

# Hepatitis C Treatment Outcomes

## Among Patients Treated In Primary Care And Addiction Treatment Settings

Belle Ngo<sup>1</sup>, Sara Jackson, MD MPH<sup>1,2,3</sup>, Jocelyn James, MD<sup>1,2,3</sup>, Judith Tsui, MD MPH<sup>1,2,3</sup>

<sup>1</sup>University of Washington School of Medicine

<sup>2</sup>University of Washington Department of General Internal Medicine

<sup>3</sup>Harborview Medical Center Adult Medicine Clinic

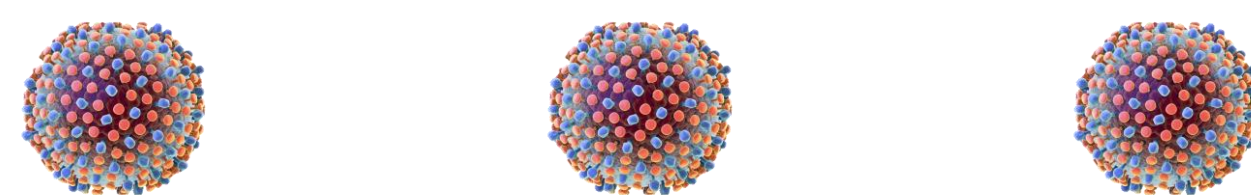
UW Medicine

UW SCHOOL  
OF MEDICINE

### BACKGROUND

With the spread of the opioid epidemic, there has been a spike in Hepatitis C (HCV) incidence. Public health experts believe it is possible to eliminate HCV with direct acting antivirals (DAAs) and advocate for extending treatment to groups actively transmitting HCV. People who inject drugs (PWID) are at highest risk for HCV infection but have the lowest treatment rates. Barriers include practices and policies which exclude patients who actively use drugs and restrict prescribing authorization to specialists. There is a need for evidence to show that patients with opioid use disorders (OUD) treated in primary care settings can have equivalent treatment outcomes to counter-act such barriers.

Harborview Medical Center Adult Medicine Clinic (HMC AMC) has been treating patients with HCV in primary care settings since 2016. Many are enrolled in office-based opioid treatment (OBOT) at HMC AMC or methadone treatment at Evergreen Treatment Services (HMC ETS) for OUD.



### METHODS

- A retrospective electronic medical record (EMR) review was conducted for all patients receiving HCV DAA treatment at HMC AMC or HMC ETS from 2016-2018.
- Patients were divided into 3 groups by OUD treatment status:
  1. Buprenorphine maintenance
  2. Methadone maintenance
  3. Neither
- Descriptive analyses were used to analyze patient demographic and clinical characteristics.
- SVR12 was the primary outcome and defined as an undetectable HCV viral load at least 12 weeks after completing treatment.

### RESULTS

#### Treatment Related Outcomes

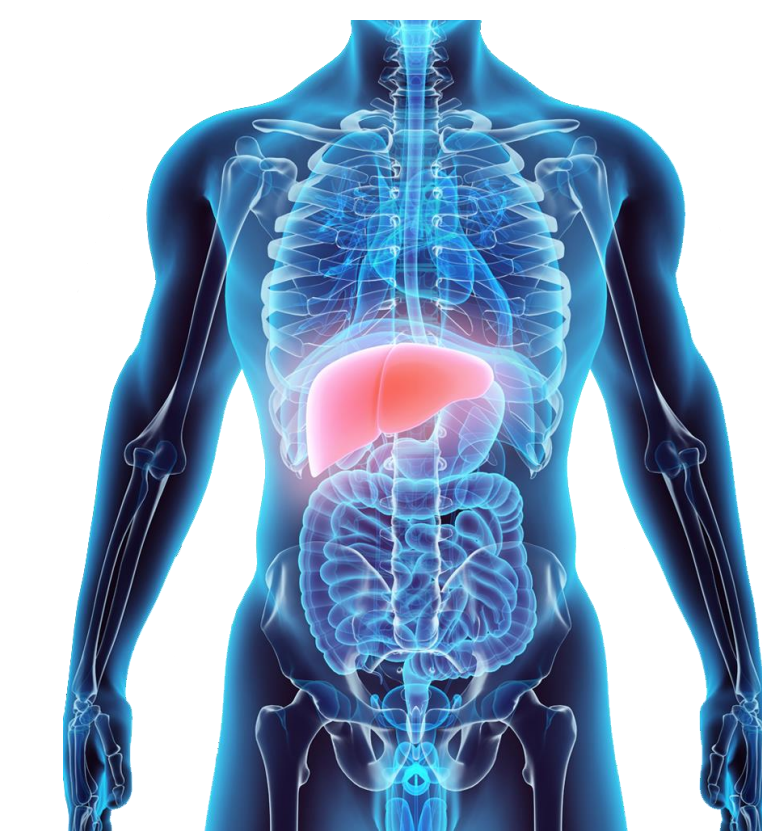
Outcomes	Buprenorphine n=13 (%)	Methadone n=44 (%)	Neither n=16 (%)	Total n=73 (%)
<b>Week 4 Treatment</b>				
Detectable	6 (46.2)	25 (56.8)	11 (68.8)	42 (57.5)
Undetectable	3 (23.1)	10 (22.7)	5 (31.3)	18 (24.7)
Missing	4 (30.8)	9 (20.5)	0	13 (17.8)
Mean Viral Load	22.1	56.5	39.3	
<b>Week 8 Treatment</b>				
Detectable	3 (23.1)	7 (15.9)	4 (25)	14 (19.2)
Undetectable	3 (23.1)	6 (13.6)	9 (56.3)	18 (24.7)
Missing	7 (53.8)	31 (70.5)	3 (18.8)	41 (56.2)
Mean Viral Load	0	12.4	12.3	
<b>Week 12 Treatment</b>				
Detectable	2 (15.4)	3 (6.8)	1 (6.3)	6 (8.2)
Undetectable	7 (53.8)	17 (38.6)	9 (56.3)	33 (45.2)
Missing	4 (30.8)	24 (54.5)	6 (37.5)	34 (46.6)
Mean Viral Load	1.6	3.3	0	
<b>Treatment Course</b>				
Complete	11 (84.6)	31 (70.4)	12 (75)	50 (74.0)
Incomplete	2 (15.4)	13 (29.6)	4 (25)	19 (26.0)
Interruption during treatment	0	4 (9.1)	0	4 (5.5)
Early termination*	0	1 (2.3)	0	1 (1.4)
Missing intermittent doses	0	4 (9.1)	2 (12.5)	6 (8.2)
Other	1 (7.7)	3 (6.8)	2 (12.5)	6 (8.2)
Unknown	1 (7.7)	1 (2.3)	0	2 (2.7)
<b>SVR12 (including missing)</b>				
Achieved	11 (84.6)	34 (77.3)	14 (87.5)	59 (80.8)
Failed	1 (7.7)	2 (4.5)	1 (6.25)	4 (5.5)
Missing	1 (7.7)	8 (18.2)	1 (6.25)	10 (13.7)
<b>SVR12 (excluding missing)</b>				
Achieved	11 (91.7)	34 (94.4)	14 (93.3)	59 (93.7)
Failed	1 (8.3)	2 (5.6)	1 (6.7)	4 (6.3)

\*Due to side effects (headache)

### DISCUSSION

- The majority of patients were >40 years old, male, single, unemployed, or current users of tobacco.
- Overall, 79/97 (81%) received treatment for OUD.
- The majority (>70%) of patients in all OUD treatment groups completed HCV DAA treatment without interruptions or missed doses (p=0.77).
- Reasons for missing doses included incarceration, intolerable side effects (headache), and poor adherence.
- Excluding patients with missing SVR12 data (n=10), >90% of patients in all OUD treatment groups achieved SVR12 (p=0.94).
- Those with and without SVR12 data appear to have similar demographic and clinical characteristics.

A major limitation to this study is the low sample size. Future steps include evaluating more patients who do not achieve SVR12 to determine potential factors that contribute to low adherence or failure to achieve cure.



### CONCLUSIONS

Patients treated with DAAs for HCV in primary care and addiction treatment settings appear to have high rates of cure. Offering treatment in such settings can expand access to care for vulnerable populations.