

# Differences in chronic hepatitis B presentation and management in primary and specialty care settings

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## Background

- Low rates of adherence have been identified in guideline-based care of chronic hepatitis B (CHB) patients seen in both primary care and specialty settings, but rates of lab monitoring, treatment, and HCC screening<sup>+</sup> were lower for patients seen in primary care.
  - One study reported that 40% have had recent laboratory testing in primary care, while 80% had similar testing in hepatology.
  - Only about half of eligible patients had received HCC screening in primary care or in hepatology.
- There may be subgroups of CHB patients with benign phenotypes, such as inactive carriers or those stably on treatment, that can be appropriately managed in the primary care setting, particularly in resource-limited or high-prevalence CHB communities.
- Characterizing gaps in guideline-based care among CHB patients in primary care settings will allow tailoring of educational interventions.

## Aims

- To compare baseline characteristics between CHB patients who are seen by primary care only (PCP only) compared to those seen by primary care and hepatologist (PCP+HEP).
- To compare clinical management between these two groups.

## Methods

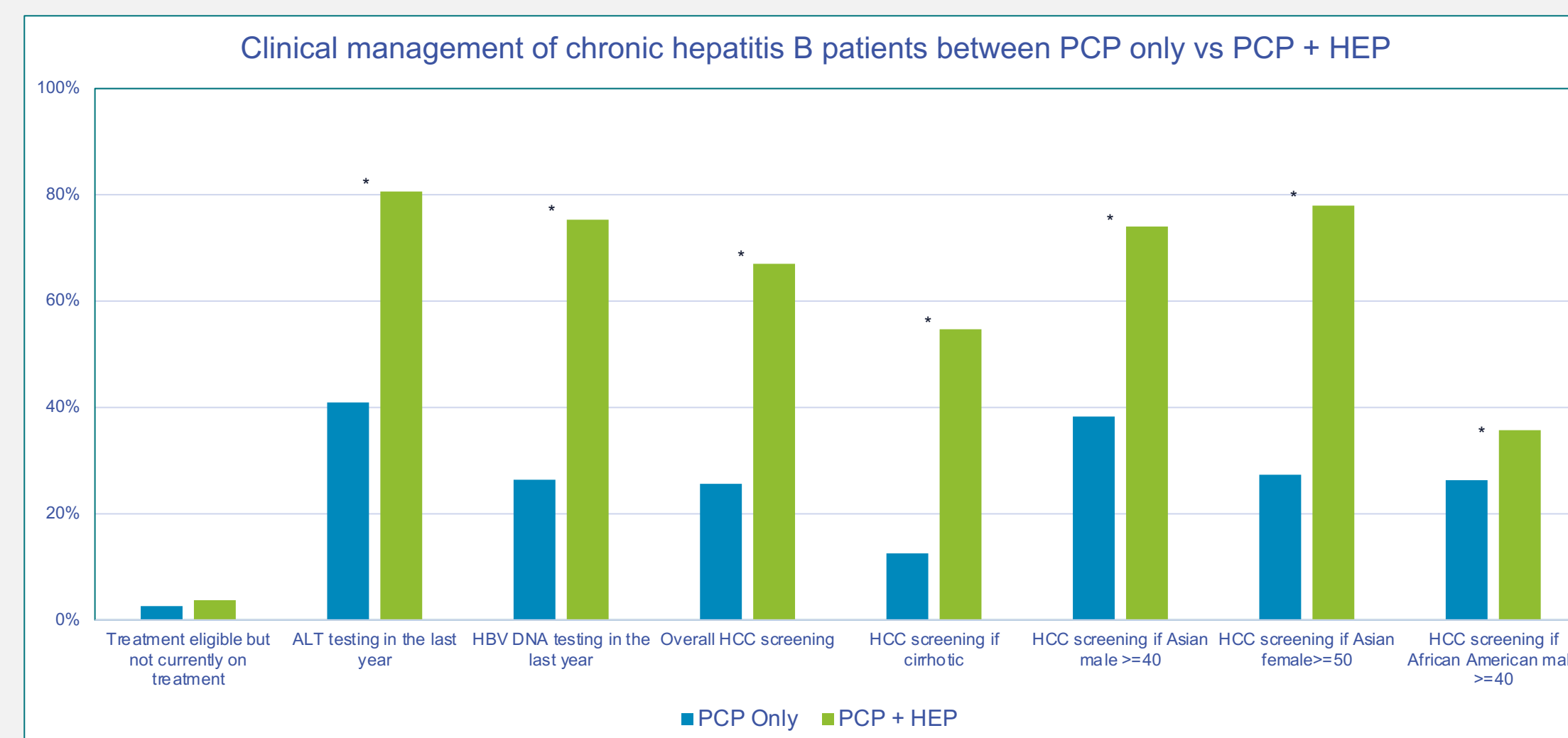
- Cross-sectional study in a single academic center serving a population with high prevalence of CHB.
- Participants with CHB, age ≥ 18, and at least 1 outpatient visit with a PCP between 2012-2015 were included.
- CHB status was ascertained using combination of ICD coding and positive HBsAg, with manual chart review to confirm status if uncertain.
- Demographic and clinical characteristics were compared, including proportion receiving guideline-based care in the PCP only versus PCP+HEP, using established metrics for outpatient CHB management.

## Results

- The mean age of the 915 patients was 55 years old, 51.1% were male, 75% were Asian, and 38.5% were seen by PCP only.
- Patients in the PCP only group had higher rates of HIV co-infection, and alcohol use and current cigarette smoking compared to those in the PCP+HEP group. There were no statistically significant differences in rates of co-morbidities between the two groups.
- 9.1% of patients in the PCP only group and 9.4% of patients in the PCP + HEP group had cirrhosis (defined by FIB-4). 4.6% of patients in the PCP only group had HCC, compared to 13.5% of patients in the PCP+HEP group, which was a statistically significant difference.
- Compared to the PCP only group, PCP+HEP group had higher rates of being on pharmacologic treatment; have had ALT testing in the last year; have had HBV DNA testing in the last year; have ever been tested for HIV, HAV, HCV or HDV; and have had HCC surveillance.
- Overall, 0.44% of patients not on treatment were treatment eligible, and this was not statistically different between the two groups.

Table 1. Baseline characteristics of CHB cohort

	Cohort total n=915 % (n)	PCP only n=352 % (n)	PCP & Hep n=563 % (n)	p-value
Age Mean (SD)	55 (15)	57 (16)	54 (14)	0.02*
Male	471 (51.5%)	175 (49.7%)	296 (52.6%)	0.40
Race				<0.01*
Asian	677 (74.0%)	224 (63.6%)	453 (80.5%)	
Caucasian	98 (10.7%)	56 (19.9%)	42 (7.5%)	
African American	46 (5.0%)	31 (8.8%)	15 (2.7%)	
Native Hawaiian/ other Pacific Islander	29 (3.2%)	14 (4.0%)	15 (2.7%)	
Other	49 (5.4%)	24 (6.8%)	25 (4.4%)	
Unknown/declined	16 (1.8%)	3 (0.85%)	13 (2.3%)	
Insurance				<0.01*
Public	438 (47.8%)	182 (51.7%)	256 (45.5%)	
Private	429 (46.9%)	141 (40.1%)	288 (51.2%)	
Self-pay	48 (5.3%)	29 (8.2%)	19 (3.4%)	
Health-related behaviors				
Alcohol	n=902	n=341	n=561	<0.01*
259 (28.3%)	110 (31.3%)	149 (26.5%)		
Cigarette smoking (current)	n=914	n=351	n=562	0.01*
82 (9.0%)	45 (12.8%)	37 (6.6%)		
Co-infections				
HIV	n=552	n=169	n=383	0.01*
17 (3.1%)	11 (6.5%)	6 (1.6%)		
Hepatitis C	n=766	n=283	n=483	0.15
35 (5.0%)	17 (6.0%)	18 (3.7%)		
Co-morbidities				
Hypertension	401 (43.8%)	166 (47.2%)	235 (41.7%)	0.11
Diabetes	196 (21.4%)	72 (20.5%)	124 (22.0%)	0.57
Chronic kidney disease (CKD)	127 (13.9%)	50 (14.2%)	77 (13.7%)	0.82
Obesity	130 (14.2%)	43 (12.2%)	87 (15.5%)	0.17
Hyperlipidemia	423 (46.2%)	160 (45.5%)	263 (46.7%)	0.71
On pharmacologic treatment	427 (46.7%)	89 (25.3%)	338 (60.0%)	<0.01*
n=884	n=335	n=549		
Platelet mean (SD)	209.3 (64.4)	218.8 (69.2)	203.5 (60.7)	<0.01*
n=913	n=351	n=562		
ALT median	25	24	25	0.03*
n=695	n=214	n=481		
Hepatitis Be Ag	105 (15.1%)	24 (11.2%)	81 (16.8%)	0.06
n=846	n=286	n=560		
Hepatitis B DNA median	11	58	9	<0.01*
Log10 HBV DNA median		4.1 (2.2-6.8)	2.2 (2.2-5.7)	



\*Denotes statistical significance at p < 0.05  
<sup>+</sup>AASLD recommends that 1) all patients with CHB with cirrhosis or 2) high risk CHB patients (Black men > 20 y.o., Asian men > 40 y.o., and Asian women > 50 y.o., should be screened for HCC with abdominal ultrasound +/- AFP every 6 months

## Conclusions

- CHB patients not referred to specialist were older and majority of untreated did not meet treatment eligibility criteria.
- High rates of cirrhosis and HCC were seen, likely due to referral bias as UCSF is a tertiary referral and major transplant center.
- However, HCC screening rates, which were low in both groups, were especially low in the group managed solely by PCP.
- Interventions to promote awareness of CHB management guidelines among PCPs may improve care of individuals who may not otherwise require specialist care.

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