

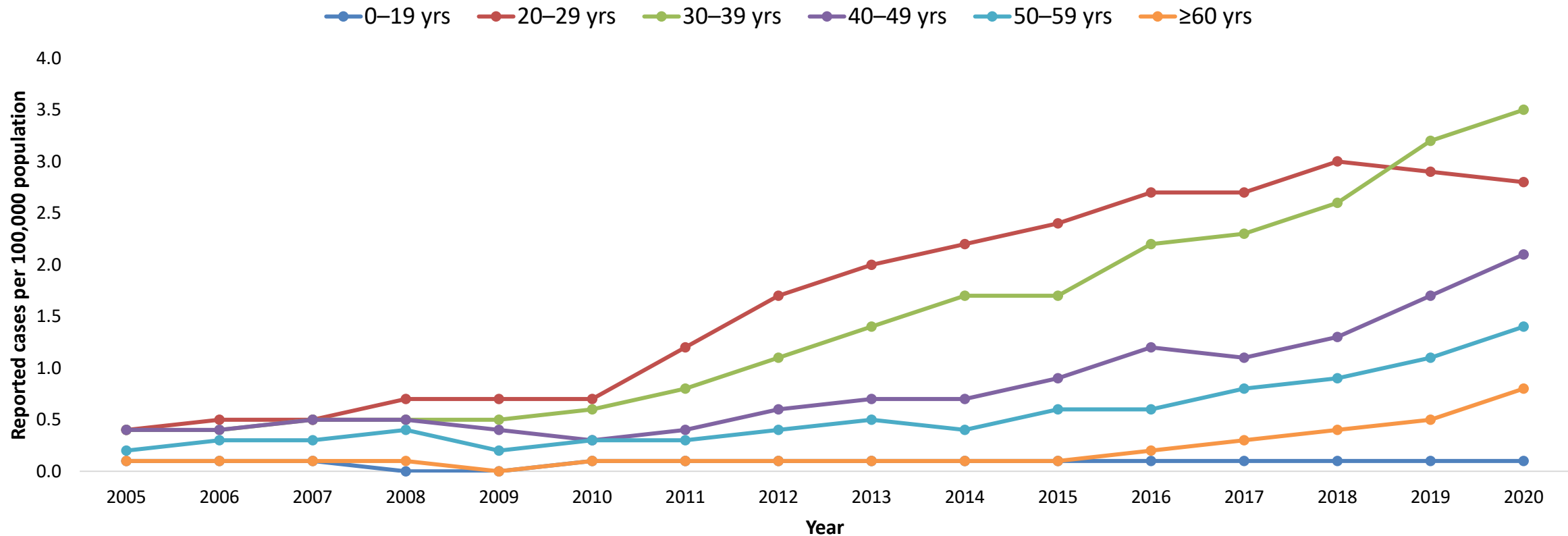
Bringing hepatitis C treatment to permanent supportive housing residents using the Pharmacist, Physician, and Patient Navigator Collaborative Care Model (PPP-CCM)

Judith Tsui, MD, MPH and Sara Glick, PhD, MPH (HepP3 Study MPIs)
Devin Kennedy, BA (Research Coordinator)
University of Washington

NASTAD Talk
May 13, 2026

National Trends in HCV:

Rates of reported cases of acute HCV, by age group, US, 2005–2020



* Rates per 100,000 population.

† Reported confirmed cases. For the case definition, see <https://ndc.services.cdc.gov/conditions/hepatitis-c-acute/>.

Source: CDC, National Notifiable Diseases Surveillance System.

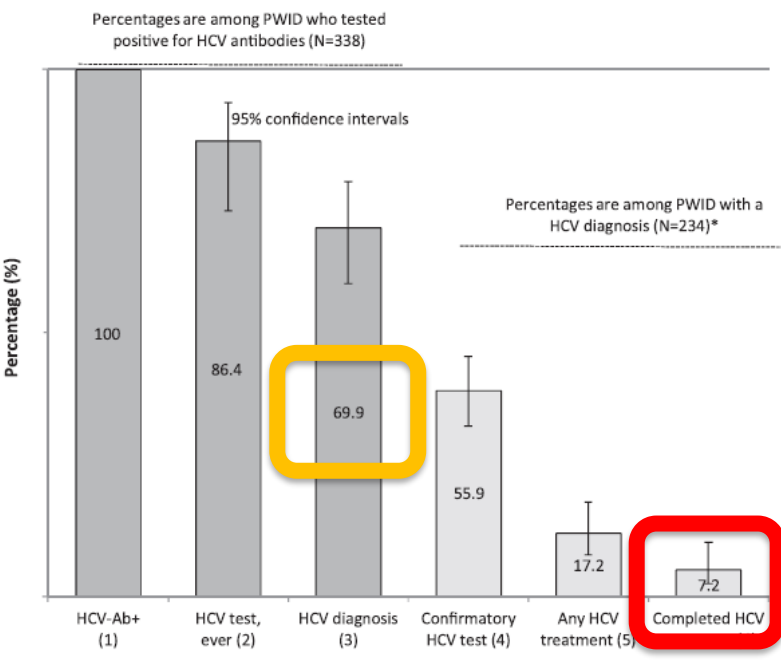
Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm>.

Published September 2022.

HCV among PWID in King County

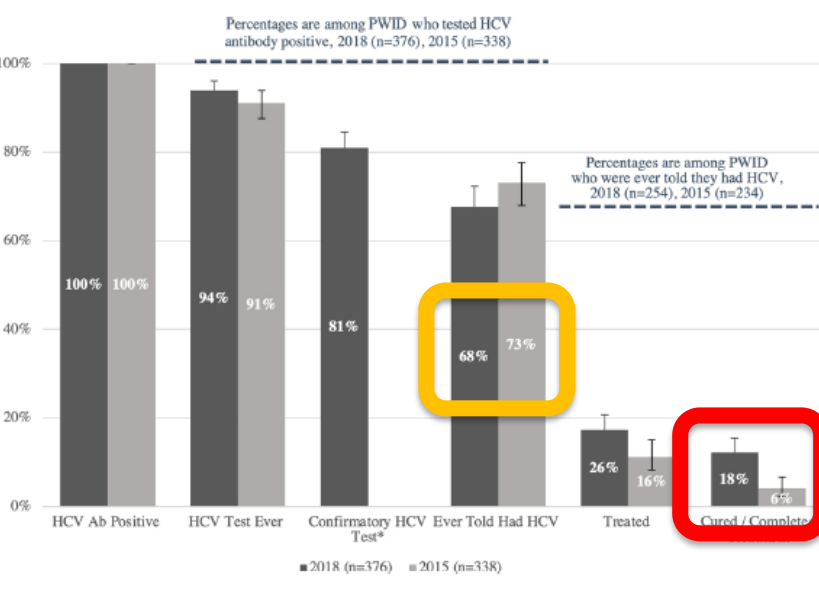
Contents lists available at ScienceDirect
Drug and Alcohol Dependence
 journal homepage: www.elsevier.com/locate/drugalcdep

Full length article
 Hepatitis C continuum of care and utilization of healthcare and harm reduction services among persons who inject drugs in Seattle
 Judith I. Tsui^{a,*}, Claire M. Miller^a, John D. Scott^b, Maria A. Corcorran^b, Julia C. Dombrowski^b, Sara N. Glick^b



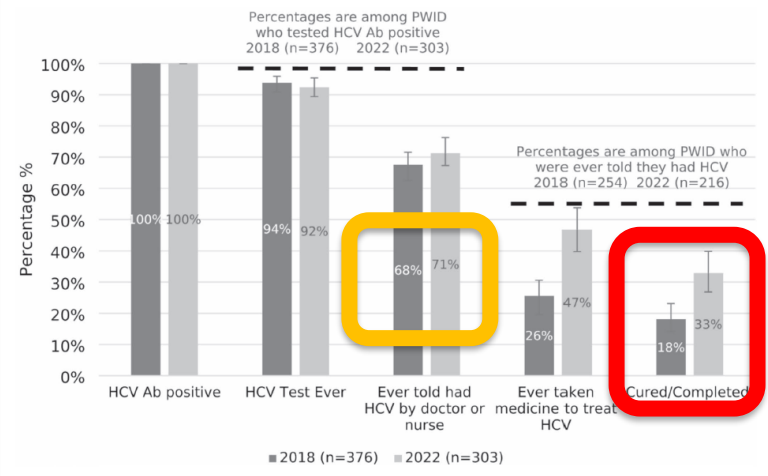
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Age and gender-specific hepatitis C continuum of care and predictors of direct acting antiviral treatment among persons who inject drugs in Seattle, Washington
 Maria A. Corcorran^{a,*}, Judith I. Tsui^b, John D. Scott^a, Julia C. Dombrowski^{a,c}, Sara N. Glick^{a,c}



AIDS and Behavior
<https://doi.org/10.1007/s10461-026-05110-9>
SUBSTANTIVE REVIEW

Increases in Hepatitis C Virus (HCV) Treatment and Cure Among People Who Inject Drugs in the Seattle Area Between 2018 and 2022
 Jenni L. Ebersberger¹, Judith I. Tsui², Maria A. Corcorran³, Sara N. Glick^{3,4}



Ever told had HCV ~70%

Completed HCV tx: 7% → 33

How can we increase access to and uptake of HCV treatment among people who use drugs?

Improving Access to HCV Care for PWUD

- **Integrating HCV care into primary care and low-barrier care models**
 - Hepatitis C Real Options (HERO) Study in 2015: HCV tx among PWID in the U.S.
 - Catalyst for programs offering HCV treatment to people who use drugs
 - AMC OBOT clinic, ETS HMC satellite clinic, Madison Clinic, Pioneer Square clinic
 - Still not enough prescribers
 - Barrier of extra steps (e.g., script sent to pharmacy, patient needs to pick up)
- **Pharmacist-led treatment?**
 - “Pilot Study of a Community-Pharmacy Model to Expand Access to Medications to Treat and Prevent Hepatitis C, Opioid Use Disorders, Overdose and HIV among Persons Who Inject Drugs” (NIH/NIDA 1R34DA047660, PI: Judith Tsui)

Pharmacy-Based Models of Care

- Collaborative Practice Agreements (CPA) allow pharmacists to provide care under a physician's prescribing authority^{1,2}
- Scope of practice for CPAs vary by state
 - In WA it can encompass all aspects of HCV care³
 - May 2015, Gov. Inslee signed law requiring insurance carriers to recognize pharmacists as health care providers allowing services to be reimbursed
- Used for other medical conditions (e.g., heart failure, diabetes, DVTs)
- Pharmacy CPAs have effectively expanded access to other medications for PWID such as naloxone and PrEP^{4,5}



1. CDC. Prevention. 2017









2. Bluml MB. J Am Pharm Assoc. 2013

3. Xu J, et al. Drug Alcohol Depend. 2018

4. Tung EL, et al. Sex Health. 2018

5. Khosropour CM, et al. AIDS Patient Care STDS. 2020

Rationale for Using Pharmacists

-  Exist in areas where there are HCV provider shortages (e.g., rural)
-  May be perceived as trusted health care providers by patients
-  Can be trained in phlebotomy
-  Care delivered by pharmacist eliminates extra “step”
-  Provide counseling on adherence and side effects
-  Good fit for care that can easily be protocolized, simplified guidelines
-  Can also offer other treatments (immunizations, PrEP, naloxone, STI tx)
-  Model to address care disparities, public health emergencies

Pilot Study: Hepatitis C Pharmacy-based Strategy Intervention (HepPSI) R34 Study

Overall Aim: To pilot and evaluate a pharmacist-driven program for medications to treat HCV, plus medications to prevent overdose and HIV, for persons who inject drugs with HCV seen in community sites.

Study Design: Single-arm prospective observational study of 40 PWID who screened positive for HCV

- **Primary outcome:** % that successfully link to the intervention
- **Secondary outcomes:** HCV treatment outcomes (initiation, completion, and SVR12) and treatment satisfaction
- **Additional aim:** described the barriers and facilitators to implementing the pharmacist-led program*

Primary Results

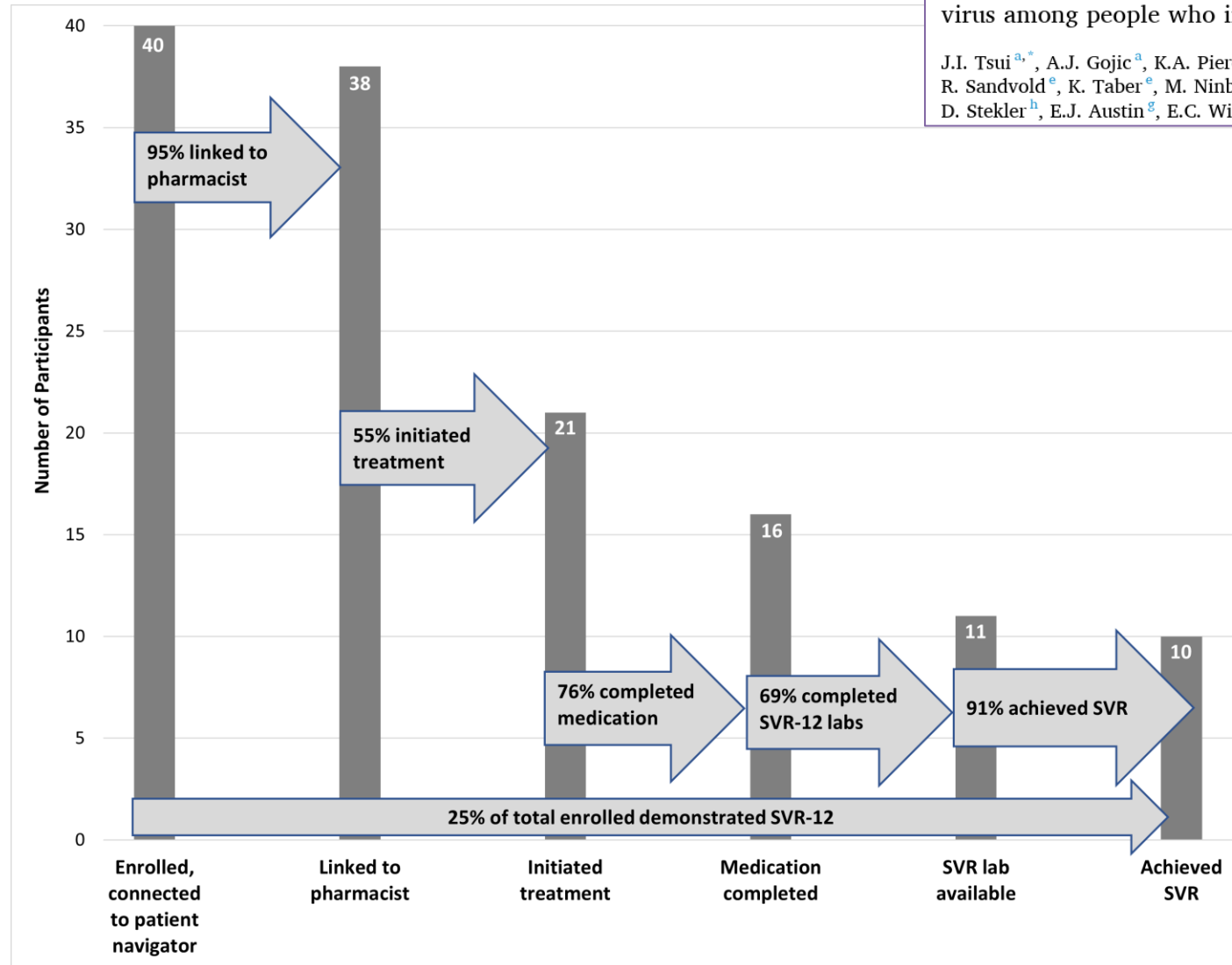
- **40 PWID** enrolled from Nov 2020-Oct 2021
- **Participant characteristics:**
 - Mean age 44 years, 30% were female, 50% were non-white
 - 38% were unhoused in the past 90 days
 - Heroin (80%) and methamphetamine (68%) were most common drugs
- **Sample was at high risk of HIV/STI exposure:**
 - 38% shared injecting equipment and 45% had unprotected sex in past month
 - New diagnosis of HIV and syphilis during the study
- 45% reported that they had previously sought HCV treatment
- **Primary Outcome: 95% were linked to the pharmacist for initial evaluation**



Pilot study of a community pharmacist led program to treat hepatitis C virus among people who inject drugs

J.I. Tsui^{a,*}, A.J. Gojic^a, K.A. Pierce^b, E.L. Tung^{b,c}, N.C. Connolly^a, A.C. Radick^a, R.R. Hunt^d, R. Sandvold^e, K. Taber^e, M. Ninburg^e, R.H. Kubiniec^f, J.D. Scott^h, R.N. Hansen^{b,c,g}, J. D. Stekler^h, E.J. Austin^g, E.C. Williams^{g,i}, S.N. Glick^{h,j}

HCV Care Cascade Results



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Results: Patient Experience

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- Among the 10 participants treated for HCV who answered a follow-up survey, 100% responded “agree” or “strongly agree” to the following statements:
 - They had a positive experience with the pharmacist
 - They felt the pharmacist was non-judgmental
 - They would refer other PWID to the pharmacists for treatment.

Downtown Emergency Support Center (DESC)

- Emergency shelters
- Supportive housing
- Street outcome
- Case management
- Medical services

Housing First Principles



Immediate access to permanent housing with no housing readiness requirements



Consumer choice and self-determination



Individualized, recovery-oriented, and client-driven supports



Harm reduction



Social and community integration

Image: Person Centered Housing Options

PPP-CCM R01—aka Hepatitis C Pharmacist, Physician, Patient Navigator (“HepP3”) Study

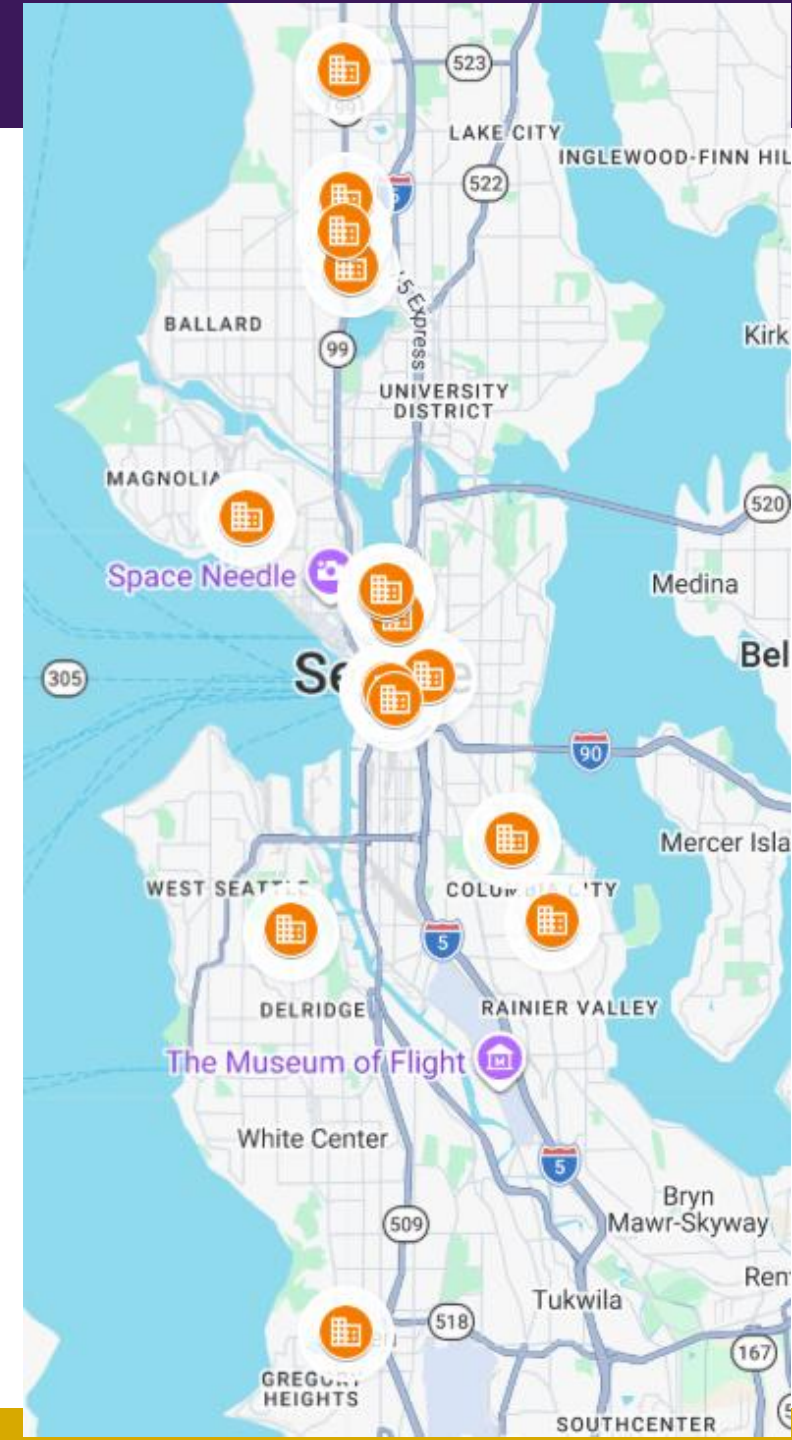
- **Study design:** Hybrid effectiveness implementation study using a parallel-group, cluster randomized controlled trial (RCT) design to test the intervention (PPP-CCM) for treating HCV (and offering other meds)
 - We will engage 16-18 housing units and randomize half to receive point-of-care (POC) HCV screening plus PPP-CCM (intervention) versus POC HCV screening
 - After 12-months, the intervention will be implemented in control units as well
 - Hold testing events to screen HCV; invite all HCV+ clients in all PSH units to participate in longitudinal cohort with surveys/medical record review baseline, 12- and 24-months (this is how we gather data on outcomes to compare)

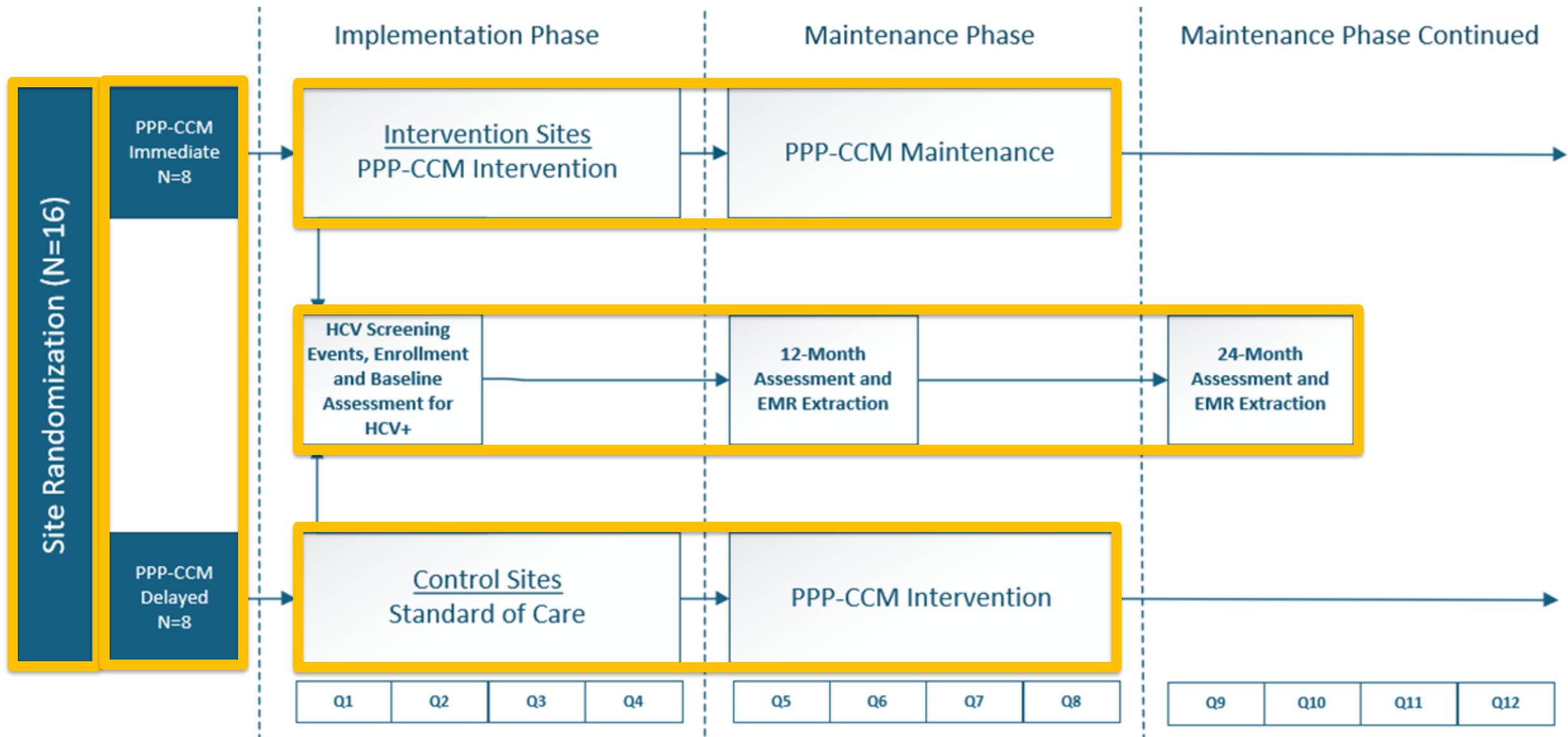
HepP3 Specific Aims

- 1** To evaluate implementation outcomes for PPP-CCM to treat HCV among PWUD living in permanent supportive housing
 - RE-AIM: Reach, adoption, implementation, and maintenance
- 2** To evaluate the effectiveness of PPP-CCM on clinical outcomes among PWUD living in permanent supportive housing
 - DAA initiation, DAA completion, and HCV cure; HIV risk behaviors
- 3** To characterize multistakeholder perspectives on acceptability and needed supports to scale and sustain PPP-CCM in permanent supportive housing

Participating DESC Buildings

- 16 buildings (of ~20)
- Number of residents: 40 – 180
- Resident demographics
 - Average age: 50 years
 - 33% women
 - 50% Black, Indigenous, or other person of color
 - Average DESC tenure: 5.1 years



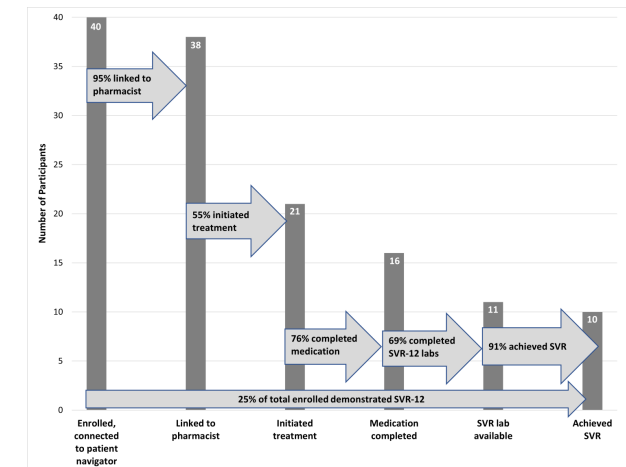


Cohort participants

Participants who screen HCV+ through POC testing offered at all PSH buildings and consent to enroll

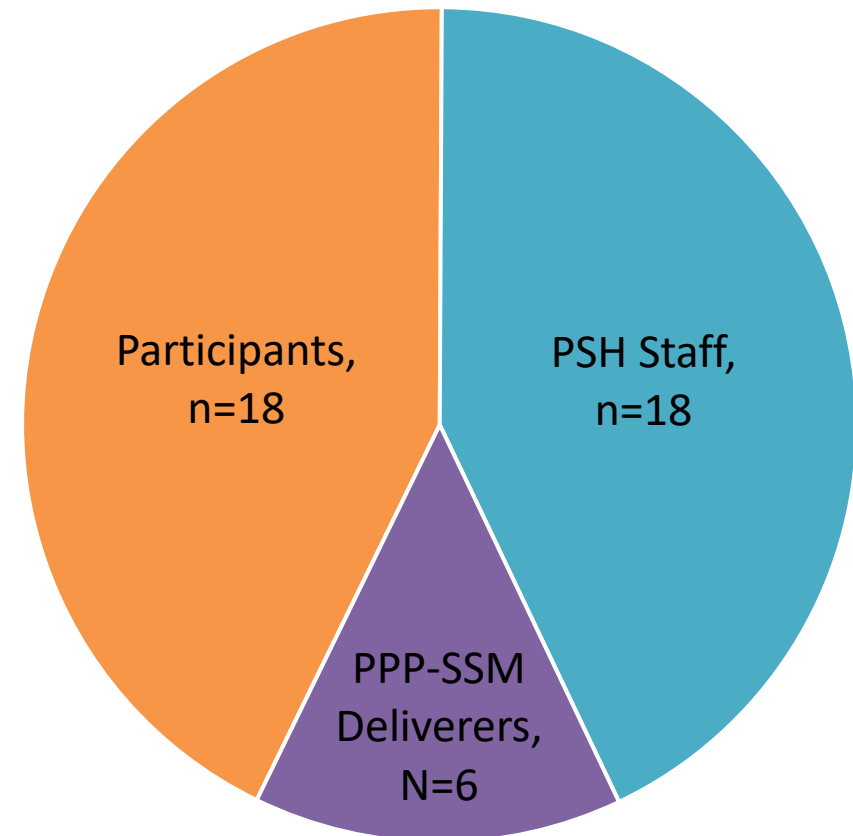
HepP3 Outcomes

- **Primary:** % of cohort participants who had a provider evaluation in 12-month study period in intervention vs. control arms
- **Secondary:** % of cohort participants who:
 - Complete pre-treatment work-up
 - Initiate DAAs
 - Complete DAAs
 - Achieve SVR4
 - Reduce HIV risk (# days of injection drug use in past 30 days)
...in 12-month study period in intervention vs. control arms

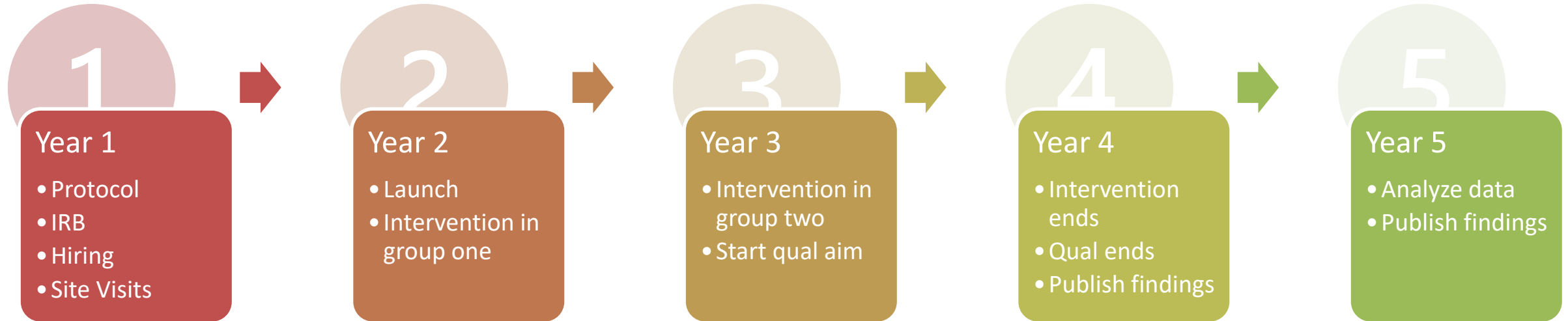


Qualitative Aim: Stakeholder Perspectives on Acceptability and Needed Supports

- In-depth interviews
- Guided by RE-AIM
- Analysis: Rapid Assessment Process
- Findings used to
 - Enhance the team’s learnings related to study implementation
 - Inform future scale-up



Study Timeline



Thank you to the HepP3 team!

- **UW Research Staff:** Devin Hamilton, Alex Gojic, Nede Ovbiebo, Chrissna Hem
- **UW Biostatistician:** Patrick Heagerty
- **UW Analyst:** Kaitlin Zinsli
- **UW Co-Investigators:** Jocelyn James, John Scott, Ryan Hansen, Emily Williams, Elizabeth Austin
- **Kelley Ross Pharmacy:** Elyse Tung, Kathleen Pierce, Erin Williams, Connor Jarvie
- **DESC:** Richard Waters, staff, clients
- **WA State DOH:** Emalie Huriaux, John Stockton, Patrick Dinwiddie
- **WA State HCA:** Judy Zerzan
- **Hepatitis Education Project:** Kimberly Taber, Apoorva Mallya, Russell Sandvold
- **DSMB Members**
- **NIH/NIDA:** Candance Webb

Thank you!

Questions?