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## 1 INTRODUCTION

- Chronic hepatitis B virus (HBV) infection is a leading cause of morbidity and mortality worldwide
- Timely identification of HBV infection and initiation of antiviral therapy among treatment eligible patients reduces risk of disease progression, cirrhosis, and hepatocellular carcinoma
- However, HBV treatment rates are sub-optimal, particularly among ethnic minorities, the groups with the greatest burden of HBV in the U.S.

## 2 AIM

- This study aims to evaluate HBV treatment rates and predictors of successful initiation of treatment among HBV patients meeting antiviral treatment criteria

## 3 METHOD

- We retrospectively evaluated adults with chronic HBV at two urban safety-net health systems from January 1, 2010 to December 31, 2015, with follow-up through December 31, 2017.
- Chronic HBV was identified with ICD-9/10 diagnosis coding and confirmed with laboratory data.
- HBV treatment eligibility was determined using American Association for the Study of Liver Diseases criteria.
- Comparison of HBV treatment eligibility and HBV treatment rates among eligible patients were performed using chi-square testing.
- Adjusted multivariate Cox proportional hazards models evaluated for predictors of receiving HBV treatment among eligible patients.
- Statistical significance was met with  $p < 0.05$ .

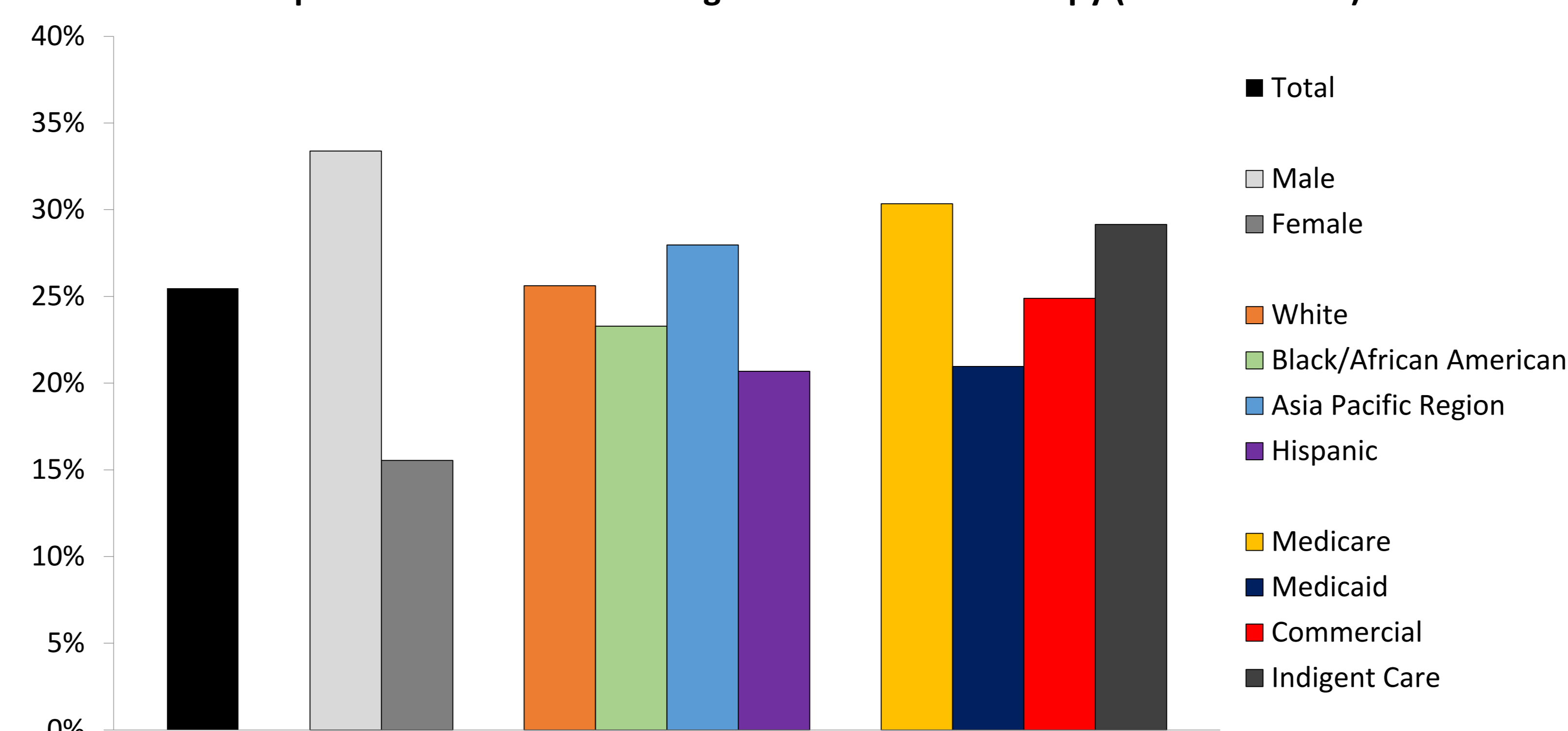
## 4 RESULTS

**Table 1. Characteristics of the study cohort**

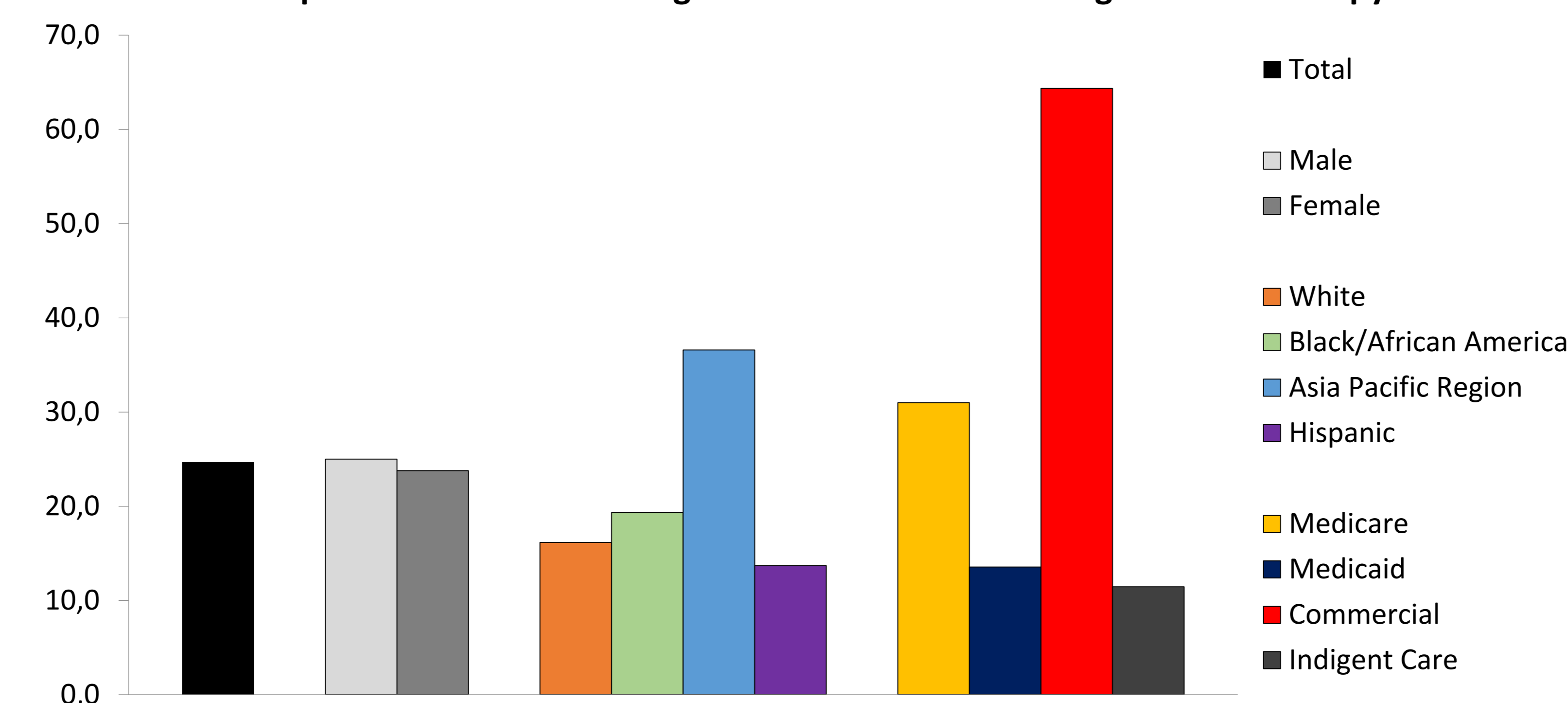
	Proportion (%)	Frequency (N)
<b>Total</b>		2373
<b>Sex</b>		
Male	55.5	1318
Female	44.5	1055
<b>Age Categories</b>		
Age < 40 years	39.7	941
Age 40-60 years	47.5	1126
Age 60 years and Over	12.9	306
<b>Race</b>		
White	27.5	652
Black/African American	39.3	932
Asia Pacific Region	30.9	733
Other/Unknown	2.1	51
<b>Ethnicity</b>		
Hispanic	14.9	353
Non-Hispanic	83.3	1976
Unknown	1.9	44
<b>Language</b>		
English Speaking	64.6	1533
Non-English Speaking	34.0	807
Unknown	1.4	33
<b>Insurance</b>		
Medicare	9.9	234
Medicaid	23.7	563
Commercial	20.3	482
Indigent Care	36.6	868
None	9.4	224
<b>Alcohol Use</b>		
Current alcohol use	21.3	506
Past history of alcohol use	5.6	133
No evidence	56.6	1344
Unknown	16.4	390
<b>Drug Use</b>		
Current drug use	8.3	197
Past history of drug use	2.4	58
No evidence	72.3	1715
Unknown	17.0	403
<b>High risk sexual behavior</b>		
Current high risk behavior	0.2	4
Past history of high risk behavior	1.4	34
No evidence	18.2	431
Unknown	1.2	28

	Proportion (%)	Frequency (N)
<b>Comorbidities</b>		
HCV	24.1	571
Nonalcoholic fatty liver disease (NAFLD)	9.8	232
Alcoholic liver disease (ALD)	5.1	122
HIV	22.7	538
Cardiovascular disease	49.3	1169
Hypertension	40.4	958
Diabetes	18.5	439
Hemodialysis	4.1	97
Psychiatric/Mental Health	48.3	1147
Non-liver cancers	25.8	613
<b>Liver Complications at time of enrollment (1st visit)</b>		
Cirrhosis	25.8	612
HCC	5.3	126
Ascites	8.7	207
Hepatic Encephalopathy	3.5	83
Variceal Bleeding	1.9	45
Hepatorenal syndrome	0.6	14
Liver Transplantation	0.5	12
Acute Liver Failure	2.4	57

**Proportion of HBV Patients Eligible for Antiviral Therapy (AASLD Criteria)**



**Proportion of Treatment-Eligible HBV Patients Receiving Antiviral Therapy**



**Table 2. Cox Proportional Hazards Model of Likelihood of Receiving Treatment Among Treatment-Eligible HBV Patients**

	Any HBV Treatment vs. No Treatment		
	Adjusted Hazards Ratio (HR)	95% Confidence Interval (CI)	P Value
<b>Sex</b>			
Male	1.00	Reference	
Female	1.05	0.58 1.90	0.861
<b>Race/Ethnicity</b>			
White	1.00	Reference	
Black/African American	0.96	0.46 1.99	0.914
Asian	4.21	1.46 12.15	0.008
Non-Hispanic vs. Hispanic	1.40	0.50 3.95	0.5205
<b>Insurance Status</b>			
Commercial	1.00	Reference	
Medicare	0.17	0.08 0.40	< 0.001
Medicaid	0.08	0.03 0.17	< 0.001
None/Indigent	0.07	0.04 0.14	< .0001
<b>Cirrhosis vs. non-cirrhosis</b>	1.78	1.04 3.05	0.036

## 5 CONCLUSIONS

- Among a safety-net cohort of 2,373 chronic HBV patients, 25.5% of patients were eligible for antiviral therapy, among which **only 24.7% of patients received treatment**
- Similar rates of HBV treatment were observed in men vs. women.
- Treatment-eligible Asian HBV patients were more likely to received HBV treatment (36.6%) compared to all other race/ethnic groups.
- Significant insurance-specific disparities were observed with 64.3% of treatment-eligible commercially insured patients receiving treatment compared to 31.0% among Medicare and 13.6% among Medicaid patients.
- On multivariate regression analyses
  - Asians were more likely to receive treatment compared to whites (HR 4.21, 95% CI 1.46-12.15,  $p < 0.01$ )
  - Compared to commercially insured patients, patients with Medicaid (HR 0.08, 95% CI 0.03-0.17,  $p < 0.001$ ) and Medicare (HR 0.17, 95% CI 0.08-0.40,  $p < 0.001$ ) were less likely to receive treatment

## 7 REFERENCES

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## 8 CONTACT

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