

# Ending transmission of HIV, HCV, and STIs and overdose in rural communities of people who inject drugs (ETHIC)



AT THE FOREFRONT  
**UChicago**  
**Medicine**



**SIU** SCHOOL  
*of* MEDICINE

**ROI** Rural  
Opioid  
Initiative 

# Executive Summary

The opioid overdose crisis in the American Midwest has been associated with a rise in HIV and viral hepatitis infections, and rural communities have been disproportionately affected. Between 2018-2023, the **Ending transmission of HIV, HCV, and STIs and overdose in rural communities of people who inject drugs (ETHIC)** study was performed by the University of Chicago and Southern Illinois University School of Medicine with the aims of understanding the epidemiology of drug use and related infectious diseases in the 16 southernmost counties in Illinois, and to implement strategies for community-based prevention and treatment.

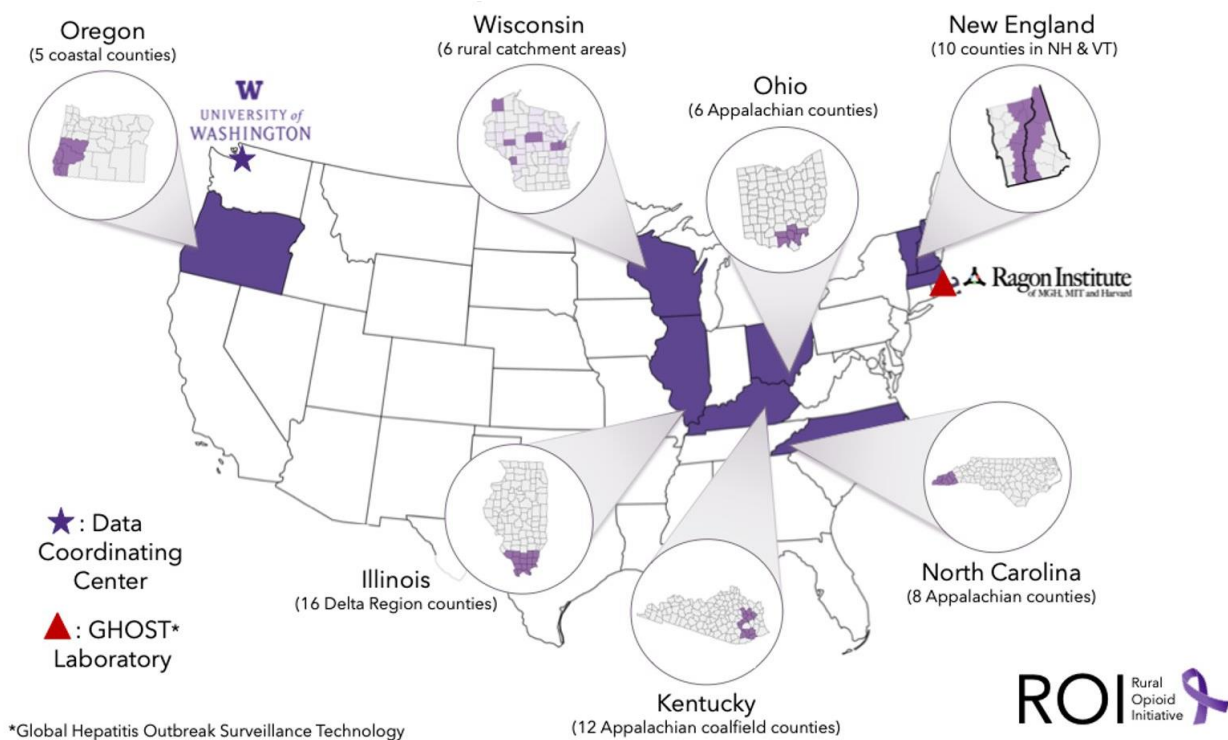
A total of 479 people who use drugs were enrolled during the study. The most frequently reported drugs used were methamphetamine (83%), followed by cocaine or crack (38%), opioid pain killers (35%), heroin (30%) and fentanyl (24%). Seventy-two percent endorsed sharing injection equipment. The vast majority had ever witnessed an overdose (70%) but only 38% possessed naloxone or Narcan®. Despite no difference in having witnessed an overdose, Black people were less likely than White people to be dispensed a naloxone kit. Regarding medical care engagement, only 8% had ever received treatment for substance use disorder and only 3% had ever taken HIV Pre-exposure Prophylaxis. While nearly one third of all participants tested positive for HCV antibody, only 25% had received treatment. Over half (56%) experienced moderate to severe psychological distress or mental health issues, and 60% had experienced homelessness. One-fifth of respondents reported the Emergency Department as their main place of medical care, although participants endorsed negative and stigmatizing healthcare experiences in this setting. Community-based harm reduction services were universally endorsed as lifesaving and an essential source of non-judgmental, empathic support.

In response to these findings the ETHIC study supported the clinical training of over 80 medical providers on medication for opioid use disorder, HCV treatment, and emergency care for people who use drugs. The study supported the scale up of harm reduction services, including extension through additional mobile units and the expansion of geographic coverage. Nearly half of those surveyed in the study became newly engaged in harm reduction services after their study participation.

# Introduction

The opioid overdose crisis in the American Midwest has been associated with a rise in HIV and viral hepatitis infections.<sup>1</sup> Rural communities have been disproportionately affected.<sup>2</sup> Counties in southern Illinois have been identified as highly vulnerable to infectious disease outbreaks related to drug use.<sup>3</sup>

In 2017, the National Institute on Drug Abuse, the Appalachian Regional Commission, the Centers for Disease Control and Prevention and the Substance Abuse and Mental Health Services Administration funded the Rural Opioid Initiative (ROI).<sup>4</sup> The ROI consists of eight studies across ten states with the goal of risk of drug overdose, HIV and hepatitis C.



Between 2018-2023, the **Ending transmission of HIV, HCV, and STIs and overdose in rural communities of people who inject drugs (ETHIC)** study was performed by the University of Chicago and Southern Illinois University to understand the epidemiology of drug use and related infectious diseases in the 16 southernmost counties in Illinois, and to implement community-based prevention and treatment. In partnership with community-based programs, state and local health departments, local coalitions and healthcare systems, ETHIC performed surveys, interviews, analyzed public health data, expanded evidence-based harm reduction interventions, and extended treatment capacity for opioid use disorder, hepatitis C, and emergency medicine based care.

# Study Phases

The ETHIC Study recruited participants into two consecutive phases:

**Phase One  
(2018-2019)  
N=173**

## **Situational Assessment**

- Analyzed public health data to identify geographic areas at risk for overdose, HIV, and HCV outbreak
- Performed surveys, interviews, and infectious disease screening of people who use drugs to inform targeted prevention and treatment

**Phase Two  
(2019-2023)  
N=306**

## **Community Response Interventions**

- Expand harm reduction services through direct study referral
- Expand treatment capacity for HCV, MOUD, ED treatment through ECHO Model

# Study Team

## **University of Chicago & Southern Illinois University School of Medicine**

- Study leadership
- Study administration
- Data collection, analysis and dissemination

## **The Community Action Place, LLC (tCAP)**

- Community collaborator lead
- Community Advisory Board
- Study participant referral, screening and referral to services

## **Illinois Department of Public Health**

- Public health dataset analysis, data dissemination

# Participant Demographics

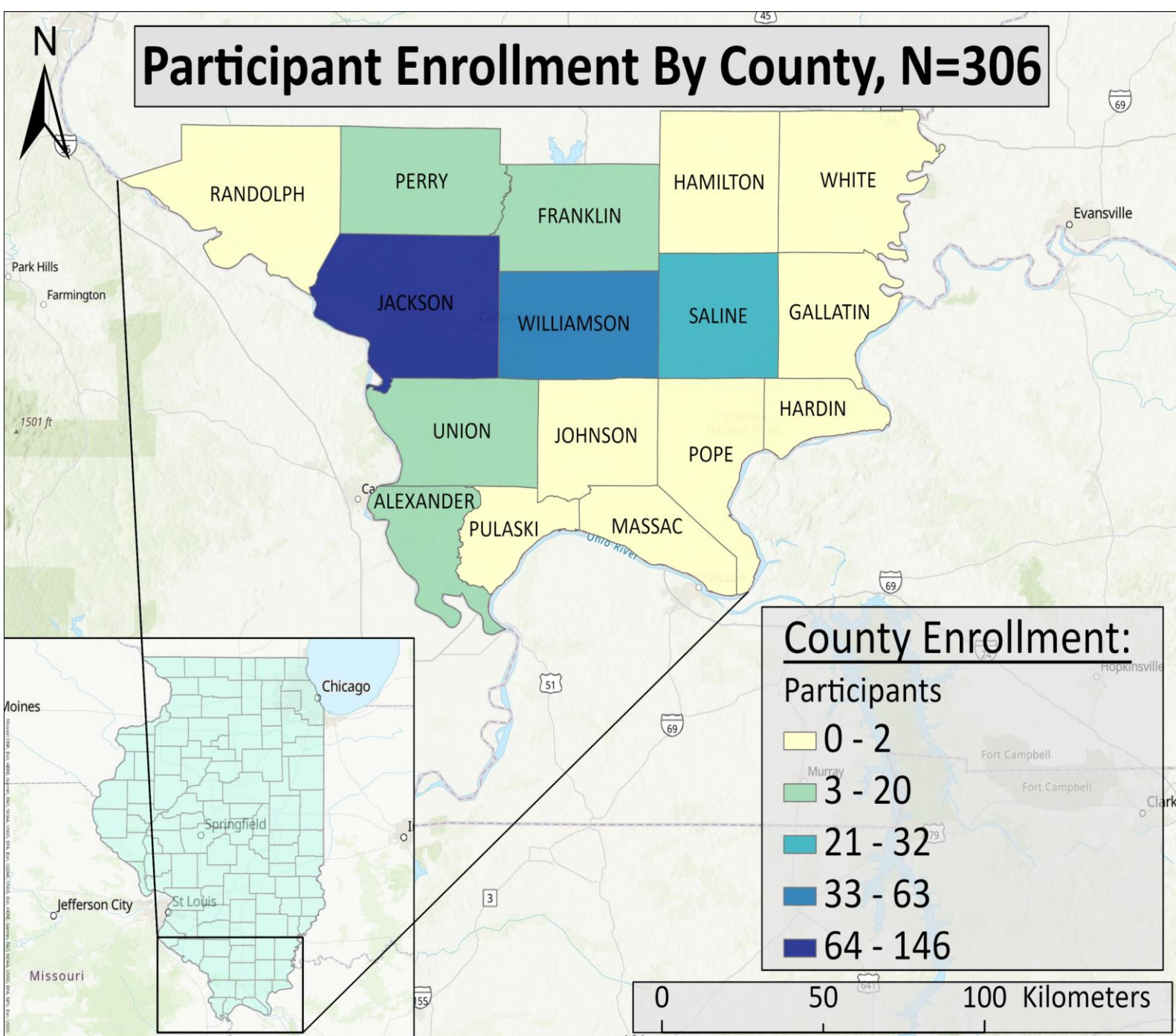
In Phase 2 we enrolled 306 participants. Eligibility included age  $\geq$  15 years old, who have who have used opioids or stimulants by any route, or injected any drugs, o get high in the past 30 days, English-speaking, able to provide informed consent at the time of the study visit and residing in the study counties.

Characteristics		N(%)
Age (mean)		42 (11%)
Gender	Male or man	197 (65%)
	Female or woman	108 (35%)
	Transgender male	0 (0.0%)
	Transgender female	1 (0.3%)
Race	White	230 (75%)
	Black	58 (19%)
	American Indian	7 (2%)
	Asian or Pacific Islander or Native Hawaiian	1 (0.3%)
	Mixed Race	1 (0.3%)
	Other	9 (3%)
Sexual Orientation	Straight or heterosexual	268 (87%)
	Lesbian or gay	8 (3%)
	Bisexual	24 (8%)
	Pansexual	4 (1%)
	Queer	0 (0.0%)
	Another sexual orientation	1 (0.3%)
	Don't know or not sure	2 (0.7%)
Education	Less than high school	84 (27%)
	High school graduate	101 (33%)
	Some college	84 (28%)
	Associates degree or trader school	26 (9%)
	Bachelors degree or more	10 (3.3%)
Housing	Experienced Homeless in past 6 months	184 (60%)

# Participant Enrollment By County

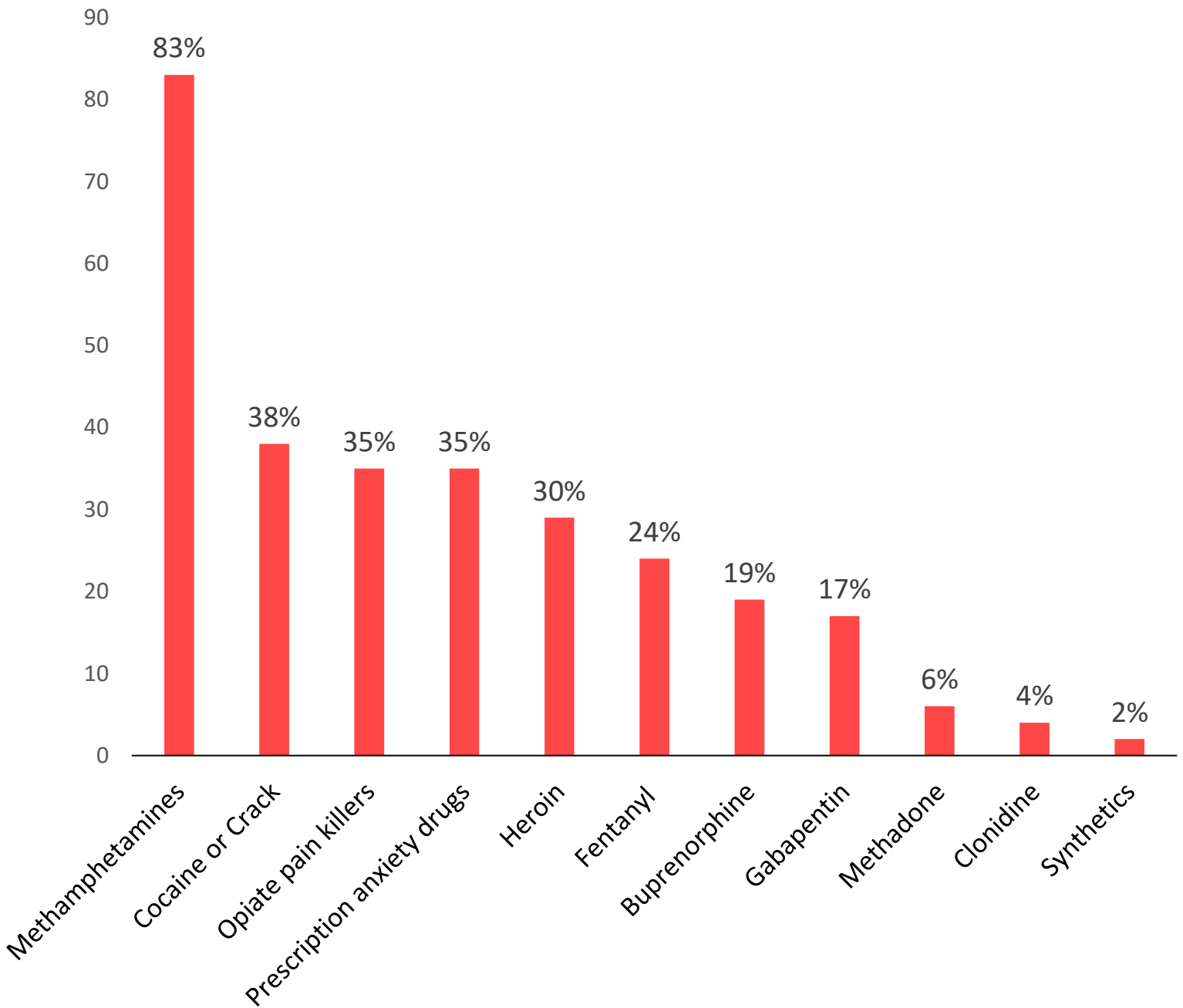
Participants were recruited from the 16 southernmost counties in southern Illinois. Most were recruited from Jackson, (48%), Williamson (21%), and Saline (11%) counties. Participants were recruited through the Community Action Place (tCAP) as well as public recruitment events. We implemented incentivized peer referral which encouraged participants to bring their peers into the study. We enrolled a total of 479 study participants (173 in phase one and 306 in phase two).

## Participant Enrollment By County, N=306



# Drug Use Characteristics

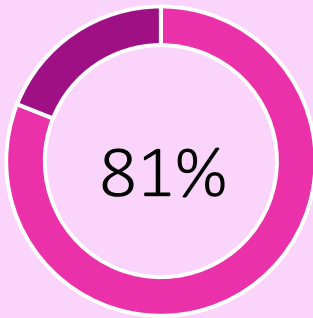
## Drug Use (self report), in the Last 30 Days



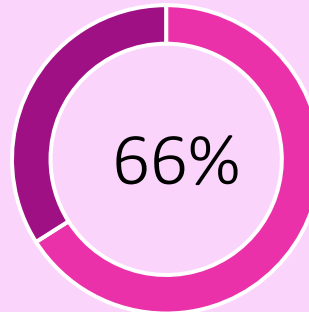
Polysubstance Use	N (%)
Methamphetamines + Heroin	78 (25%)
Methamphetamines + Cocaine/crack	76 (25%)
Any Opioid + Benzodiazepines	7 (2%)

# Injection Drug Use Characteristics

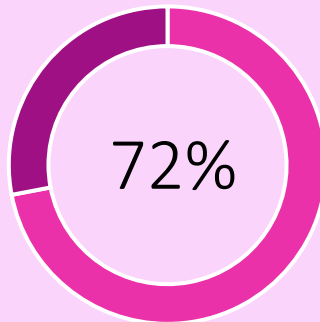
## Injection Drug Use Behavior



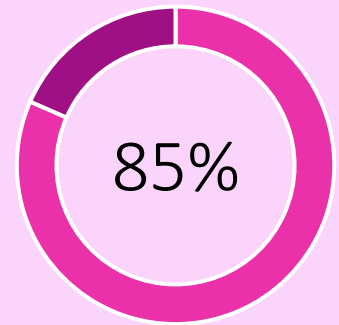
Of participants injected alone



Injected drugs using equipment that had been used by somebody else



Injected more than one time in a single sitting from the same solution



Injected in the presence of other people who were also injecting

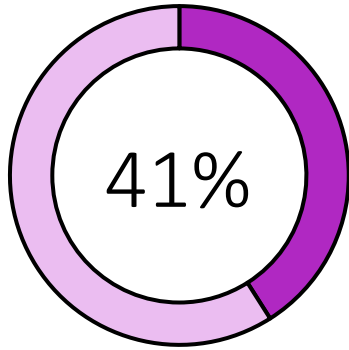
*“When I started shooting dope, it was rash...Like you didn't sit around in the room and everybody in the room was shooting dope. You know what I mean? You went to the bathroom, did your thing real quick, and came back. Nowadays we have 14, 15-year-old kids shooting dope. With them passing out the sterile stuff with people doing it, it's going to save a lot of kids' livers and kidneys from hep C.”*

Injection, Type of Drug (Last 30 Days)	N (%)
Methamphetamine, Crystal Meth, or Amphetamines (not as prescribed)	276 (90%)
Street Fentanyl or Carfentanil Powder	165 (56%)
Heroin	159 (53%)
Drug combination	154 (52%)
Opioid Painkillers (Oxycontin, Percocet, Vicodin not as prescribed)	124 (42%)
Cocaine or Crack	124 (42%)
Buprenorphine (Suboxone or Subutex not as prescribed)	119 (41%)
Prescription Anxiety Drugs (Xanax, Valium, Klonopin not as prescribed)	108 (37%)
Synthetics (U4 or "Pink")	107 (37%)
Methadone (not as prescribed)	106 (36%)



# Overdose & Naloxone Statistics

## Overdose



of participants  
have ever  
overdosed

On average, participants experienced

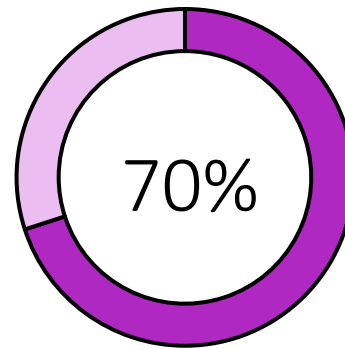


overdoses in their lifetime

On average, participants knew



people who have died from an  
overdose in the last 6 months

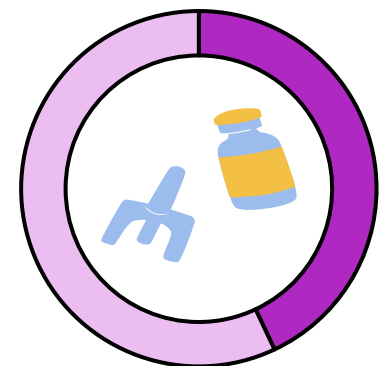
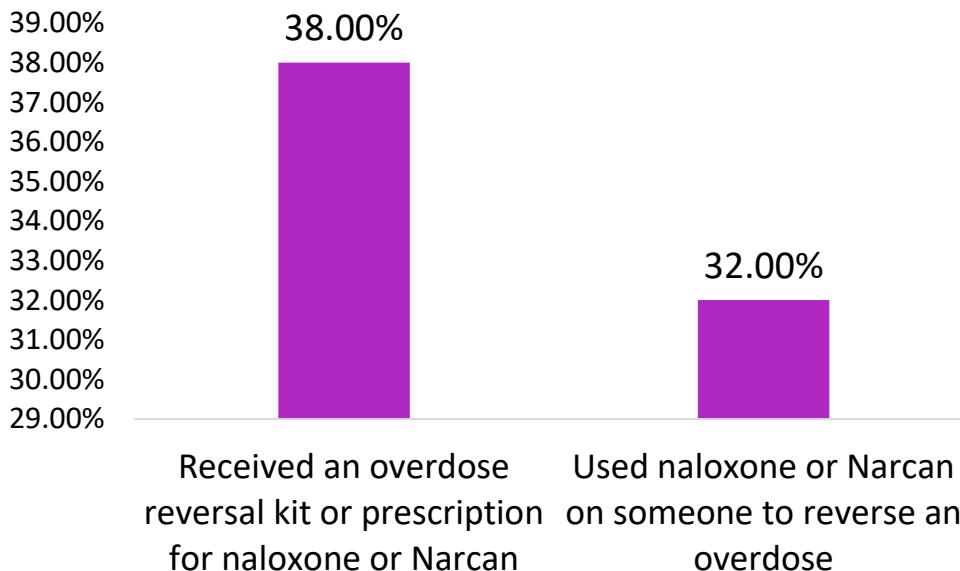


Of people have  
witnessed an  
overdose

*"It gives you the chance to make the right decisions and quit to beat this battle I guess you could say, man. I don't know, man. They're a wonderful thing, man. They're distributing Narcan and everything. I've seen it save so many lives. It's ridiculous, man."*

## Naloxone aka Narcan<sup>®</sup>

Narcan Possession and Use (Last 6 months)



43%  
of participants have  
Naloxone or Narcan at home

# Racial, Sexual and Gender Disparities

Racial disparities existed regarding harm reduction utilization, as well as naloxone possession despite no difference in having witnessed an overdose.

	Race (n=302)		
	White	Non-white	p-value
Have ever used harm reduction services	38%	14%	<b>0.000</b>
Ever overdosed	48%	25%	<b>0.000</b>
Ever seen someone overdose?	71%	67%	0.531
Ever gotten an overdose reversal kit	42%	29%	<b>0.048</b>
Ever used Narcan to reverse an overdose	36%	20%	<b>0.008</b>
Have Narcan at your house now	48%	29%	<b>0.003</b>

Participants discussed childhood trauma, a family history of drug use, homophobic family environment, etc.

*“I grew up Christian, and my dad is a very mental man. He don't believe in gay marriages and he don't believe in any kind of gay relationship. He's very mean when it comes to stuff like that. So honestly, the only person that knew was my brother and my little sister. I didn't feel comfortable enough to tell my stepmom and my dad because I figured I knew that I was going to be treated way differently. ”*



# Treatment

Treatment for substance use disorder remains limited in this community.

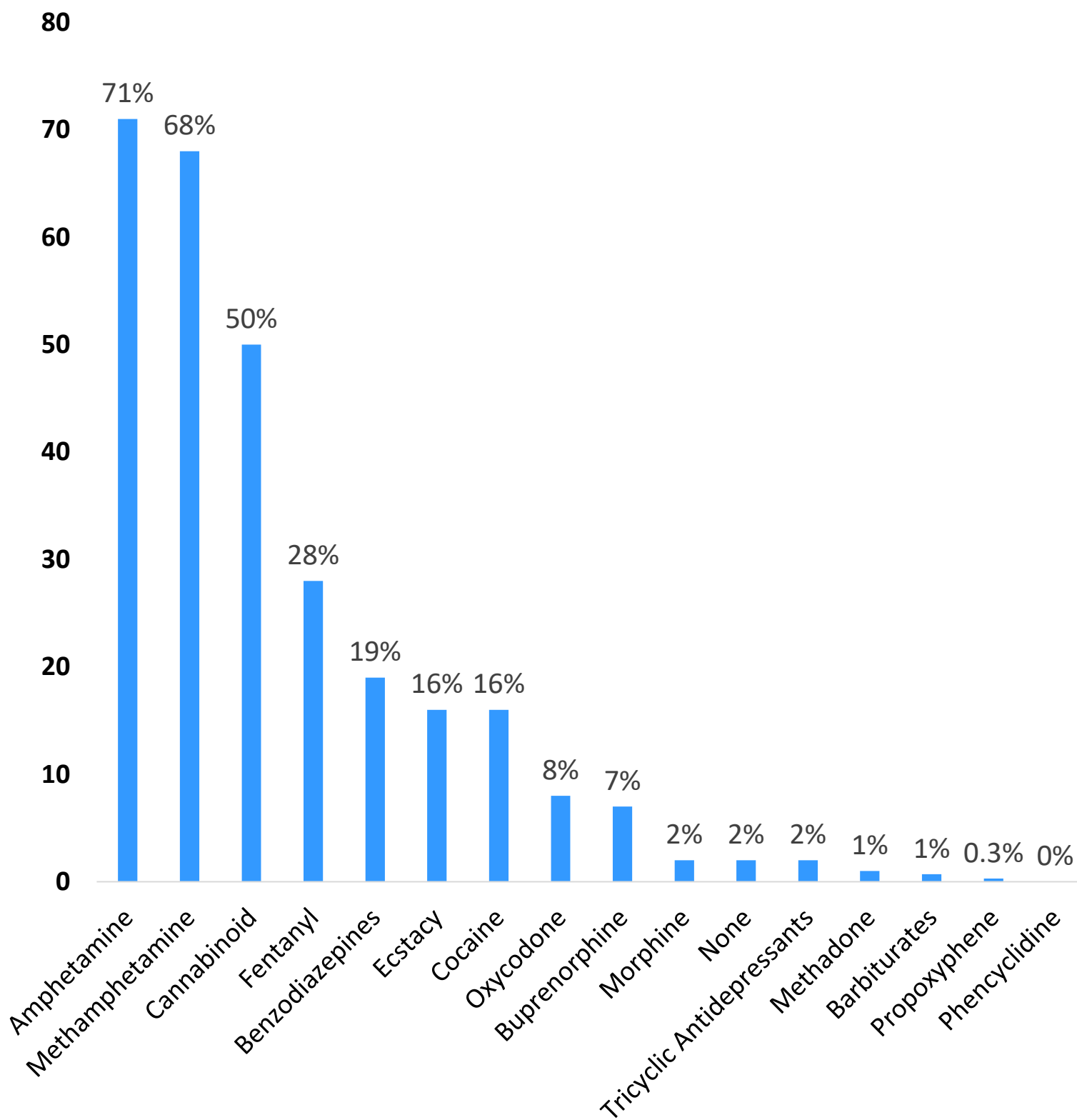


Treatment Types & Location (In the last 30 days)	N%
Outpatient substance use counseling from a provider or program	11 (4%)
Buprenorphine maintenance medication (Suboxone or Subutex) from a doctor or programs	5 (2%)
Methadone maintenance from a clinic	4 (1%)
Detox program	4 (1%)
Buprenorphine shots (Sublocade) from a doctor or program	3 (1%)
Residential or inpatient drug treatment facility	2 (0.7%)
Support group (Narcotics Anonymous, Alcoholics Anonymous, Celebrate Recovery, SMART recovery, or Rational Recovery)	2 (0.7%)
Sober house/recovery home	0 (0%)
Naltrexone shots (Vivitrol) from a doctor or program	0 (0%)

# Urine Toxicology

Toxicology findings reveal the presence of fentanyl in 28% of our study participants, representing a 4% increase compared to the 24% self-reported usage.

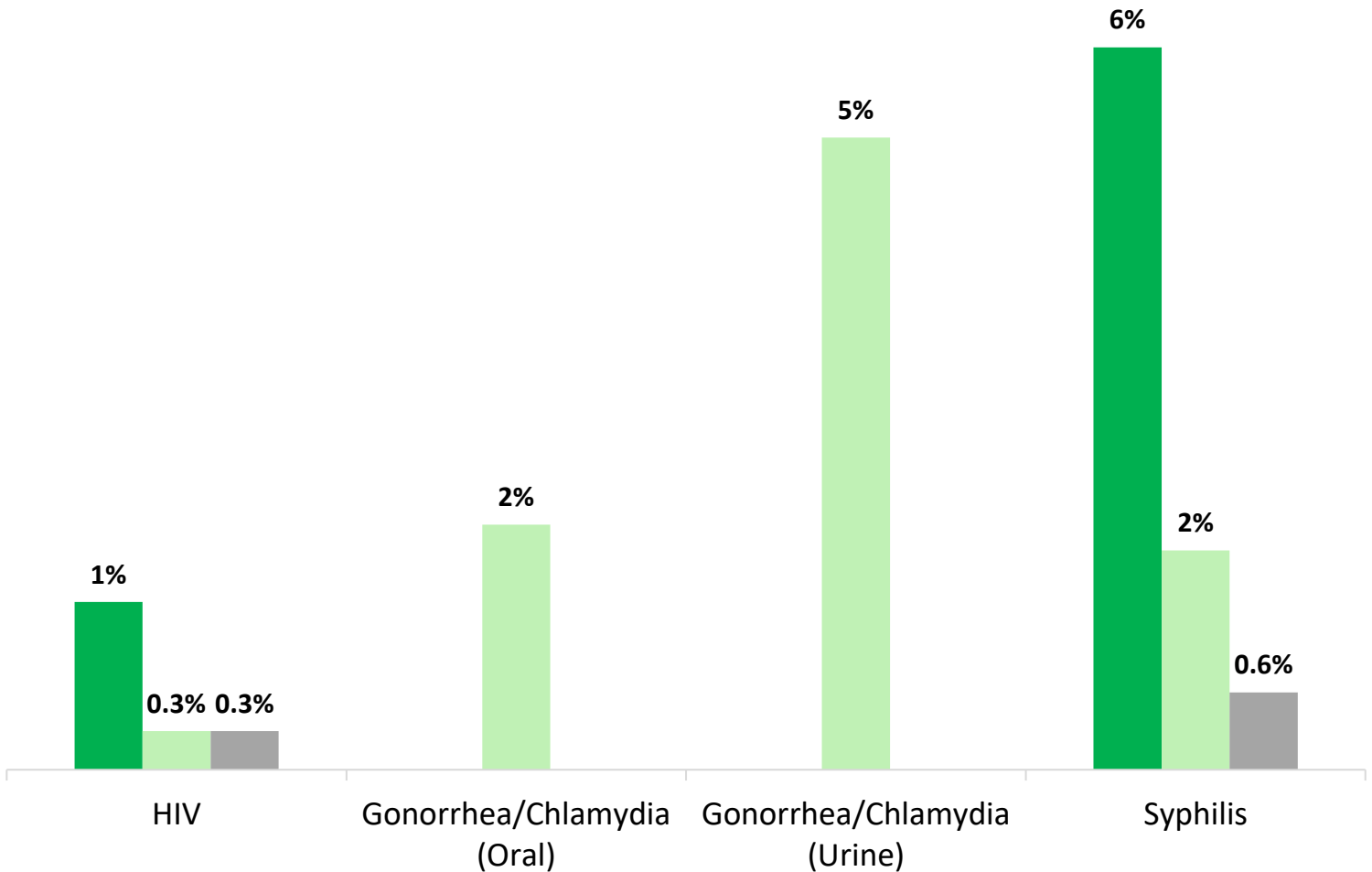
## Urine Toxicology



# HIV and Sexually Transmitted Infections

## STI Self Report and Test Results<sup>a</sup>

■ Self Report ■ Positive Rapid STI Test Results ■ Positive Confirmatory Test Results



### Sexual Behavior (in the last 30 Days)

Of those participants

60%

Of participants had vaginal or anal sex without a condom<sup>b</sup>

58%

engaged in vaginal or anal sex without a condom with someone who injects drugs<sup>c</sup>

### HIV Care Continuum



49%

Have heard of medicine people can take to prevent HIV (PrEP)<sup>d</sup>

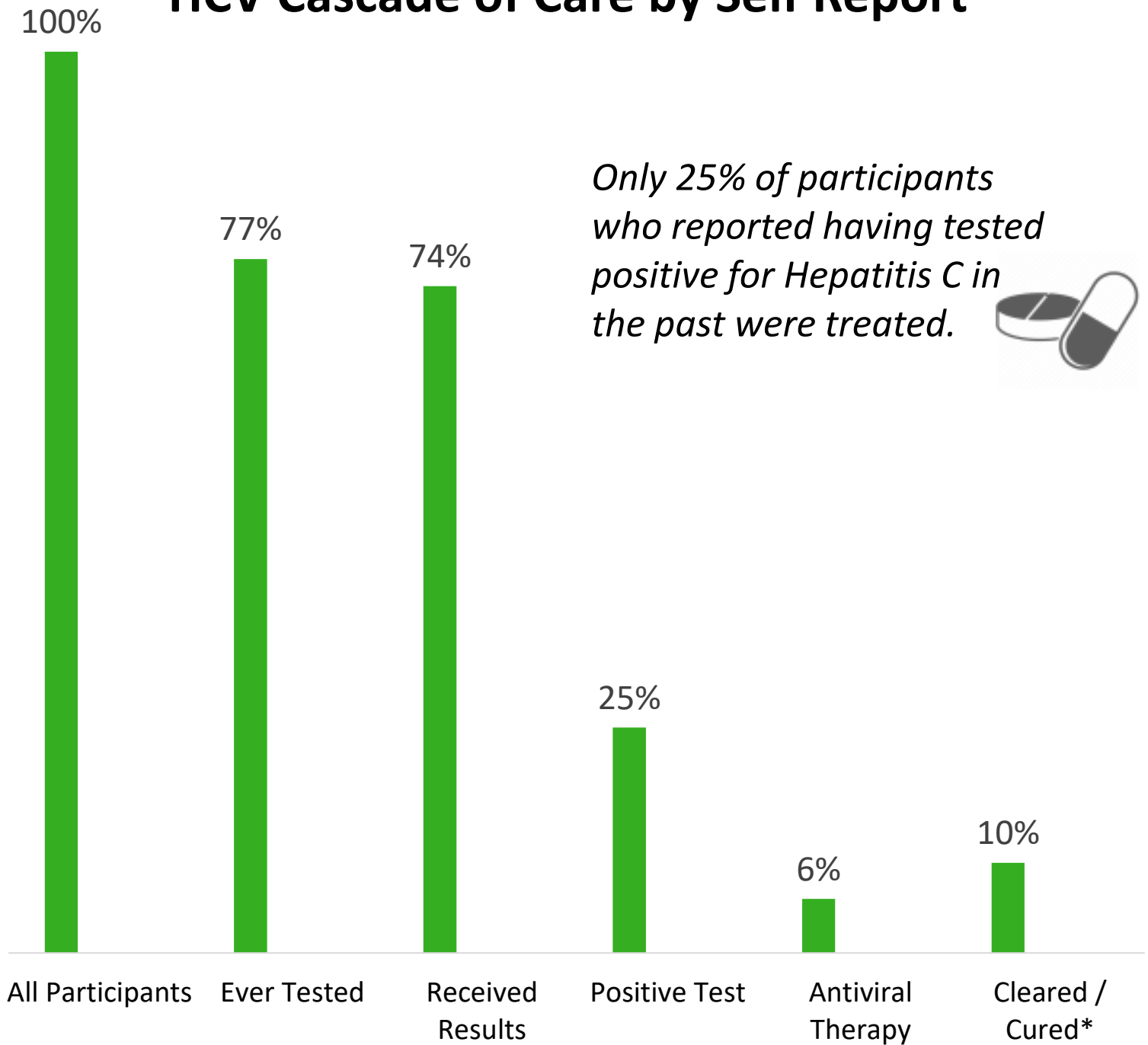
3%

Have ever been offered medicine to prevent HIV

<sup>a</sup> Total Responses: 291, <sup>b</sup> Total responses: 296, <sup>c</sup> Total Responses: 171, <sup>d</sup> Total Responses: 303, <sup>e</sup> Total Responses: 149

# Hepatitis C Cascade of Care

## HCV Cascade of Care by Self Report<sup>a</sup>



32% of all ETHIC participants (all phases) tested positive for Hepatitis on rapid point of care testing.<sup>b</sup>

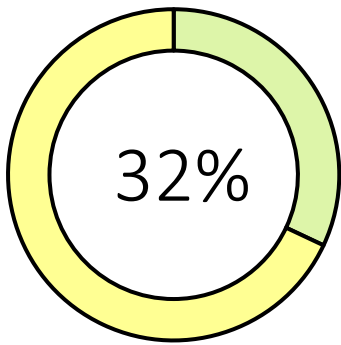
Of those participants who underwent confirmatory RNA testing, 68% were positive.<sup>b</sup>

<sup>a</sup> Total responses: 306, <sup>b</sup> Total responses: 440, \* includes spontaneous clearance

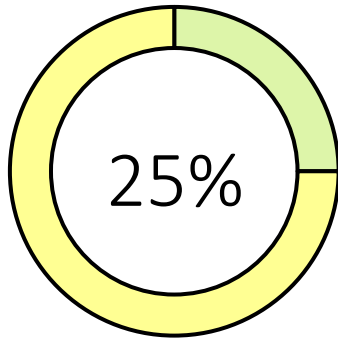
# Criminal Legal Involvement

*“Because I had a traffic stop where I got pulled over and they actually destroyed the syringe box (sharps disposal) there wasn’t anything in it, but they broke the lid... And then they wanted to question me about why the Narcan looked half empty, I was like, “Man, that’s how it came. It’s never been touched. You know what I mean. But I was like you’re giving me an issue about something that could possibly save somebody’s life.”*

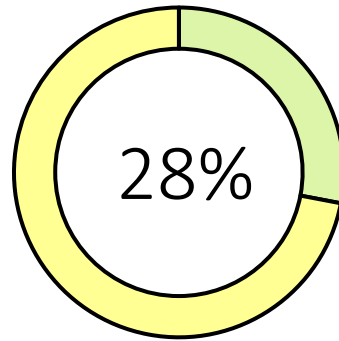
*In the last 6 months...*



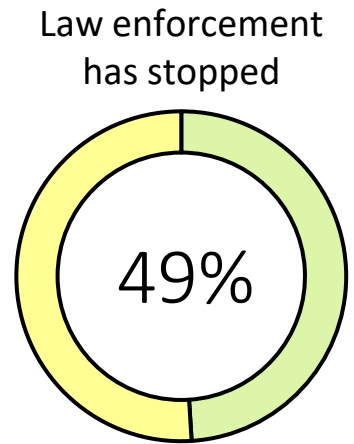
of participants have been arrested or booked <sup>a</sup>



Of participants have been on probation, parole, supervised release or community corrections supervision <sup>a</sup>



Of participants were in jail or prison <sup>b</sup>



Law enforcement has stopped  
of participants to search them, their car, or belongings

**18%**

*of participants have been referred to a drug court or drug diversion program <sup>c</sup>*

*“My brother actually went to the ER. I don’t even remember what he went for. And they drug tested him and they called the cops on him. And they’re not even supposed to do that. And he ended up going to jail because they called the cops because he failed his drug test and they didn’t like him anyways... so he went to jail.”*

# Healthcare Access & Services

## Healthcare Access

Do you have a way to get to medical appointments?



47%

Have a car, or can walk



13%

Have no access



28%

Maybe (if a friend or relative is available)

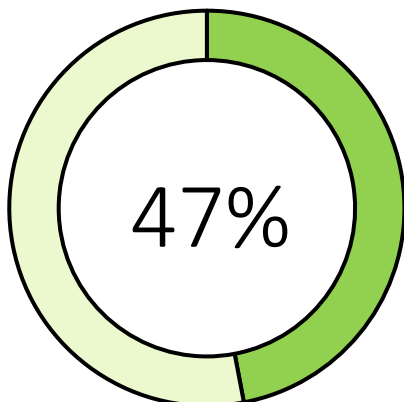


12%

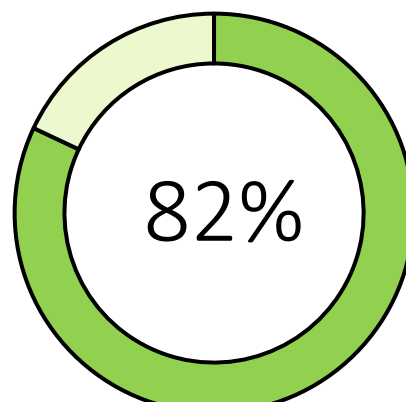
Maybe (if public transit is available)

*"it's very, very hard to go to that ER without being there for two or three hours and walking out with nothing other than more resentment, more frustration and pain and anxiety and feeling more wronged and more dehumanized and less trust and faith in your own nation. Honestly, every day of my life, I'd give anything just to have real healthcare and real support health wise."*

What is the main place where you received medical care in the past 6 months?	N (%)
I have not received medical care in the past 6 months	88 (29%)
Private doctor	68 (22%)
Emergency department	67 (22%)
Community health center	57 (19%)
Urgent care center	10 (3%)
Other	7 (2%)
Jail or prison	5 (2%)
Health department	2 (0.7%)
Mobile health clinic or van	0 (0.0%)



*Of participants currently see a primary care provider at least once per year*



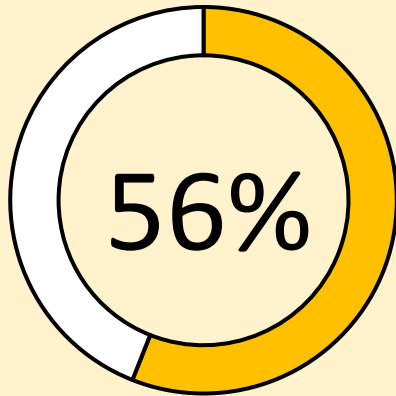
*Of participants are covered by Medicaid*





# Mental Health

More than half of our participants experience moderate to severe psychological distress or mental health issues<sup>a</sup>

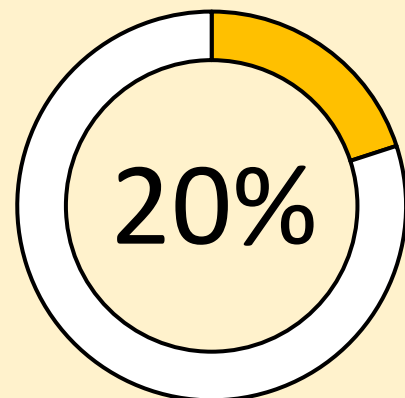


*"The key need, mental healing. I feel like most drug addicts... we start using drugs in the first place because something happened to us and drugs are the only way we know how to mask that."*



*"We've been so hurt. We've got a community so hurt by people that were supposed to love them, that they just don't trust anybody."*

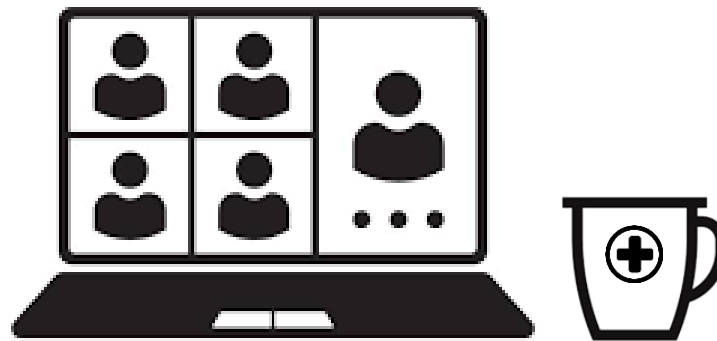
20% of our total participants may be exhibiting symptoms associated with PTSD<sup>b</sup>



<sup>a</sup> Past 30 days, using the Kessler Psychological Distress Scale (K6), <sup>b</sup> Past 30 days, using the Primary Care PTSD Screen for DSM-5

# Expanding Treatment Access

The ETHIC study funded workforce development and treatment capacity building for substance use disorder and hepatitis C virus, and emergency department personnel training for treatment of people who use drugs in southern Illinois.



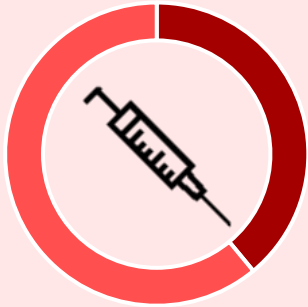
We used the Expansion of Community Health Outcomes (ECHO) model and partnered with ECHO-Chicago, the Southern Illinois School of Medicine, the Illinois Hospital Association, and the Illinois College of Emergency Medicine Physicians.

We trained **> 80** medical providers in:

- Medication for Opioid Use disorder
- Hepatitis C treatment
- Emergency Care for People Who Use Drugs

# Harm Reduction Service Access

*In the past 30 days...*



39%

Got new syringes, cottons,  
or cookers from an SSP <sup>a</sup>



40%

Got new syringes or  
needles from a pharmacy <sup>b</sup>

36%

of participants don't  
know where the  
nearest syringe  
exchange program is <sup>c</sup>

Over the course of the study tCAP experienced a **5-fold** expansion in their participant base and a **3.5-fold** expansion in their zip-codes served



**48%** of those surveyed who were not previously receiving harm reduction services became newly engaged in tCAP services after their study participation

*And as far as the Narcan and whatnot, I don't know -- I know you can get a prescription for it, but like me, I can't get a prescription because I'm not an opioid user. So for me to get -- I wouldn't know where I would get Narcan. But like I told you, a year and a half ago, roughly, if it wasn't for you guys [tCAP], I wouldn't have had the Narcan that literally saved my fiancé's life, literally."*

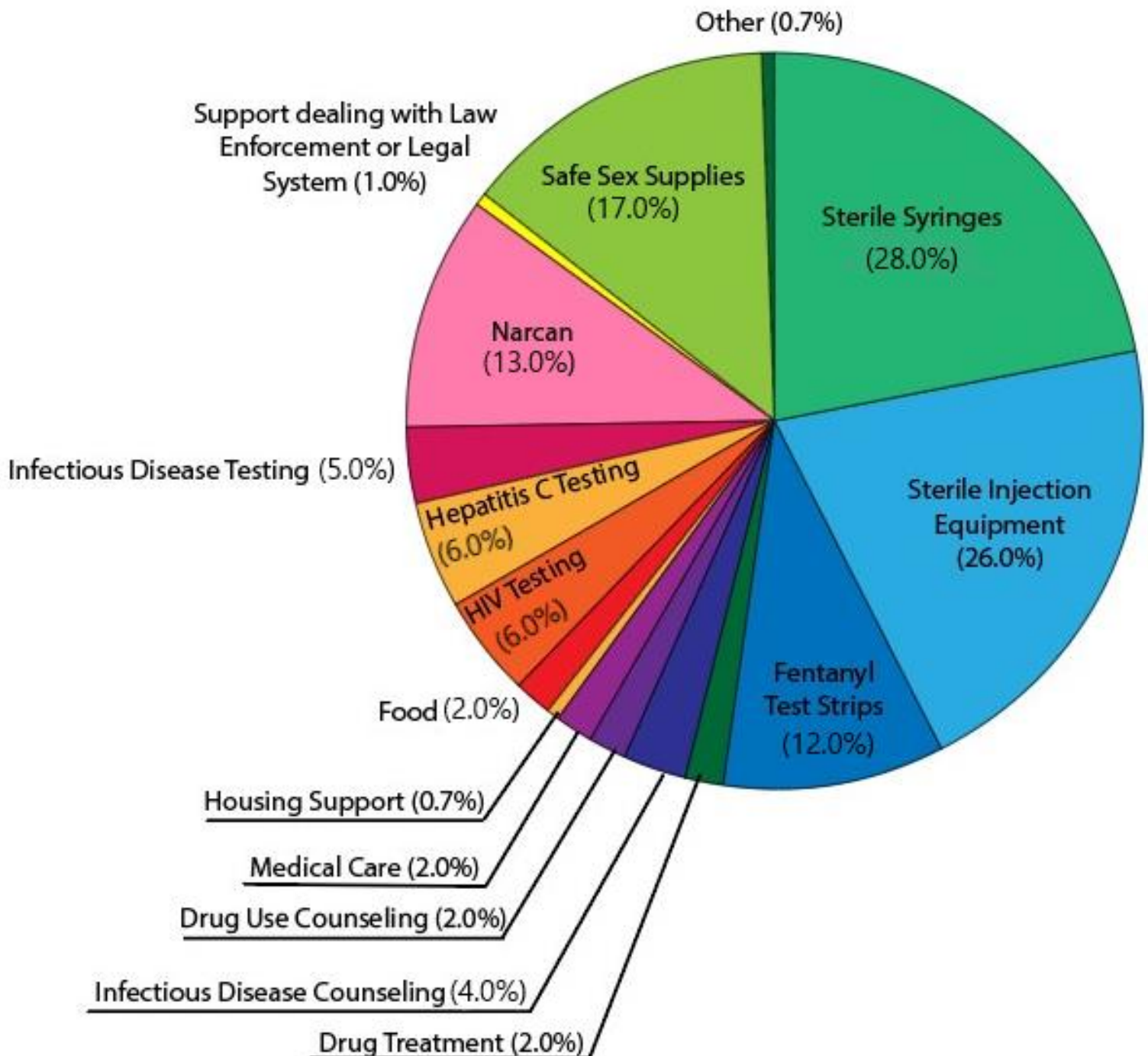
# The Community Action Place (tCAP)

In the past 6 months

**31%**

of participants received services from tCAP

The main services requested included sterile syringes (28%), injection equipment (26%), safe sex supplies (17%), Narcan (13%), and fentanyl test strips (12%).



# tCAP Testimonials

*"I would still have hepatitis B [sic] if it weren't for you guys the staff helped me really well. They took me to all my appointments and everything. Not many people would be willing to do that."*

*"Some people don't have transportation to go and get it themselves, and then the Community Action Place actually be willing... to come to your home and drive. I mean, they even go to Cairo and that's like an hour away from here. So I mean, it really does help when they are willing to bring you these harm reduction kit that you need badly if you need to stay safe and, you know, reduce yourself from a lot of harm"*

*"He cares about the community, cares about people being healthy and feeling a place for us, you know? Worthy. And he'll take the time to visit and make sure everybody's doing well. It's not just needles, you know, it's about making a connection"*

*"When [Participants partner] overdosed and we didn't have Narcan, I was scared to death. I had no idea. I had never been there during the overdose...I didn't know what to do. First thing I did was pick up the phone and called [tCAP Staff] and he was there to talk to me and kind of like, just kind of tell me what to expect and what to watch for and it -- he was a lifesaver for me"*

*"I'm 100% comfortable with [the harm reduction provider]. He's been nothing but a saint to me and [participants partner]...I have so much respect for him for bringing a harm reduction service to our area, which we had absolutely nothing to speak of. And like the way he went about it, and just doing it himself, like, I can't say enough about how much I respect that"*

# Acknowledgements

**Thank you to all of our study participants**

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Jerel Ezell

**Community Partners**

Rainbow Café – Carrie Vine,  
Cy Chamberlain, Alex Socorro  
Hopewell Baptist Church  
NAACP, Carbondale Chapter

**The Community Advisory Board**

**In memorium**

Zachary Gulley