Treating Hepatitis C Among People Who Use Drugs

Jocelyn James, MD
Assistant Professor, University of Washington

Last Updated: June 2021
Disclosures

No conflicts of interest or relationships to disclose.

Some of the following slides come from a talk that was developed in collaboration with Judith Tsui, MD, and in partnership with the Washington Department of Health.
Objectives

- Epidemiology of hepatitis C (HCV) among people who use drugs (PWUD)
- Treatment as prevention among PWUD
- Countering myths about HCV treatment among PWUD
- Special considerations about HCV treatment among PWUD
Opioid Epidemic and HCV

- **Emerging epidemic** of HCV among young people who inject drugs (PWID)
- Closely related to opioid epidemic

**Rates of reported acute hepatitis C by age group, US, 2002-2017 (CDC Viral Hepatitis Surveillance Data)**
Opioid Epidemic and HCV

• **Reported acute infections are only the “tip of the iceberg”**

  3,621 acute cases reported in U.S. in 2018

  Estimated 50,300 actual new cases

Figure source: modified from hepatitisc.uw.edu from Klevens et al, Am J Public Health 2014
What about in Washington State?

- As throughout US, there are now two epidemics: baby boomers and young people who inject drugs

**Chronic HCV in WA State**

<table>
<thead>
<tr>
<th>Year</th>
<th>Age Distribution of Chronic HCV Cases in WA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td><img src="image1" alt="Bar chart for 2007" /></td>
</tr>
<tr>
<td>2018</td>
<td><img src="image2" alt="Bar chart for 2018" /></td>
</tr>
</tbody>
</table>

Source: WA State Dept of Health
Treatment as Prevention for HCV among PWID

Treating populations that actively transmit HCV

Reduces new infections

Reduces prevalence over time

*Hep C Free Washington initiative identifies PWID as a priority population for treatment
#1 People who use substances can’t be effectively treated / cured

#2 People who use substances are likely to get reinfected anyway

Though previously assumed true and incorporated into guidelines and coverage requirements, these myths have been debunked…
Countering Myth #1

• Studies from various settings show **good adherence and high cure rates** among people who use drugs, including those with injection drug use

• There are **NO data to support pretreatment screening** for illicit drug or alcohol use to select a population more likely to be successful with hepatitis C treatment
• Randomized, double-blind, placebo-controlled trial of elbasvir/grazoprevir for treatment-naïve patients\(^1\) enrolled in opioid agonist treatment

• Participants had to be at least 80% adherent to OAT visits

• Primary outcome: proportion of patients with SVR 12

• Results:
  - 301 patients, 76% men, 80% white, >46% with positive urine screens
  - 91.5% had SVR 12

\(^1\)Genotypes 1, 4, 6
Sofosbuvir and velpatasvir for hepatitis C virus infection in people with recent injection drug use (SIMPLIFY)

- Open-label international trial of sofosbuvir/velpatasvir among people with HCV\(^1\) and injection drug use within 6 months
- Therapy was given in one-week electronic blister packs
- Primary outcome: proportion of patients with SVR 12
- Results:
  - 103 patients, mostly male, 59% receiving opioid agonist treatment, 74% had injected in last month
  - 97% completed treatment, 94% had SVR 12, drug use did not affect SVR

\(^1\)Genotypes 1-6; Grebely, Lancet Gastroenterol Hepat 2018
Countering Myth #2

- **Rate of reinfection among people who use drugs is low…**
  - And substantially lower than rates of first infection\(^1,2\)
  - Hepatitis C treatment has been associated with reduced opioid injecting/sharing\(^3\)

- **Rate of reinfection is decreased…**
  - When people receive **medications for opioid use disorder**\(^1\)
  - When people use **syringe service programs**

- **Some degree of reinfection suggests you are treating the right population**

---

\(^1\) Hajaridazeh, J Hepatol 2020; \(^2\) Morris, Clin Infect Disease 2017; \(^3\) Artenie, Clin Infect Disease 2020
Meta-analysis of rate of HCV reinfection

- Studied reinfection among 1) people who recently used drugs, and 2) those on opioid agonist treatment
- 36 studies with 6,311 person-years follow up

<table>
<thead>
<tr>
<th>Population</th>
<th># Studies</th>
<th>Person-years f/u</th>
<th>Rates of reinfection per 100 person-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injecting or non-injecting drug use</td>
<td>33</td>
<td>5,061</td>
<td>5.9 (95% CI 4.1-8.5)</td>
</tr>
<tr>
<td>Injecting drug use</td>
<td>31</td>
<td>4,648</td>
<td>6.2 (95% CI 4.3-9.0)</td>
</tr>
<tr>
<td>Opioid agonist treatment</td>
<td>25</td>
<td>2,507</td>
<td>3.8 (95% CI 2.5-5.8)</td>
</tr>
<tr>
<td>Cured patients remain vulnerable to reinfection</td>
<td>Screen those with risk factors with HCV RNA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Try to minimize shame around reinfection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinfection risk is reduced by use of NSPs and medications for OUD</td>
<td>Offer harm reduction services, encourage meds for OUD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some degree of reinfection is a sign that you are treating the right population</td>
<td>Don’t let reinfection risk be a barrier to treatment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Psychosocial Benefits of Cure of HCV

- Improved self-efficacy and empowerment
- Relief from stigma and from illness-related uncertainty, stress
- Positive impacts on substance use

➢ “Clearing HCV will help in defeating the bigger problems, because it’s like trying to get up when you’ve got 100 bricks on ya. But then if I took half the bricks off from the Hep C, then now I’ve got a bit more movement and I can start taking the bricks off.”

➢ “Everything changed. I stopped drug use. I stopped everything because I said if I beat the Hep C, I could beat that too. Praise God up to today, I feel so good.”

¹Goutzamanis et al, BMC Infectious Diseases 2018; ²Batchelder et al, Drug and Alcohol Depend 2015
Interest in HCV Treatment is High Among PWID

• 58% of respondents to a state syringe exchange survey from 2019 reported HCV testing in the last year

• Of those diagnosed with HCV,
  - 28% had received any treatment
  - 68% reported interest in treatment

Photo: Hepatitis Education Project

Alcohol and Drug Abuse Institute: adai.uw.edu/wa-state-syringe-exchange-health-survey-2019-results
But…Ongoing Treatment Gaps Require Work

- Study of PWID in Seattle area found that only 26% of those who knew they had HCV reported any treatment

- Urgent need to
  - connect people diagnosed with HCV to “rapid start” of treatment
  - offer treatment in settings in which PWID are seen

![HCV Care Continuum among Seattle PWID, National HIV Behavioral Surveillance Survey, 2018](chart)

1Corcorran et al, Drug and Alcohol Dependence, Volume 220, 2021
Special Considerations for HCV Treatment Among PWUD

- Benefits of treatment at individual level may extend to improved control over substance use, decreased psychosocial stress, increased self-efficacy
- There are public health benefits when PWUD are cured
- Treating HCV among PWUD may help combat stigma on part of both providers and patients
- Treating HCV provides opportunities to engage patient in
  - Harm reduction counseling
  - Assessment and treatment of other substance use (alcohol, opioids, tobacco, etc.)
  - General medical care (screening, immunizations), improved patient-provider relationships
Special Considerations for HCV Treatment Among PWUD

- **Quick start to treatment** may be particularly important among PWUD
  - Care transitions/disruptions are particularly common

- **Low-barrier treatment** is important in setting of competing priorities (SUD care, housing, other medical problems) and frequent distrust/distaste for medical interactions

- Provide HCV care in other settings where PWUD are seen

- Keep in mind that DAA’s are forgiving of imperfect adherence
Conclusions

• Treating HCV among PWUD is critical to combatting current epidemic of HCV infection

• PWUD want HCV treatment and have high rates of cure, but most have still not been offered treatment

• HCV treatment among PWUD should be offered promptly and in settings in which this population is seen

• Reinfection after HCV treatment is low, especially when people receive medications for opioid use disorder and use syringe service programs
Thank you!

• Questions/discussion
The Mountain West AIDS Education and Training (MWAETC) program is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling $2,990,665 with 0% financed with non-governmental sources.

The content in this presentation are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, HRSA, HHS, or the U.S. Government.