

*Patient Engagement Learning Series*

**Nurse Case Management: Strengthening Patient Engagement Across the HCV Care Continuum**

Thursday, December 3, 2020 at 2:00 pm ET



**NATIONAL  
NURSE-LED CARE  
CONSORTIUM**

a PHMC affiliate

# Disclaimer

*Through the Patient Engagement Learning Series, we intend to create a space where providers, community advocates, and patient representatives can engage thoughtfully on challenging topics surrounding patient care. We commit to providing evidence-based data and research to support all content presented.*

*We believe that addressing this topic aligns with the aims of the Learning Series and is therefore integral to our discussion. We welcome your feedback to continue guiding our content development.*

*Funding for this webinar has been provided to the National Nurse-Led Care Consortium through the Patient-Centered Outcomes Research Institute (PCORI) Contract Number 14507. Contents are solely the responsibility of the authors and do not necessarily represent the official views of PCORI.*

# National Nurse-Led Care Consortium

The **National Nurse-Led Care Consortium (NNCC)** is a membership organization that supports nurse-led care and nurses at the front lines of care.

NNCC provides expertise to support comprehensive, community-based primary care and public health nursing.

- Policy research and advocacy
- Program development and management
- Technical assistance and support
- Direct, nurse-led healthcare services

# Speakers



**Laura Starbird, PhD, RN**

Assistant Professor in the Department of  
Family and Community Health at the  
University of Pennsylvania School of  
Nursing



**Jillian Bird, MSN, RN**

Nurse Training Manager  
National Nurse-Led Care Consortium



**Shelley Bastos**

Patient Representative

# Objectives

- Examine key components of nurse case management to strengthen engagement across the HCV care continuum.
- Explore additional strategies to optimize HCV care, including engaging peer networks and offering integrated services.

# Panel Discussion



**Laura Starbird, PhD, RN**

Assistant Professor in the Department of  
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University of Pennsylvania School of  
Nursing



**Jillian Bird, MSN, RN**

Nurse Training Manager  
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**Shelley Bastos**

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# Pop Up Question

**How do your personal relationships or peer networks influence whether you are accessing care?**

# Pop Up Question

**How has care for HCV been impacted during COVID-19?**





# Nurse Case Management: Strengthening Patient Engagement Across the Hepatitis C Care Continuum

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Laura E. Starbird, PhD, RN  
Assistant Professor  
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# Disclosures

I have no financial interests or commercial relationships to disclose.

# Acknowledgements

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## Collaborators

- Jason Farley, PhD, MPH, ANP-BC
- Mark Sulkowski, MD
- Hae-Ra Han, PhD, RN
- Chakra Budhathoki, PhD
- Nancy Reynolds, PhD, C-NP

# Objectives

At the end of this presentation, participant will be able to:



Describe the global impact of viral hepatitis



Identify at least 3 barriers to patient-centered hepatitis C care in the U.S.

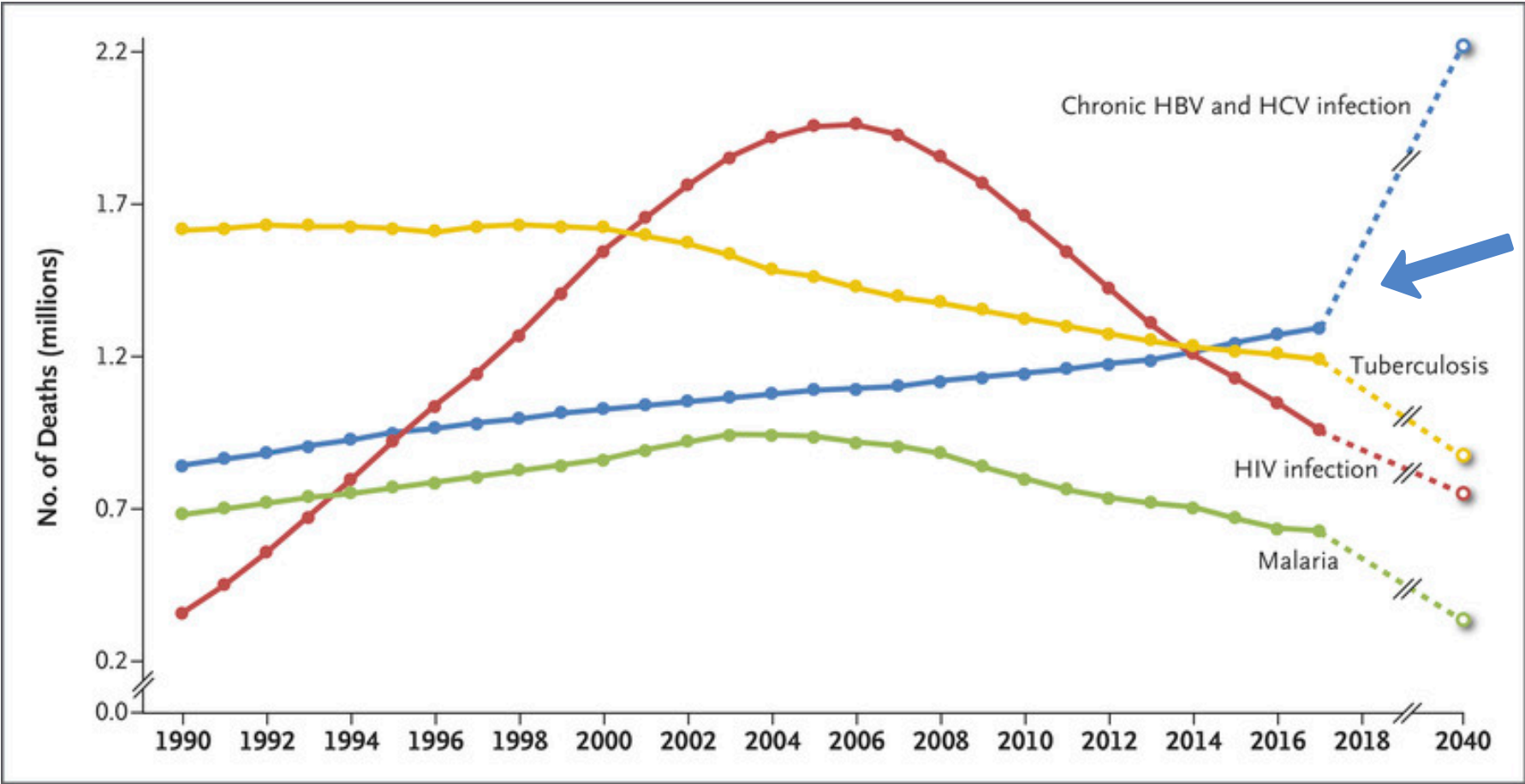


Synthesize how case management can support patients with hepatitis C



Discuss next steps to address ongoing challenges for hepatitis C care in the U.S.

# Estimated global deaths due to viral hepatitis, HIV, malaria and TB 1990-2018 <sup>(1)</sup>



(1) Thomas, D. L. *New England Journal of Medicine*. 2019

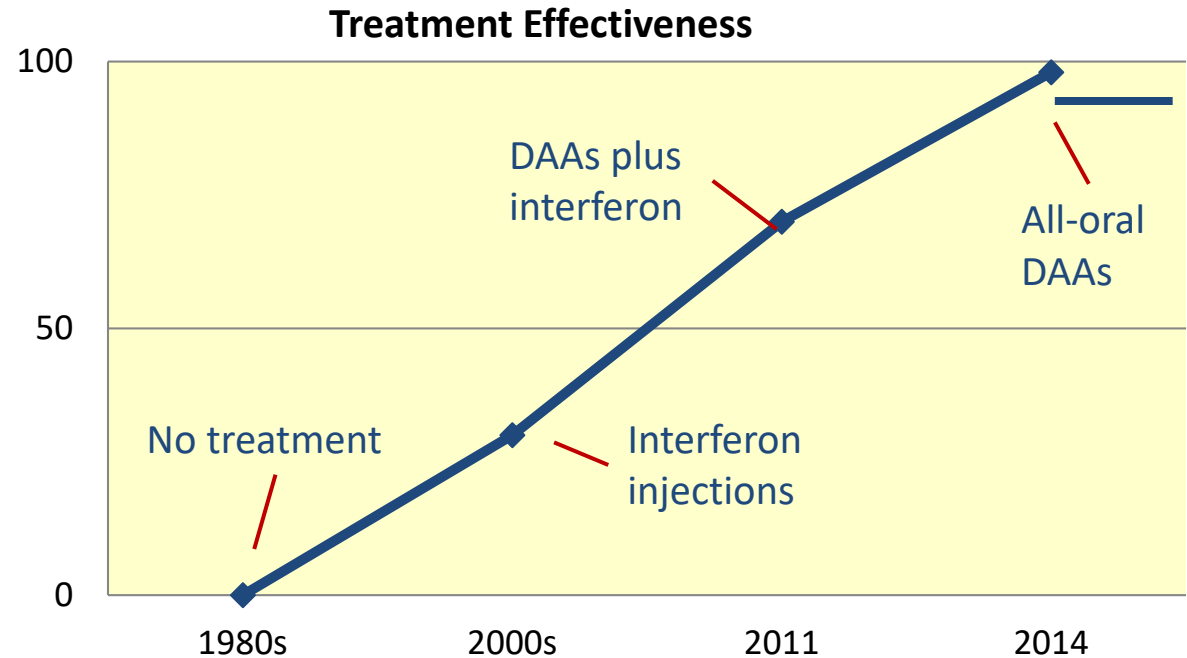
# Hepatitis C morbidity in HIV co-infection



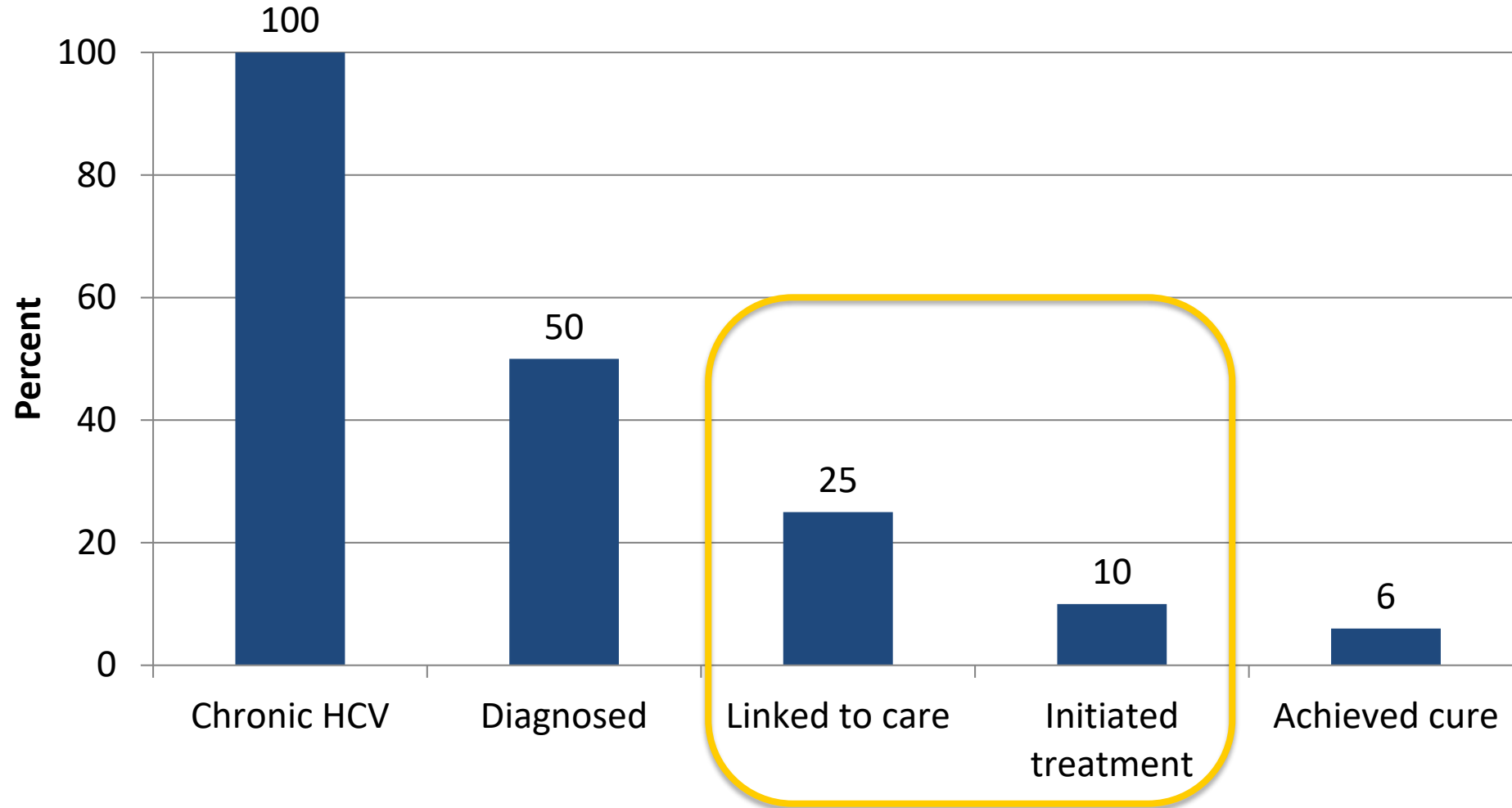
- 1 in 4 people with HIV have hepatitis C <sup>(2)</sup>
- HIV co-infection accelerates hepatitis C-related liver disease <sup>(3)</sup>
- People co-infected with HIV are less likely to be treated for hepatitis C <sup>(4,5)</sup>

# Hepatitis C can be cured

- All-oral direct acting antivirals (DAAs) introduced in 2014
- Well-tolerated
- 8-24 weeks
- >90% effective
- HCV treatment guidelines: HIV co-infected are high priority to treat <sup>(6)</sup>



## U.S. Hepatitis C Care Continuum among Persons with HIV (7,8)





# Barriers to Hepatitis C Care

- Hepatitis C knowledge (10,12)
- Perceived threat (10,13)
- Competing demands (10,11,12)
- HIV/hepatitis C drug-drug interactions (14,15)
- Provider expertise (13,16)
- Access to specialty care (13,16,17)
- Navigating the healthcare system (16,17)

# The Care2Cure Study

- Does nurse case management improve linkage to an HCV-treating provider compared to usual care?
- Does nurse case management decrease time to HCV treatment initiation compared to usual care?
- What patient-level characteristics predict success across the hepatitis C care continuum?

# Usual Care

- Co-located HIV and HCV practices
- Nurse case managers and social workers
- Automatic appointment reminders
- CDC hepatitis C fact sheet

# Hepatitis C Nurse Case Management

## Component

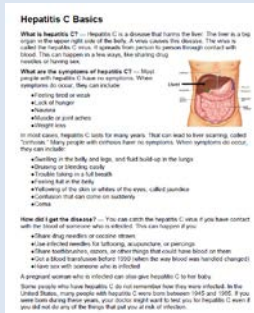
## Description

Nurse-Initiated Referral



- Verify insurance and need for referral
- Request referral from primary care provider
- Confirm referral entrance in Epic

Strengths-Based Education



- Handout-guided education on hepatitis C symptoms, transmission, treatment, liver health
- Assessment of strengths and needs related to hepatitis C care
- Set goals for engagement in liver health/hepatitis C care

Clinical Coordination for Patient Navigation



- Make appt. with viral hepatitis provider per patient's request and needs
- Reschedule as needed

Appointment reminders














- 1-week and 1-day appointment reminders
- Phone, text, or email

# Nurse-initiated HIV treatment modification

- Identification of drug-drug interaction based on hepatitis C provider's recommended DAA regimen
- Communication with HIV provider about antiretroviral therapy switch
- Schedule & navigate patient appointment with HIV provider
- Nurse visit for drug-drug interaction education

Care2Cure Research Study

SINGLE PILL COMBOS	Hepatitis C Medication Options		
	Harvoni	Viekira Pak	Sovaldi and Daklinza
Your HIV Medication			
Atripla 	Yellow	Red	Yellow
Complera 	Yellow	Yellow	Green
Stribild 	Yellow	Red	Yellow
Triumeq 	Green	Yellow	Green
Genvoya 	Yellow	Red	Yellow

-  OK to take at the same time
-  May need extra monitoring
-  Should not be taken at the same time

Show this chart to your HIV provider to help figure out the best medications to cure your hepatitis C

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# Hepatitis C Care Continuum Outcomes

Name	Definition	Measure
<b>Referred to care</b>	Referral to Viral Hepatitis Practice entered in Epic	yes/no
<b>Appointment scheduled</b>	At least one appointment at the Viral Hepatitis Practice scheduled	yes/no
<b>Linked to care</b>	Attended at least one appointment at the Viral Hepatitis Practice	yes/no
<b>Prescribed treatment</b>	Prescription for direct acting antivirals entered in medical chart	yes/no
<b>Initiated treatment</b>	Took first dose of direct acting antivirals	yes/no

<b>Participant Demographics</b>	<b>Number (%)</b>
Female	26 (38)
Age, mean years (SD)	55 (7.7)
Race/Ethnicity	
Black/African American	55 (81)
White/Caucasian	10 (15)
Education	
No high school diploma/No GED	17 (49)
Health insurance	
Medicaid	58 (85)

<b>Participant Health Characteristics</b>	<b>Number (%)</b>
HIV viral load <20 copies/mL (undetectable)	29 (43)
CD4 cell count, median (IQR)	366 (198 – 653)
Any illicit drug use, past 12 months	35 (52)
Injection drug use, past 12 months	16 (24)
Taking medication for opioid use disorder	35 (52)
Alcohol use, past 6 months	28 (41)

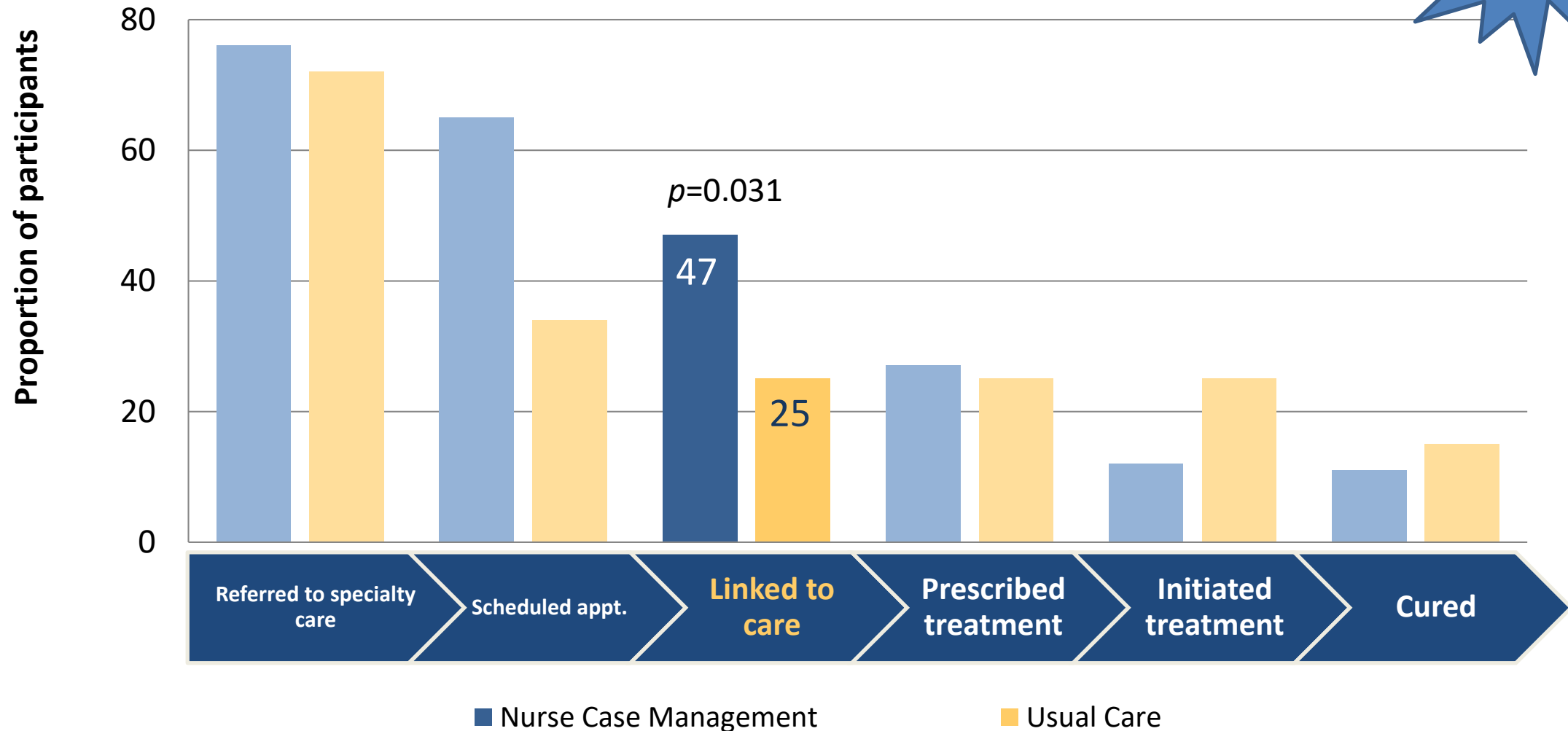
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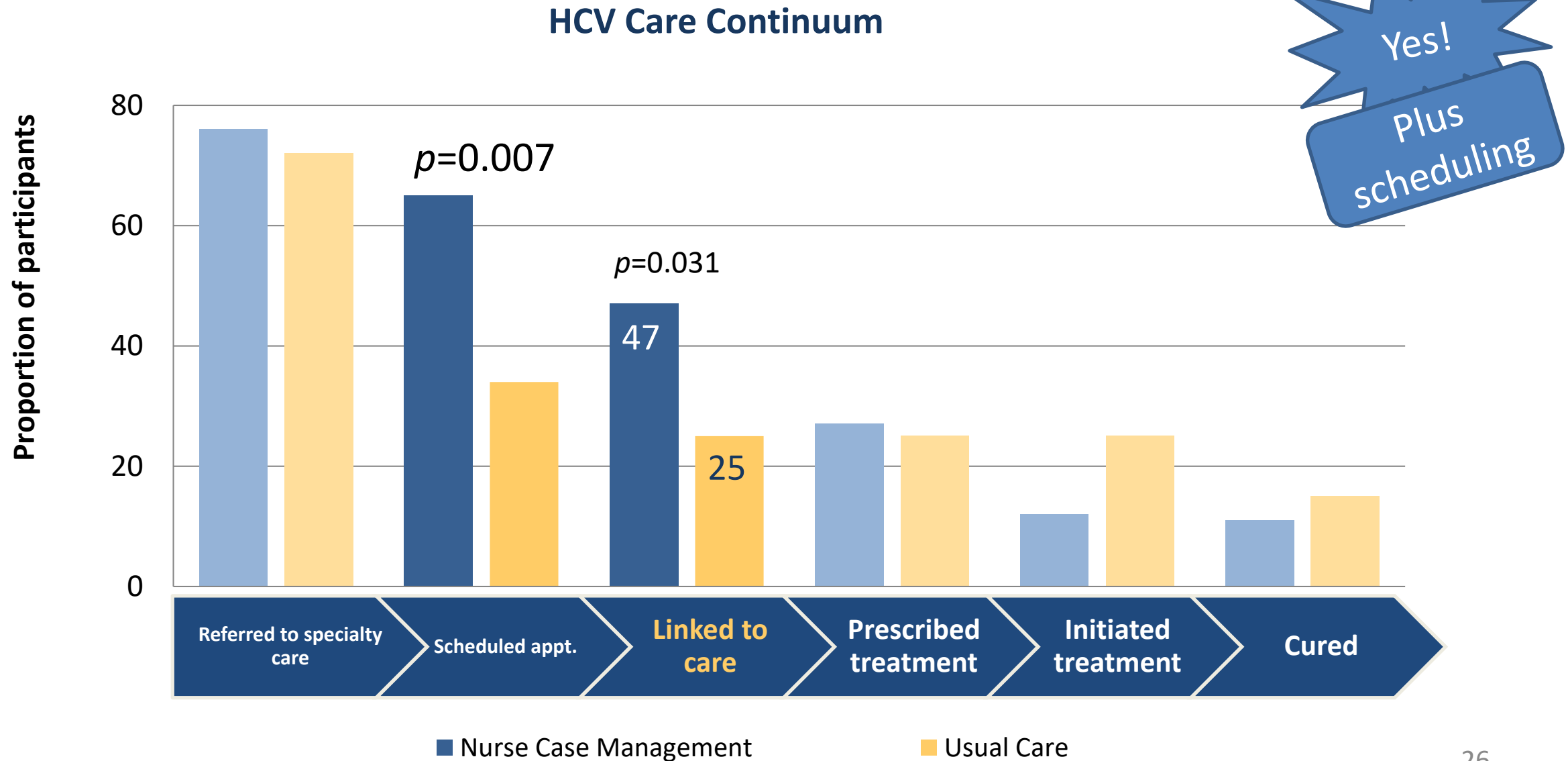
# Does nurse case management improve linkage to HCV care compared to usual care?



## HCV Care Continuum



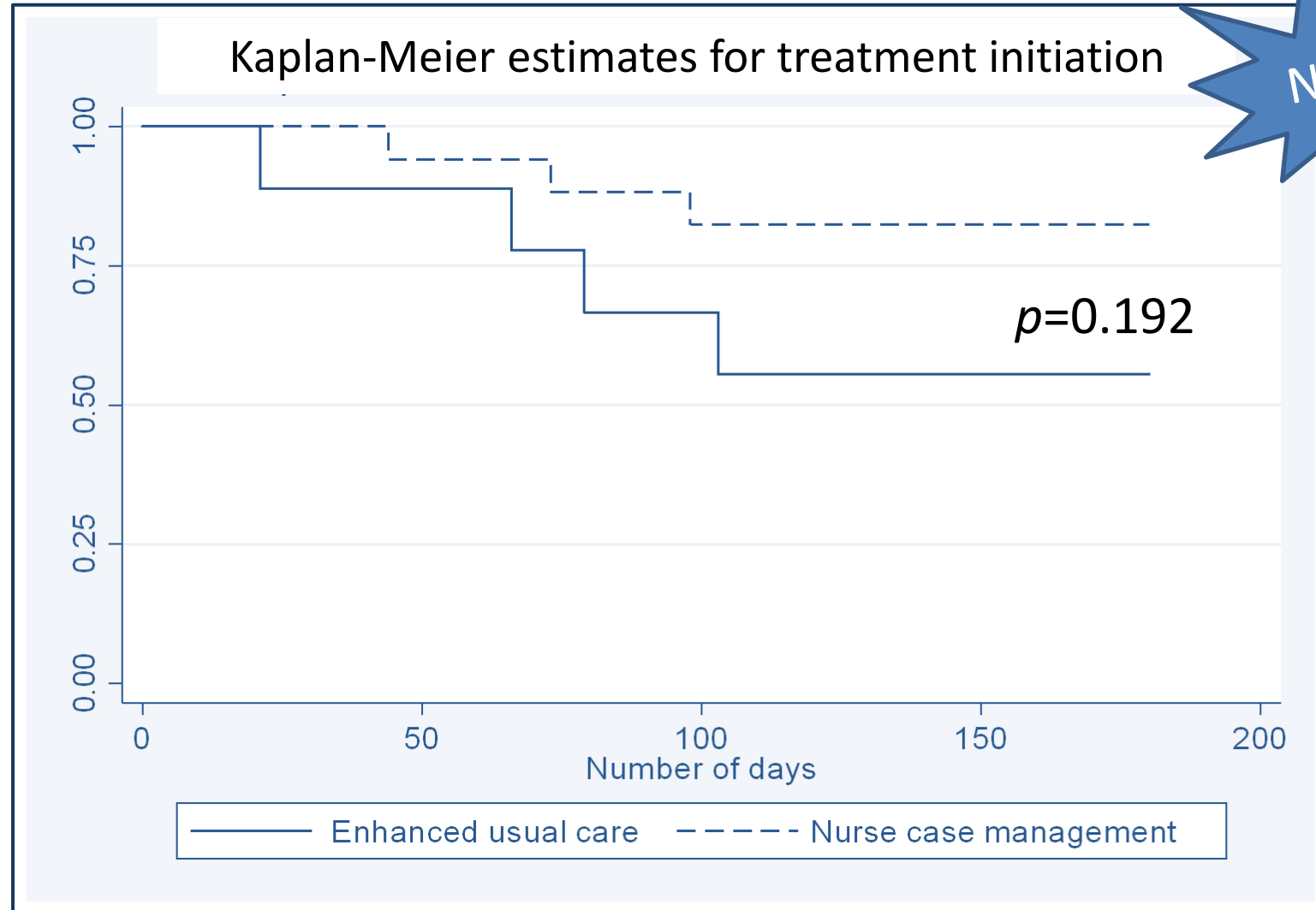
# Does nurse case management improve linkage to HCV care compared to usual care?



*Does nurse case management decrease time to HCV treatment initiation compared to usual care?*

Mean time to treatment initiation:

- Nurse case management: 72 days
- Usual care: 98 days

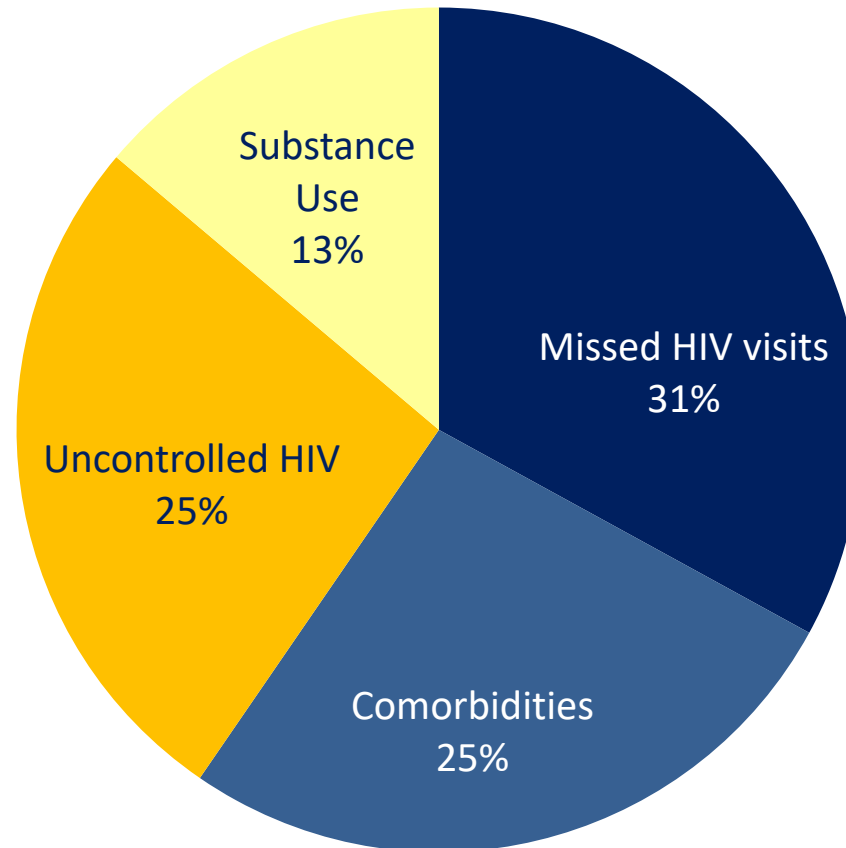


No (?)

# What patient-level characteristics are associated with success across the HCV care continuum?



## Reasons for non-referral



# What patient-level characteristics are associated with success across the HCV care continuum?



	Adjusted odds ratio*	p value	95% Confidence Interval
Alcohol use	3.792	<b>0.030</b>	1.140 – 12.612

\*model adjusted for randomization arm, CD4 cell count, alcohol use

Patients who drank alcohol were 3.8 times more likely to schedule an HCV appointment than patients who did not drink.

# What patient-level characteristics are associated with success across the HCV care continuum?



	Adjusted odds ratio*	p value	95% Confidence Interval
Alcohol use	3.786	<b>0.016</b>	1.287 – 11.132

\*model adjusted for randomization arm and alcohol use

Patients who drank alcohol were 3.8 times more likely to attend an HCV appointment than patients who did not drink.

# What patient-level characteristics are associated with success across the HCV care continuum?



	Adjusted odds ratio*	p value	95% Confidence Interval
Alcohol use	4.178	<b>0.035</b>	1.105 – 15.803
Know someone who cured hepatitis C	5.238	<b>0.014</b>	1.403 – 19.553
Medication for opioid use disorder	0.248	<b>0.036</b>	0.067 – 0.915

\*model adjusted for randomization arm, alcohol use, knowing someone who cured hepatitis C, and MOUD

Patients who drank alcohol were 4.2 times more likely to be prescribed HCV treatment compared to patients who did not drink.

# What patient-level characteristics are associated with success across the HCV care continuum?



	Adjusted odds ratio*	p value	95% Confidence Interval
Alcohol use	4.178	<b>0.035</b>	1.105 – 15.803
Know someone who cured hepatitis C	5.238	<b>0.014</b>	1.403 – 19.553
Medication for opioid use disorder	0.248	<b>0.036</b>	0.067 – 0.915

\*model adjusted for randomization arm, alcohol use, knowing someone who cured hepatitis C, and MOUD

Patients who knew someone who had cured their HCV were 5.2 times more likely to be prescribed HCV treatment compared to patients who did not know anyone cured of HCV.



# What patient-level characteristics are associated with success across the HCV care continuum?



	Adjusted odds ratio*	p value	95% Confidence Interval
Alcohol use	4.178	<b>0.035</b>	1.105 – 15.803
Know someone who cured hepatitis C	5.238	<b>0.014</b>	1.403 – 19.553
Medication for opioid use disorder	0.248	<b>0.036</b>	0.067 – 0.915

\*model adjusted for randomization arm, alcohol use, knowing someone who cured hepatitis C, and MOUD

Patients taking medication for opioid use disorder (MOUD) were 75% less likely to be prescribed HCV treatment compared to patients who did not take MOUD.

# What patient-level characteristics are associated with success across the HCV care continuum?



	Adjusted odds ratio	p value	95% Confidence Interval
Know someone who cured hepatitis C	8.049	<b>0.036</b>	1.147 – 56.489

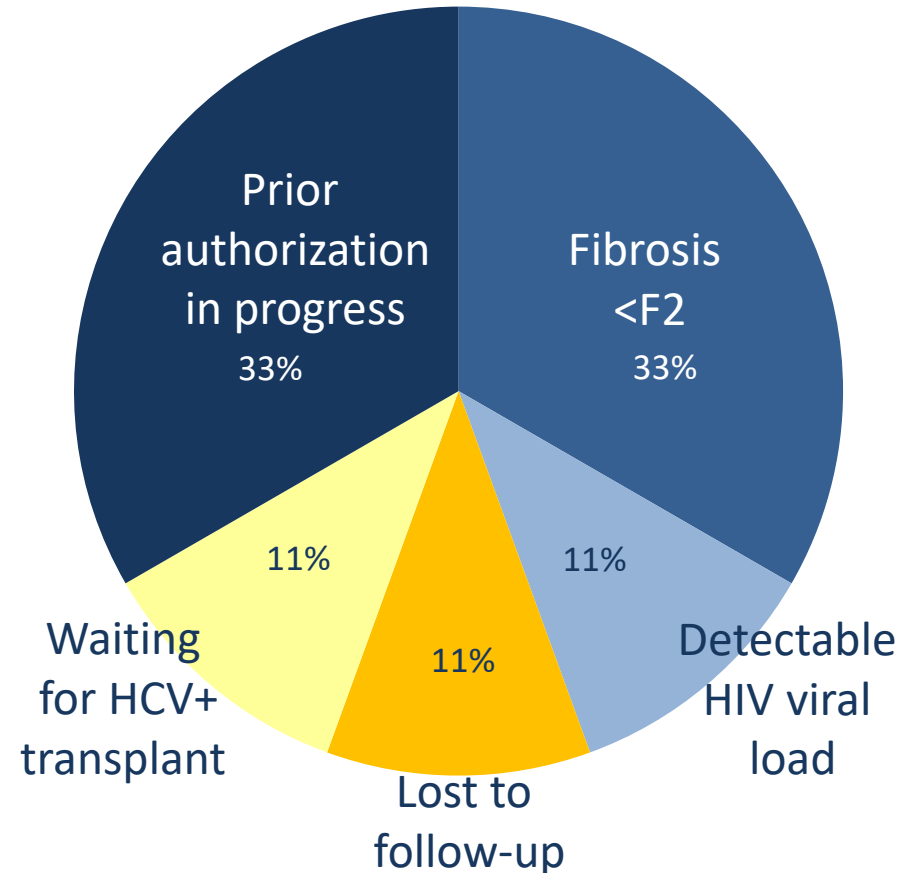
\*model adjusted for randomization arm, knowing someone who cured hepatitis C, and financial strain

Patients who knew someone who had cured their HCV were 8 times more likely to start HCV treatment compared to patients who did not know anyone cured of HCV.

# What patient-level characteristics are associated with success across the HCV care continuum?



## Barriers to initiating treatment



# Summary of Findings

- Nurse case management is an effective strategy to link adults co-infected with HIV to hepatitis C care
- Despite linking to care, few participants initiated hepatitis C treatment during the six-month follow-up
  - No improvement in time to treatment initiation
- Facilitators to succeeding in hepatitis C care continuum outcomes included alcohol use and knowing someone who had cured hepatitis C
- Taking medication for opioid use disorder was a significant barrier to being prescribed hepatitis C treatment

# Implications for Research & Practice



Case management support should span the entire care continuum

Examine the role of HIV case managers in hepatitis C care

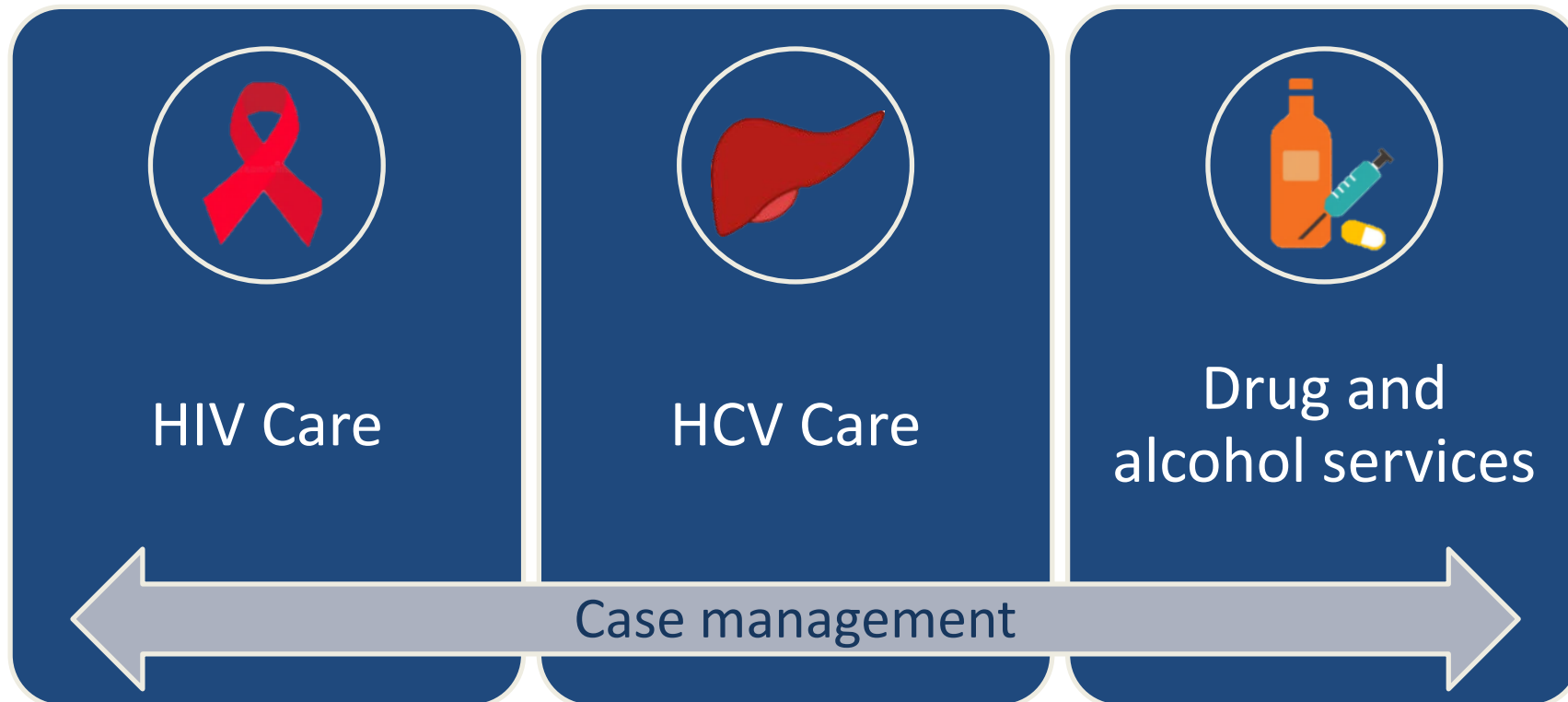
- Nurse case management vs. community health workers or peer navigators

Capitalize on social networks <sup>(24,25)</sup>

Enhance treatment pathways for people who drink alcohol

# Implications for Research & Practice

- Integrated treatment settings



# Implications for Policy

- Insurance treatment guidelines should be evidence-based
  - <https://stateofhepc.org/report/>



- Funding allocation for hepatitis C care in non-HIV clinics



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# Pop Up Question

**In what ways can providers support patients to initiate HCV treatment?**

# Discussion



# Thank you

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