

Disparities in Hepatitis C Treatment and Overcoming Healthcare Biases

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SF CAN San Francisco Cancer Initiative

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Background

- Current guidelines for chronic hepatitis C virus (HCV) recommend all patients be treated with direct acting antivirals (DAAs).
- Despite the high demand for DAAs after their initial release, many patients remain untreated and the incidence of HCV continues to rise.
- Disparities exist in HCV care and health systems may not be addressing the gaps in care adequately.¹⁻⁴

Aims

- Identify all untreated HCV patients at a large, urban academic medical center
- Understand factors associated with HCV treatment initiation

Methods

- Using the electronic medical record (EMR), we performed a cross-sectional study of all chronic HCV patients engaged in care at a single center from 2014-2017.
- Criteria for chronic HCV: 1) detectable HCV RNA, 2) prescription for pegylated interferon and/or DAA therapy; or 3) ICD 9/10 code for chronic HCV.
- Demographic, clinical, pharmaceutical, and visit data were abstracted from the EMR through June 2019.

Results

Cohort Characteristics

- 2360 chronic HCV patients were identified, with a mean age of 63.5 years. 64.2% were male, 52.5% were Non-Hispanic White, and 31.1% had a primary care provider (PCP). 71.1% had public health insurance.
- 76.4% had ever been prescribed HCV treatment (DAA or pre-DAA) by the end of the study period.
- 29.0% did not have SVR labs in the EMR.

Multivariable Analysis

- Treatment was more likely amongst Hispanic compared to Black patients (OR 0.54, p = 0.005).
- Clinical features associated with HCV treatment included low platelet count $\leq 100 \times 10^9/L$ (OR 2.54, p < 0.0001) and HIV-HCV co-infection (OR 2.31, p < 0.0001).
- Aspects of healthcare access associated with HCV treatment included having a PCP (OR 1.45, p = 0.013), a hepatologist (OR 12.61, p < 0.0001), and private health insurance (OR 1.82, p < 0.0001).
- Non-significant factors included sex, language, substance use, and depression.

Table 1. Baseline characteristics of chronic HCV cohort.

Characteristic	Entire cohort N = 2360	Ever treated N = 1802	Not treated N = 558	p value
Age (mean \pm SD)	63.5 \pm 10.5	64.0 \pm 9.7	61.7 \pm 12.7	< 0.0001*
Age (n, %) \geq 45 years	2252 (95.4)	1731 (96.1)	521 (93.4)	< 0.0001*
< 45 years	108 (4.6)	71 (3.9)	37 (6.6)	
Sex (n, %)				
Male	1515 (64.2)	1171 (65.0)	344 (61.7)	0.157
Female	845 (35.8)	631 (35.0)	213 (38.4)	
Race/Ethnicity (n, %)				
Non-Hispanic White	1238 (52.5)	945 (52.4)	293 (52.5)	0.005*
Black	351 (14.9)	247 (13.7)	104 (18.6)	
Asian	200 (8.5)	159 (8.8)	41 (7.4)	
Hispanic	399 (16.9)	325 (18.0)	74 (13.3)	
Other	172 (7.3)	126 (7.0)	46 (8.2)	
Language (n, %)				
English	2174 (92.1)	1656 (91.9)	518 (92.8)	0.705
Spanish	57 (2.4)	48 (2.7)	9 (1.6)	
Asian	55 (2.3)	44 (2.4)	11 (2.0)	
Other	74 (3.1)	54 (3.0)	20 (3.6)	
Platelet count (n, %) $\leq 100 \times 10^9/L$	998 (42.3)	886 (49.2)	112 (20.1)	< 0.0001*
$101-140 \times 10^9/L$	356 (15.1)	267 (14.8)	89 (16.0)	
$> 140 \times 10^9/L$	727 (30.8)	503 (27.9)	224 (40.1)	
Unknown	279 (11.8)	146 (8.1)	133 (23.8)	
PC visit ever (n, %)*				
Yes	733 (31.1)	601 (33.4)	132 (23.7)	< 0.0001*
No	1627 (68.9)	1201 (66.6)	426 (76.3)	
Hepatology visit ever (n, %)				
Yes	1411 (59.8)	1321 (73.3)	90 (16.1)	< 0.0001*
No	949 (40.2)	481 (26.7)	468 (83.9)	
Insurance (n, %)				
Private	578 (24.9)	477 (26.5)	101 (18.1)	< 0.0001*
Public	1691 (71.7)	1274 (70.7)	417 (74.7)	
None	91 (3.9)	51 (2.8)	40 (7.2)	
HIV co-infection				
Yes	258 (10.9)	195 (10.8)	63 (11.3)	0.756
No	2102 (89.1)	1607 (89.2)	495 (88.7)	

Conclusions

- It is encouraging that the majority of this cohort received HCV treatment initiation, but significant disparities were found.
- Patients who are Black, have public or no health insurance, do not have a PCP or a hepatologist, or do not have cirrhosis were less likely to be treated.
- Patients with HIV co-infection and low platelet counts were more likely to have been treated, which is appropriate. Yet, nearly 1/3 of all treated patients were missing SVR labs.
- Without a systematic approach to HCV, health systems may be permitting disparities in care. To overcome biases and reduce liver-related mortality for all, health systems need to identify their HCV patients and proactively facilitate access to treatment, determination of SVR, and follow-up care.

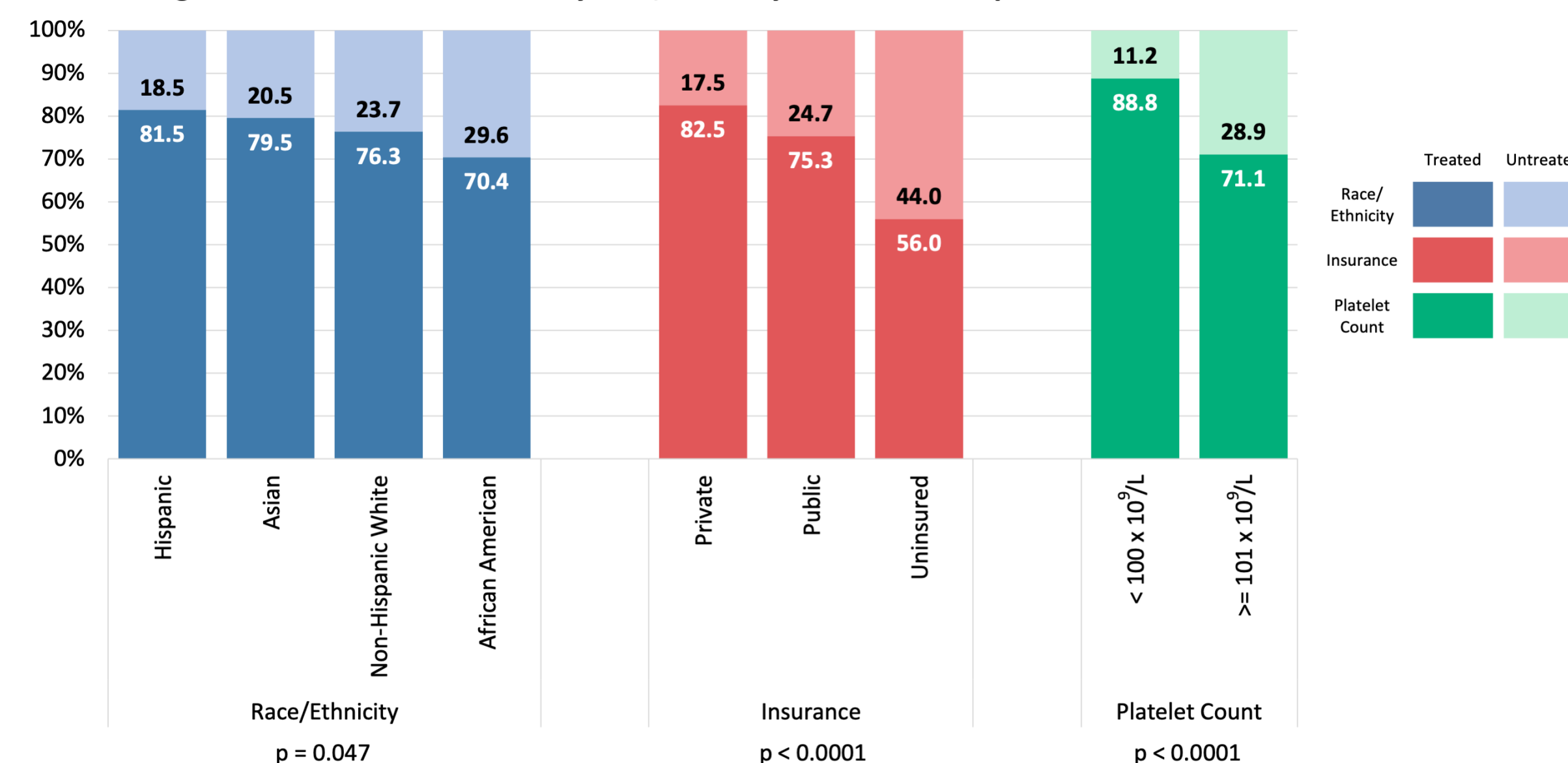
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Figure 1. HCV treatment rates by race/ethnicity, insurance and platelet count



*p-values based on multivariable model controlling for age, sex, race/ethnicity, language, platelet count, primary care visits, hepatology visits, health insurance, substance use disorder, obesity, depression, diabetes, and HIV/AIDS