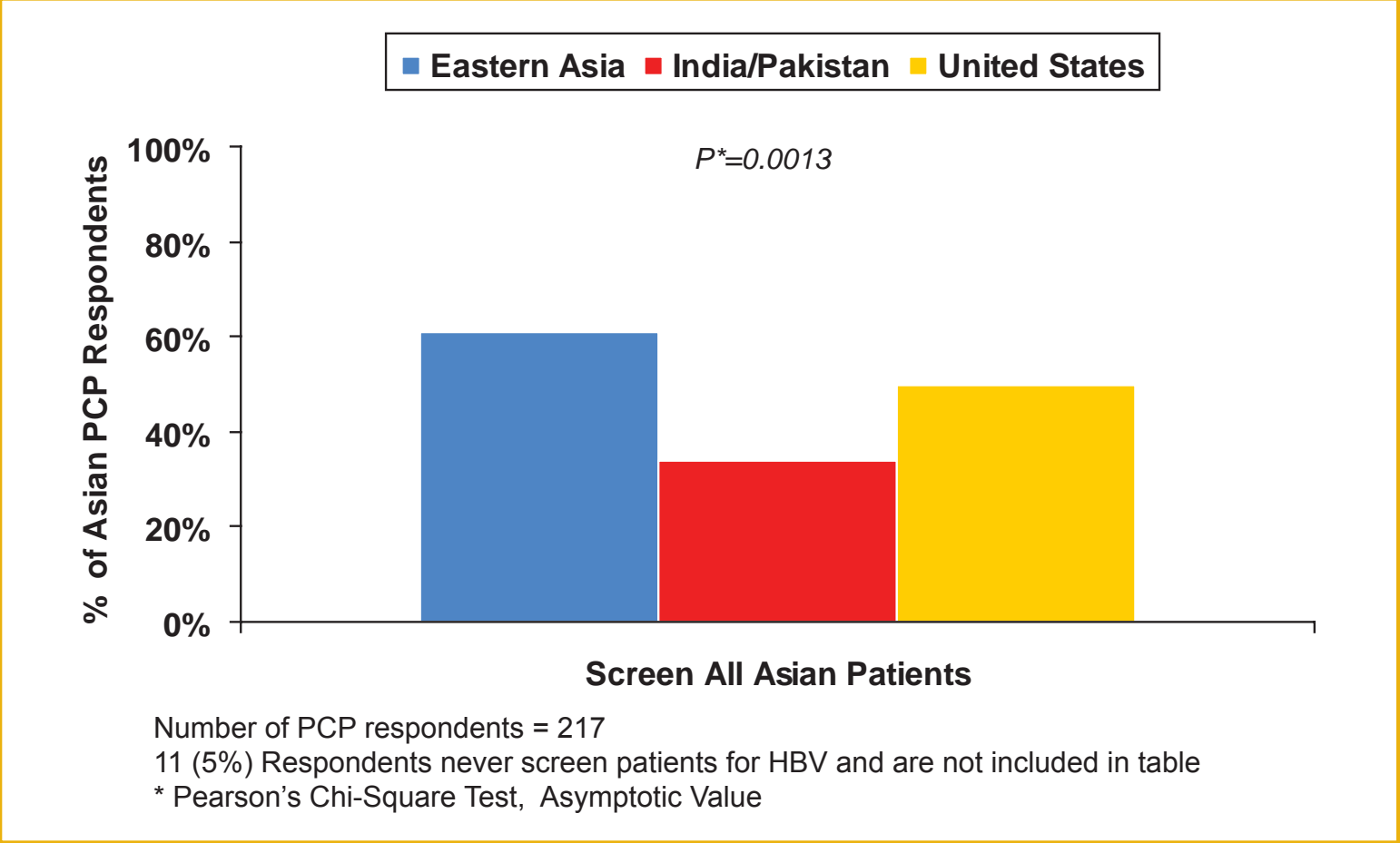
- EA PCPs see the largest percentage of Asian patients born outside the US

Figure 3. Percent of PCPs who Ever Screen Patients for HBV



- Most PCPs, regardless of country of birth, reported that they have screened patients for HBV

Figure 4. Percent of PCPs who Routinely Screen All Asian Patients for HBV



- The percentages of Asian PCPs that routinely screen all their Asian patients for HBV are significantly different based on the physician's country of birth

Table 3. Percent of All Adult Asian Patients Screened for HBV in the Last Six Months

Percent Screened	Country of Birth			
	EA ^a	I/P ^a	US ^a	Overall ^b
N (%)	115 (49.4)	83 (35.6)	30 (12.9)	228
0-10%	30 (43.5)	30 (43.5)	9 (13.0)	69
11-25%	38 (41.7)	39 (42.9)	14 (15.4)	91
26-50%	28 (65.1)	11 (25.6)	4 (9.3)	43
51-75%	7 (53.8)	3 (23.1)	3 (23.1)	13
76-100%	12 (100)	0	0	12

a. EA: Eastern Asia, I/P: India/Pakistan, US: United States

b. 5 (2%) Respondents were born in non-represented countries and are not included in table

Table 4. Most Important Reason for Screening Patients for HBV

Reason	Country of Birth		
	EA ^a	I/P ^a	US ^a
Patient has an elevated liver test	24 (21.8)	26 (33.8)	6 (20.0)
Patient has an elevated liver test plus family history of HBV or liver disease	20 (18.2)	14 (18.2)	12 (40.0)
Patient is Asian and born outside the United States	28 (25.5)	5 (6.5)	5 (16.7)
Patient has symptoms suggestive of CHB or liver disease	11 (10.0)	10 (13.0)	1 (33.3)
Patient is pregnant or planning to get pregnant	7 (6.4)	5 (6.5)	0
Patient asked to be screened for HBV	7 (6.4)	4 (5.2)	0
Patient has a family member with HBV and/or liver cancer	6 (5.5)	5 (6.5)	0

Number of PCP respondents = 217

a. EA: Eastern Asia, I/P: India/Pakistan, US: United States

Table 5. Most Common Reason Why Screening Tests May Not be Ordered

Reason	Country of Birth		
	EA ^a	I/P ^a	US ^a
I do not consider the patient to be at risk of HBV	24 (20.9)	21 (24.3)	9 (30.0)
Patient has no symptoms of HBV or liver disease	14 (12.2)	19 (22.9)	5 (16.7)
Patient has received HBV vaccination shots	19 (16.5)	13 (15.7)	2 (6.7)
Patient has no insurance	15 (13.0)	10 (12.1)	5 (16.7)
Patient has refused testing before	17 (14.8)	6 (7.2)	3 (10.0)

Number of PCP respondents = 228

a. EA: Eastern Asia, I/P: India/Pakistan, US: United States

Conclusions

- Chronic hepatitis B disproportionately affects Asian-Americans; however many such patients followed by Asian-American PCPs are not perceived to be at risk for chronic hepatitis B and go unscreened
- Within our study population, there were differences in HBV screening practices among Asian-American PCPs according to their country of birth
- Education on health risks of HBV infection and the CDC HBV screening guidelines is needed to improve HBV infection awareness among Asian-American PCPs

Acknowledgements

Asian-American PCPs who completed the survey
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