



# Hepatitis C Virus Care Continuum Among People Who Inject Drugs



Elizabeth Golding<sup>1</sup>, Sophia Goldin<sup>1</sup>, Theodore Yoder<sup>1</sup>, Kevin Kamis<sup>2</sup>, Sarah Rowan<sup>1,2,3</sup>

<sup>1</sup>School of Medicine, University of Colorado, Aurora, Colorado, USA <sup>2</sup>Public Health Institute at Denver Health, Division of HIV/STI/Viral Hepatitis, Denver, Colorado, USA <sup>3</sup>Division of Infectious Diseases, Department of Medicine, University of Colorado, Aurora, Colorado, USA

## Background

- In 2022, there were ~67,400 acute hepatitis C (HCV) cases in the US in addition to 93,805 newly reported chronic HCV cases
- Injection drug use (IDU) is the most common mode of HCV transmission in the US
- Direct acting antivirals (DAAs) are over 95% effective at curing HCV infection, yet treatment rates remain low among people who inject drugs (PWID)

## Study Aims

- Quantify the number of PWID who progress through each stage of the HCV care continuum
- Identify the biggest gaps in the HCV care continuum

## Methodology

### Study Design:

- Retrospective analysis at a large urban safety-net healthcare system of individuals who had a detectable HCV RNA level

### Inclusion Criteria:

- Detectable HCV RNA level in the electronic medical record between 11/01/2021 to 10/31/2023
- Evidence of definite or possible IDU between 5/1/2021 and 10/31/2023

### Data Collection:

- All data, including age, race, gender and housing status, was extracted from the EMR and entered into a RedCap database
- Charts were assessed for progression through the HCV care continuum stages as defined by Figure 1 from the dates of positive HCV RNA result through 10/31/2023 or the date of SVR12 attainment if before 10/31/2023.

## Results

Table 1. Demographic indicators and linkage to care

	Total n (%)	Not linked to care n (%)	Linked to care n (%)	p-value
<b>Overall</b>	149	98 (65.8)	51 (34.2)	
<b>Gender</b>				
Male	123 (83.1)	81 (85.3)	40 (78.4)	0.296
Female	25 (16.9)	14 (14.7)	11 (21.6)	
Non-binary	***	***	***	***
<b>Race/Ethnicity</b>				
White non-Hispanic	97 (66.0)	63 (65.6)	43 (70.5)	0.937
non-White	50 (34.0)	33 (34.4)	18 (29.5)	
<b>Housing status</b>				
Unhoused	61 (41.5)	43 (44.8)	18 (35.3)	0.266
Housed	86 (58.5)	53 (55.2)	33 (64.7)	
<b>Classification of drug use</b>				
Definite IDU	120 (80.5)	72 (75.0)	46 (90.2)	0.028
Possible IDU	29 (19.5)	24 (25.0)	5 (9.8)	
<b>Age (median years)</b>				
≥40	65 (43.6)	40 (41.7)	25 (47.2)	
<40	84 (56.4)	56 (58.3)	28 (52.8)	0.517

Median duration of follow-up from HCV RNA test through SVR12 or end of chart review (10/31/2023): 19.1 months

Figure 1. HCV Care Continuum

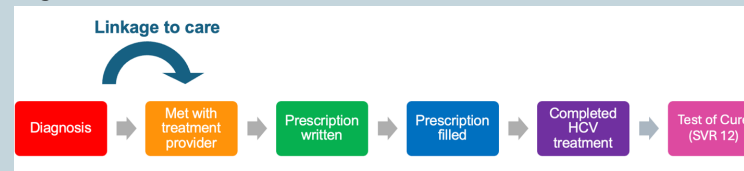
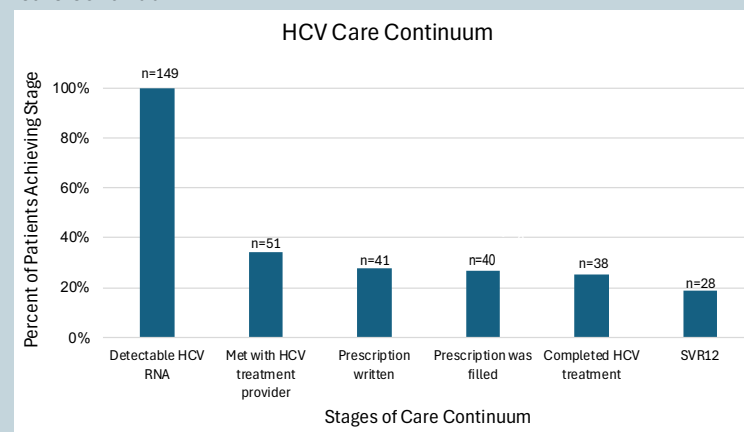


Figure 2. Number of participants who completed each stage of the care continuum



## Definitions

- Definite IDU: documentation of injection drug use in the medical record
- Possible IDU: emergency department visit with injection drug use related infection, withdrawal or overdose, or a positive urine toxicology test
- SVR12: sustained virologic response at 12 weeks
- Treatment completion: all medication refills were filled

## Conclusion and Future Directions

- 19% of PWID with documented HCV in our safety-net healthcare system had evidence of cure in our system's medical records during a two-year period.
- Greatest barrier in achieving cure was accessing care after positive HCV RNA test
- 75% of those who met with treatment providers were able to complete treatment
- More research is needed to identify the causes of loss to follow up and develop appropriate interventions
- A pilot study of telehealth-based HCV treatment at a syringe access program as an intervention to increase linkage to care is currently underway at Denver Health to address this key drop-off in the care continuum for PWID