

# HIV, Hepatitis and the Fourth Wave of the Opioid Epidemic: Syndemics in a Post-Pandemic World

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# Learning Objectives

1. Understand how changes in the epidemiology of opioid and methamphetamine use disorder have posed obstacles to the goals of ending the HIV epidemic
2. Recognize the potential impact of incorporating screening, linkage to care, and low-threshold treatment for hepatitis C infection in addiction treatment settings
3. Discuss a research agenda for a comprehensive, patient-centered approach to health and safety of people who inject drugs



# The time is now.



Ending  
the  
HIV  
Epidemic



**Diagnose** all people with HIV as early as possible.

**Treat** people with HIV rapidly and effectively to reach sustained viral suppression.



**Prevent** new HIV transmissions by using proven interventions, including pre-exposure prophylaxis (PrEP) and syringe services programs (SSPs).

**Respond** quickly to potential HIV outbreaks to get needed prevention and treatment services to people who need them.



<https://www.cdc.gov/endhiv/index.html>

<https://www.hiv.gov/federal-response/ending-the-hiv-epidemic/key-strategies/>



# America's HIV Epidemic Analysis Dashboard (AHEAD)

A WHOLE OF SOCIETY INITIATIVE

## National Progress

AHEAD displays *Ending the HIV Epidemic in the U.S.* (EHE) indicator data for all 50 states with a focus on 57 priority areas. Tracking this data at the community level serves to highlight our progress as a nation.

Incidence

Knowledge of Status

Diagnoses →

Linkage to HIV Medical Care

Viral Suppression

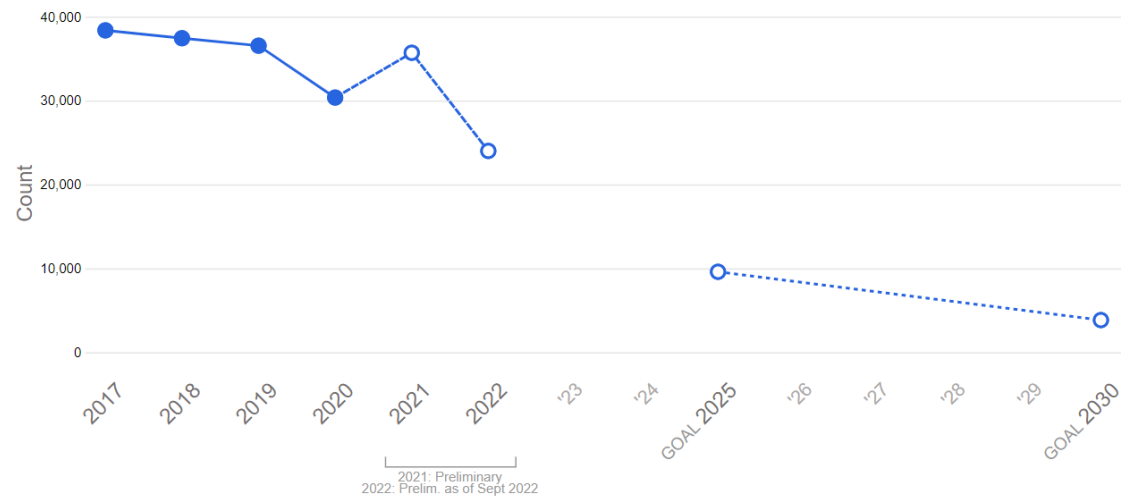
PrEP Coverage

 National Goals

Decrease ↓ confirmed HIV diagnoses by 75% by 2025 and 90% by 2030.

In 2020 (COVID-19 Pandemic), 30,346 people were diagnosed with HIV.

Number of people diagnosed with HIV for a given year nationwide.



**Diagnoses** is one of the six EHE indicators. Diagnoses is the number of people with HIV infection diagnosed in a given year confirmed by laboratory or clinical evidence.



ORIGINAL ARTICLE

## HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014–2015

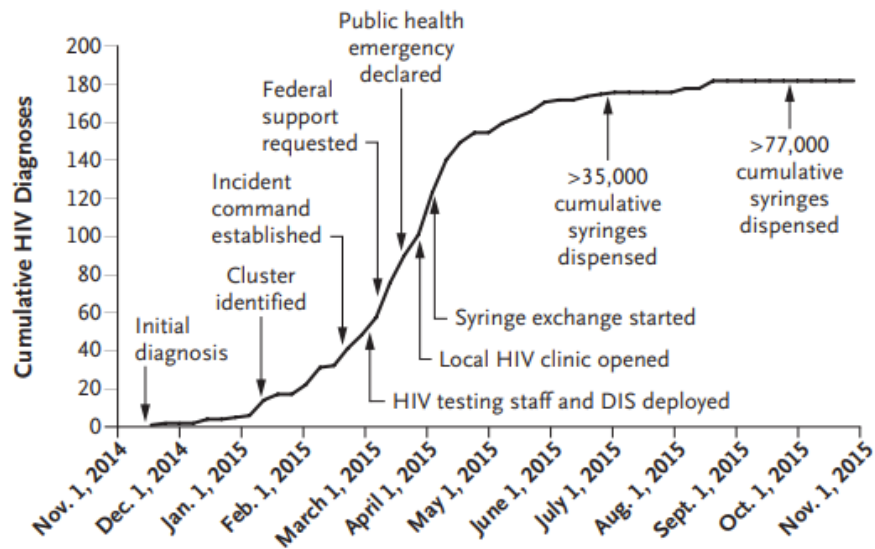
Philip J. Peters, M.D., Pamela Pontones, M.A., Karen W. Hoover, M.D., M.P.H.,  
Monita R. Patel, Ph.D., M.P.H., Romeo R. Galang, M.D., M.P.H., Jessica Shields, B.S.,  
Sara J. Blosser, Ph.D., Michael W. Spiller, Ph.D., Brittany Combs, R.N.,  
William M. Switzer, M.P.H., Caitlin Conrad, B.S., Jessica Gentry, M.A.,  
Yury Khudyakov, Ph.D., Dorothy Waterhouse, B.S., S. Michele Owen, Ph.D.,  
Erika Chapman, M.P.H., Jeremy C. Roseberry, M.A., Veronica McCants, M.S.A.,  
Paul J. Weidle, Pharm.D., M.P.H., Dita Broz, Ph.D., M.P.H.,  
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Jennifer Walthall, M.D., M.P.H., John T. Brooks, M.D.,  
and Joan M. Duwve, M.D., M.P.H., for the Indiana HIV Outbreak Investigation Team\*

### ABSTRACT

#### BACKGROUND

In January 2015, a total of 11 new diagnoses of human immunodeficiency virus (HIV) infection were reported in a small community in Indiana. We investigated the extent and cause of the outbreak and implemented control measures.

### A Cumulative HIV Diagnoses and Public Health Response



### B HIV Diagnoses According to Week of Testing

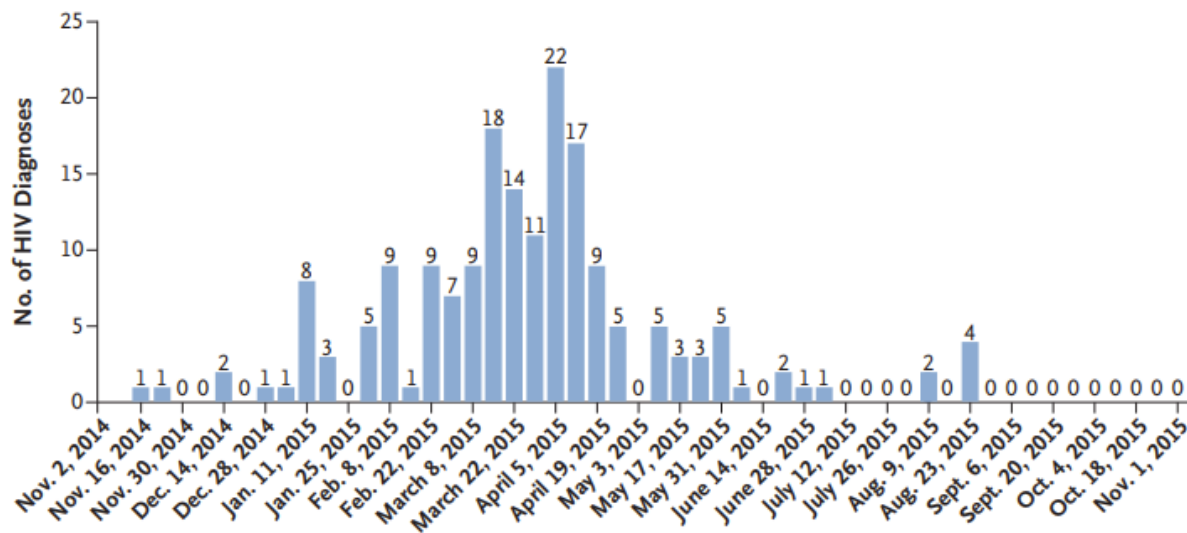
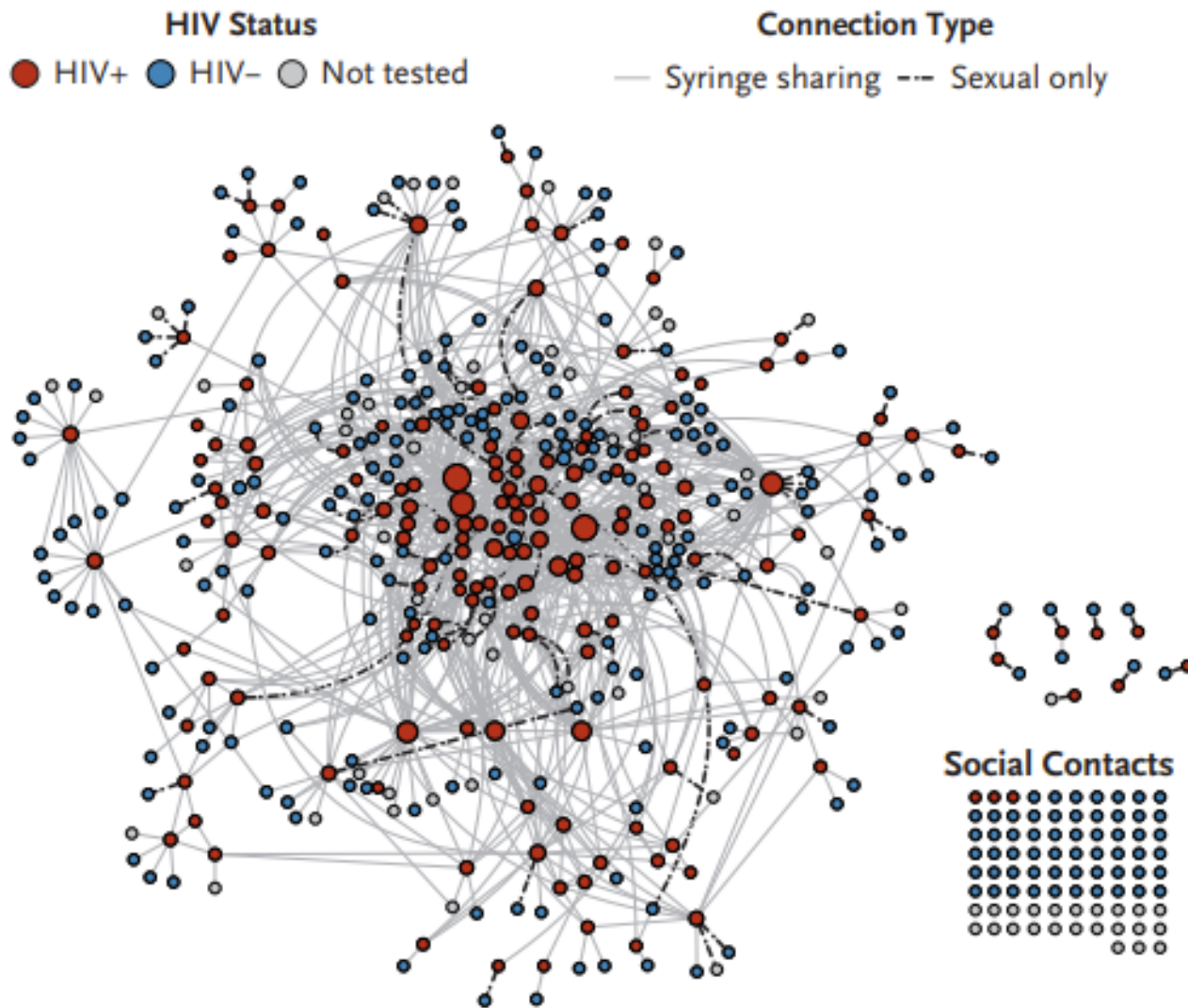


Figure 1. Outbreak of HIV Infection in Southeastern Indiana.





**Figure 3.** Syringe-Sharing Network of Persons with Newly Diagnosed HIV Infection.

# County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States

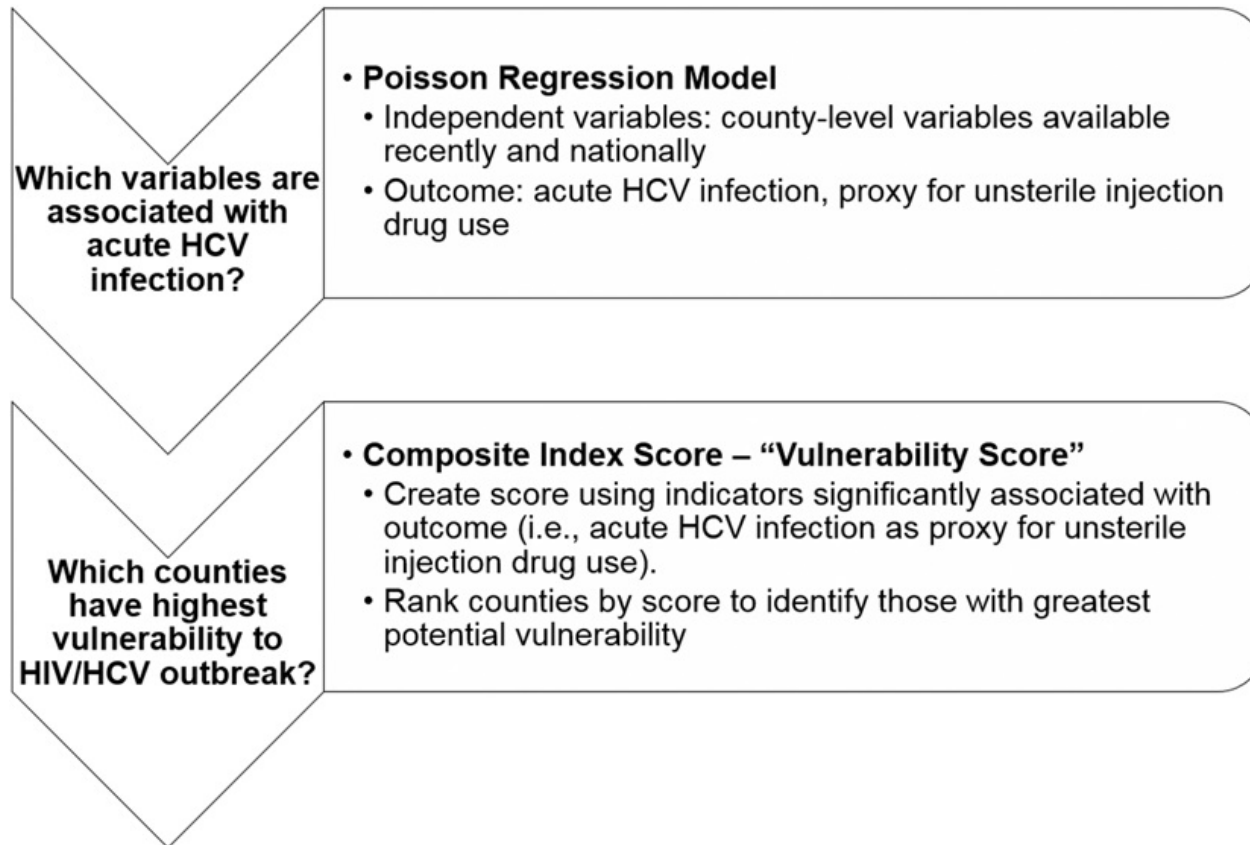
*Michelle M. Van Handel, MPH,\* Charles E. Rose, PhD,\* Elaine J. Hallisey, MA,†  
Jessica L. Kolling, MPH,‡ Jon E. Zibbell, PhD,§ Brian Lewis, BS,|| Michele K. Bohm, MPH,¶  
Christopher M. Jones, PharmD, MPH,# Barry E. Flanagan, PhD,|| Azfar-E-Alam Siddiqi, MD, PhD,\*  
Kashif Iqbal, MPH,\* Andrew L. Dent, MA, MBA,† Jonathan H. Mermin, MD, MPH,\*\*  
Eugene McCray, MD,\* John W. Ward, MD,§ and John T. Brooks, MD\**

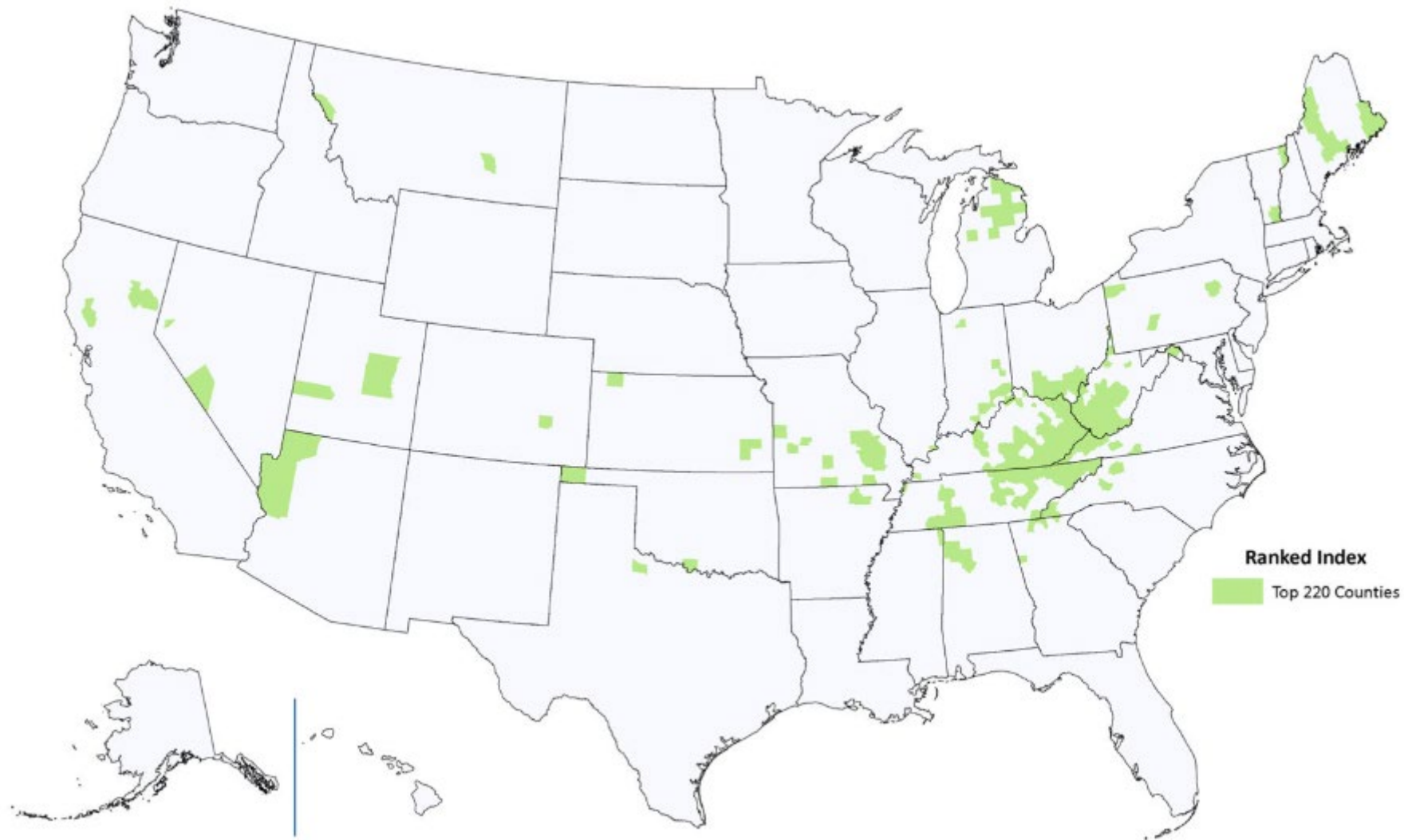
## Objective:

A recent HIV outbreak in a rural network of persons who inject drugs (PWID) underscored the intersection of the expanding epidemics of opioid abuse, unsterile injection drug use (IDU), and associated increases in hepatitis C virus (HCV) infections. We sought to identify US communities potentially vulnerable to rapid spread of HIV, if introduced, and new or continuing high rates of HCV infections among PWID.



## County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States

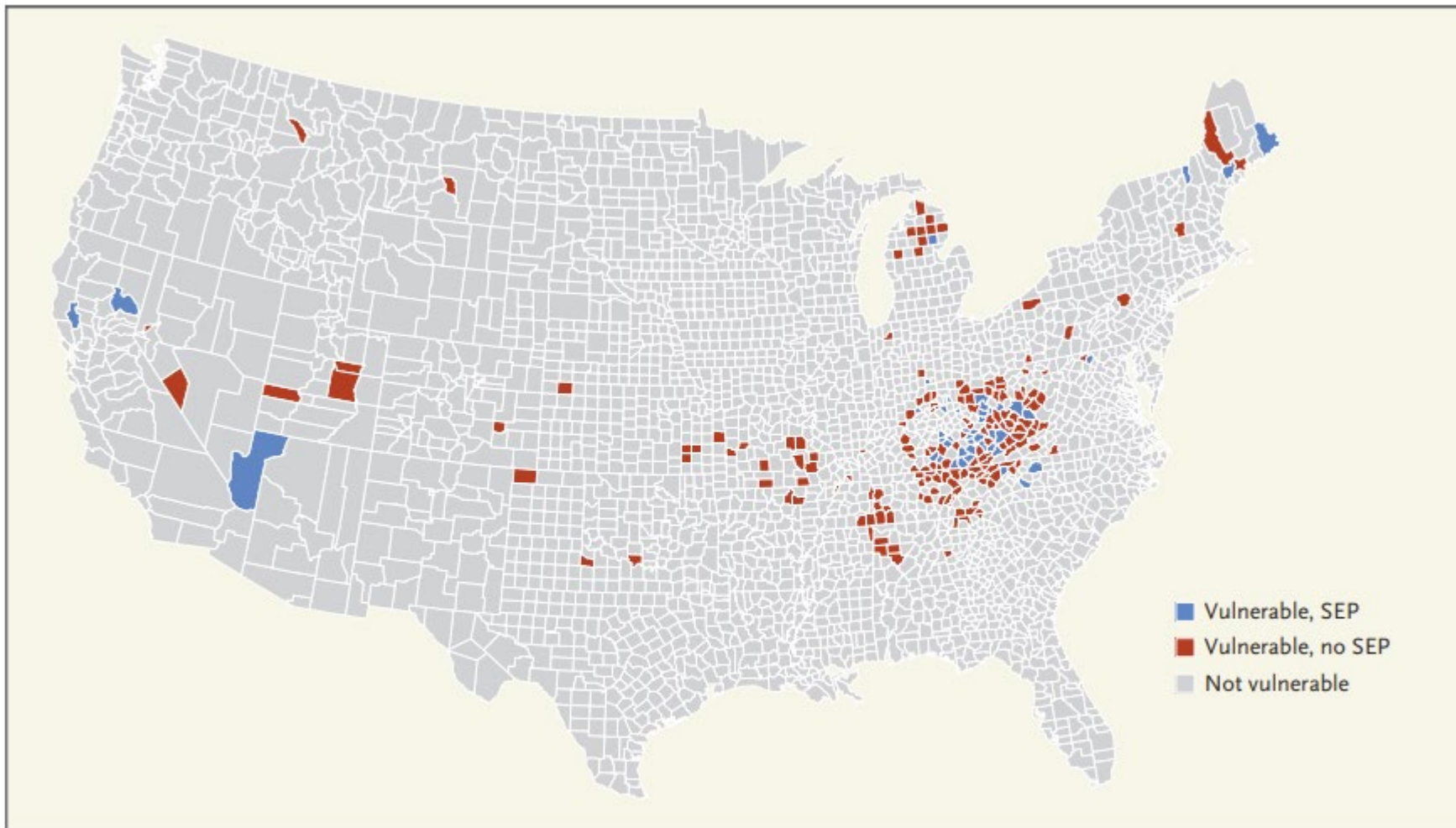




**Figure 2.**

Counties for which estimated vulnerability scores or their upper 90% confidence interval exceeded the 95th percentile. Map produced by the Geospatial Research, Analysis, and Services Program (GRASP).

J Acquir Immune Defic Syndr. 73(3):323-331.



**U.S. Counties' Vulnerability to HIV and HCV Outbreaks and Their Syringe-Exchange Program (SEP) Status.**

Data are as of 2018 and are from the CDC and the North American Syringe Exchange Network.



**Morbidity and Mortality Weekly Report (MMWR)**

*Notes from the Field: Outbreak of Human Immunodeficiency Virus Infection Among Persons Who Inject Drugs — Cabell County, West Virginia, 2018–2019*

Weekly / April 24, 2020 / 69(16);499–500

**TABLE. Characteristics of persons with outbreak-associated human immunodeficiency virus infection — Cabell County, West Virginia, January 1, 2018–October 9, 2019\***

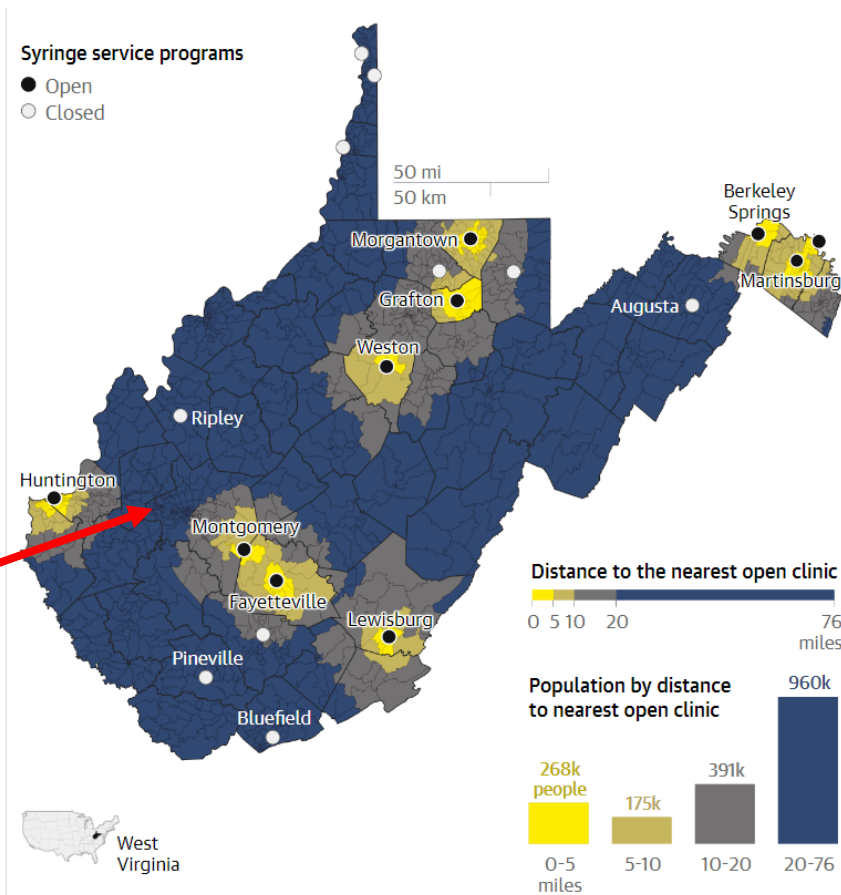
Characteristic	No. (%)
<b>Total</b>	<b>82 (100)</b>
<b>Sex</b>	
Male	49 (60)
Female	33 (40)
<b>Age group (yrs)</b>	
<20	0 (0)
20–39	61 (74)
≥40	21 (26)
<b>Race/Ethnicity</b>	
White, non-Hispanic	75 (92)
Black, non-Hispanic	1 (1)
Hispanic	1 (1)
Other	5 (6)
<b>Transmission category</b>	
Injection drug use	75 (92)
Male-to-male sex and injection drug use	6 (7)
Male-to-male sex	1 (1)
<b>Exchanged sex for money or drugs</b>	<b>24 (29)</b>
<b>Laboratory evidence of current or past hepatitis C virus infection</b>	<b>72 (88)</b>

\* Data were last updated on January 26, 2020.



## How restrictions on syringe programs led to a severe HIV outbreak in West Virginia

Charleston (Kanawha County) shut down its only SSP in March 2018



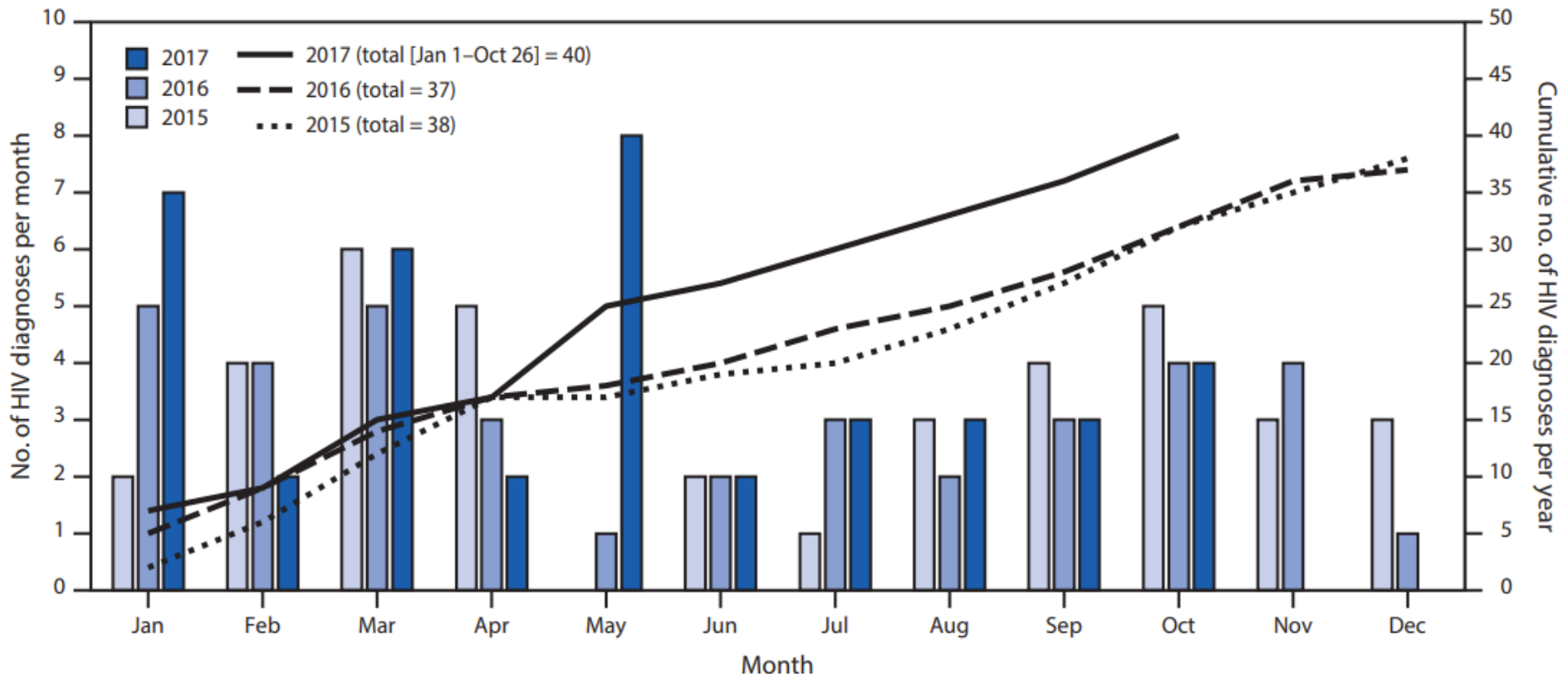


Morbidity and Mortality Weekly Report (MMWR)

Notes from the Field: HIV Infection Investigation in a Rural Area — West Virginia, 2017

Weekly / March 2, 2018 / 67(8);257-258

FIGURE. Number of HIV diagnoses per month and cumulative number of diagnoses per year — 15 West Virginia counties, 2015–2017





**ROI** Rural  
Opioid  
Initiative



Research Consortium

1. Build local collaborations, aggregate existing data and conduct a rapid epidemiological assessment to fill local data gaps, and harmonize core data elements across studies (UG3 phase; 2018-2020);
2. Propose locally relevant intervention projects informed by UG3 phase collaborations and assessments; and
3. Implement sustainable, locally tailored interventions over a period of three years (UH3 phase; ongoing)

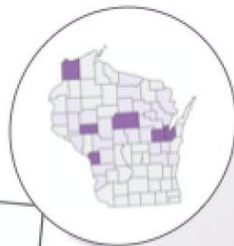
# Rural Opioid Initiative Sites

Oregon  
(2 western counties)



**W**  
UNIVERSITY of  
WASHINGTON

Wisconsin  
(6 rural catchment areas)



Ohio  
(3 Appalachian counties)



New England  
(11 counties in MA, NH & VT)



**Ragon Institute**  
of MGH, MIT and Harvard

West Virginia  
(7 coalfield counties)



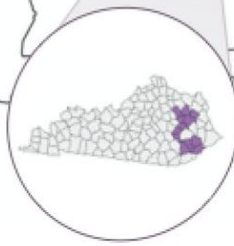
★ : Data  
Coordinating  
Center

▲ : GHOST\*  
Laboratory

Illinois  
(16 Delta Region counties)



Kentucky  
(12 Appalachian coalfield counties)



North Carolina  
(8 Appalachian counties)



**ROI** Rural  
Opioid  
Initiative

\*Global Hepatitis Outbreak Surveillance Technology

# ROI Multi-site Data Collection

(UG3 Phase, Jan 2018 – Mar 2020)

## Quantitative

- ACASI survey of people who use drugs (PWUD)
- Recruitment via respondent-driven sampling (RDS)

## Qualitative

- Key informant interviews in rural communities
- In-depth interviews with PWUD

## Laboratory

- Rapid testing for HIV, HCV, Syphilis
- Next-gen sequencing of HCV+ specimens

**ROI** Rural  
Opioid  
Initiative



Research Consortium

## Selected Published Findings To Date:

- Concurrent stimulant use increases risk of opioid overdose
- Stigmatization contributes to rural risk environment
- Trauma is associated with transition to injection drug use
- Internet & phone access enables addiction treatment
- Emergence of unexpected drug use behaviors (the case of “wasp dope”)

# Cohort description

Jenkins *et al.*

*Addiction Science & Clinical Practice* (2022) 17:38

<https://doi.org/10.1186/s13722-022-00322-5>


Addiction Science &  
Clinical Practice

RESEARCH

Open Access



## The Rural Opioid Initiative Consortium description: providing evidence to Understand the Fourth Wave of the Opioid Crisis

Richard A. Jenkins<sup>1</sup>, Bridget M. Whitney<sup>2</sup>, Robin M. Nance<sup>2</sup>, Todd M. Allen<sup>3</sup>, Hannah L. F. Cooper<sup>4</sup>, Judith Feinberg<sup>5</sup>, Rob Fredericksen<sup>2</sup>, Peter D. Friedmann<sup>6</sup>, Vivian F. Go<sup>7</sup>, Wiley D. Jenkins<sup>8</sup>, P. Todd Korthuis<sup>9</sup>, William C. Miller<sup>10</sup>, Mai T. Pho<sup>11</sup>, Abby E. Rudolph<sup>12</sup>, David W. Seal<sup>13</sup>, Gordon S. Smith<sup>5,18</sup>, Thomas J. Stopka<sup>14</sup>, Ryan P. Westergaard<sup>15</sup>, April M. Young<sup>16</sup>, William A. Zule<sup>17</sup>, Joseph A. C. Delaney<sup>18</sup>, Judith I. Tsui<sup>2</sup> and Heidi M. Crane<sup>2\*</sup>  on behalf of the Rural Opioid Initiative



# Cohort description

**Table 3** Substance use patterns among participants in the Rural Opioid Initiative by study site

	Total	Sites							
		IL	KY	NC	NE	OH	OR	WI	WV
N	3048	173	338	350	589	258	174	991	175
Preferred drug for getting high									
Opioids <sup>a</sup>	1655 (54%)	81 (47%)	206 (61%)	171 (49%)	452 (77%)	183 (71%)	78 (45%)	378 (38%)	106 (61%)
Heroin <sup>^</sup>	1146 (38%)	34 (20%)	103 (30%)	106 (30%)	351 (60%)	124 (48%)	69 (40%)	307 (31%)	52 (30%)
Street fentanyl/carfentanil <sup>^</sup>	67 (2%)	2 (1%)	1 (< 1%)	11 (3%)	23 (4%)	21 (8%)	0	4 (< 1%)	5 (3%)
Prescription opioids <sup>^</sup>	293 (10%)	31 (18%)	63 (19%)	44 (13%)	44 (7%)	29 (11%)	8 (5%)	36 (4%)	38 (22%)
Buprenorphine <sup>^</sup>	85 (3%)	5 (3%)	36 (11%)	4 (1%)	25 (4%)	8 (3%)	1 (1%)	0	6 (3%)
Methadone <sup>^</sup>	45 (1%)	9 (5%)	3 (1%)	6 (2%)	7 (1%)	1 (< 1%)	0	15 (2%)	4 (2%)
Methamphetamine	1070 (35%)	74 (43%)	108 (32%)	158 (45%)	23 (4%)	61 (24%)	91 (52%)	515 (52%)	40 (23%)
Cocaine/crack	188 (6%)	12 (7%)	7 (2%)	14 (4%)	95 (16%)	8 (3%)	1 (1%)	26 (3%)	25 (14%)
Benzodiazepines	39 (1%)	4 (2%)	6 (2%)	5 (1%)	4 (1%)	1 (< 1%)	1 (1%)	18 (2%)	0

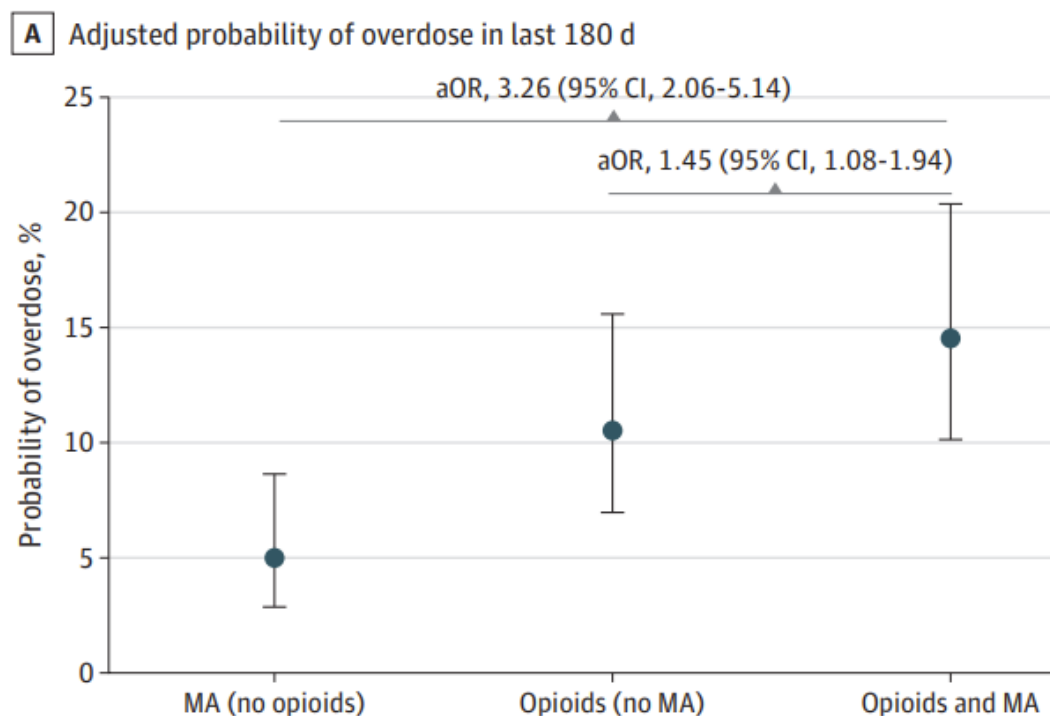


Original Investigation | Substance Use and Addiction

# Association of Methamphetamine and Opioid Use With Nonfatal Overdose in Rural Communities

P. Todd Korthuis, MD, MPH; Ryan R. Cook, PhD, MSPH; Canyon A. Foot, BA; Gillian Leichtling, BA; Judith I. Tsui, MD, MPH; Thomas J. Stopka, PhD, MHS; Judith Leahy, MPH; Wiley D. Jenkins, PhD, MPH; Robin Baker, PhD; Brian Chan, MD; Heidi M. Crane, MD, MPH; Hannah L. Cooper, PhD; Judith Feinberg, MD; William A. Zule, DrPH, MPH; Vivian F. Go, PhD; Angela T. Estadt, MPH; Robin M. Nance, PhD; Gordon S. Smith, MD, MPH; Ryan P. Westergaard, MD, PhD; Brent Van Ham, MS, RN; Randall Brown, MD, PhD; April M. Young, PhD, MPH

Figure. Adjusted Probability of Methamphetamine (MA) Overdose in Last 180 Days and Adjusted Mean Lifetime Overdoses



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# *“It wasn’t here, and now it is. It’s everywhere”:* fentanyl’s rising presence in Oregon’s drug supply

Sarah S. Shin<sup>1\*</sup>, Kate LaForge<sup>1</sup>, Erin Stack<sup>1</sup>, Justine Pope<sup>1</sup>, Gillian Leichtling<sup>1</sup>, Jessica E. Larsen<sup>2</sup>, Judith M. Leahy<sup>3</sup>, Andrew Seaman<sup>2,6,7</sup>, Daniel Hoover<sup>2</sup>, Laura Chisholm<sup>4</sup>, Christopher Blazes<sup>2</sup>, Robin Baker<sup>5</sup>, Mikaela Byers<sup>8</sup>, Katie Branson<sup>4</sup> and P. Todd Korthuis<sup>2,5</sup>

*“A lot of people who were never into opiates, never had a problem with opiates—were just 100 percent meth addicts—they don’t really like it [methamphetamine] now. They don’t hardly ever do meth. It’s all about the fetties [fentanyl pills] and more people—  
young people, too.”*

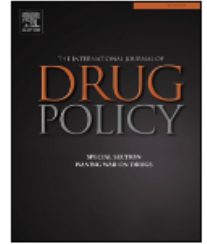
*“Well, the younger generation probably is in trouble, because it’s [fentanyl] just starting to get hot and get popular. The younger generation is so influenced by coolness or the popularity-ness or whatever.”*



Contents lists available at ScienceDirect

## International Journal of Drug Policy

journal homepage: [www.elsevier.com/locate/drugpo](http://www.elsevier.com/locate/drugpo)



### Rural risk environments for hepatitis c among young adults in appalachian kentucky



David H. Cloud<sup>a,\*</sup>, Umedjon Ibragimov<sup>a</sup>, Nadya Prood<sup>a</sup>, April M. Young<sup>b</sup>, Hannah L.F. Cooper<sup>a</sup>

<sup>a</sup> Emory University, Rollins School of Public Health, United States

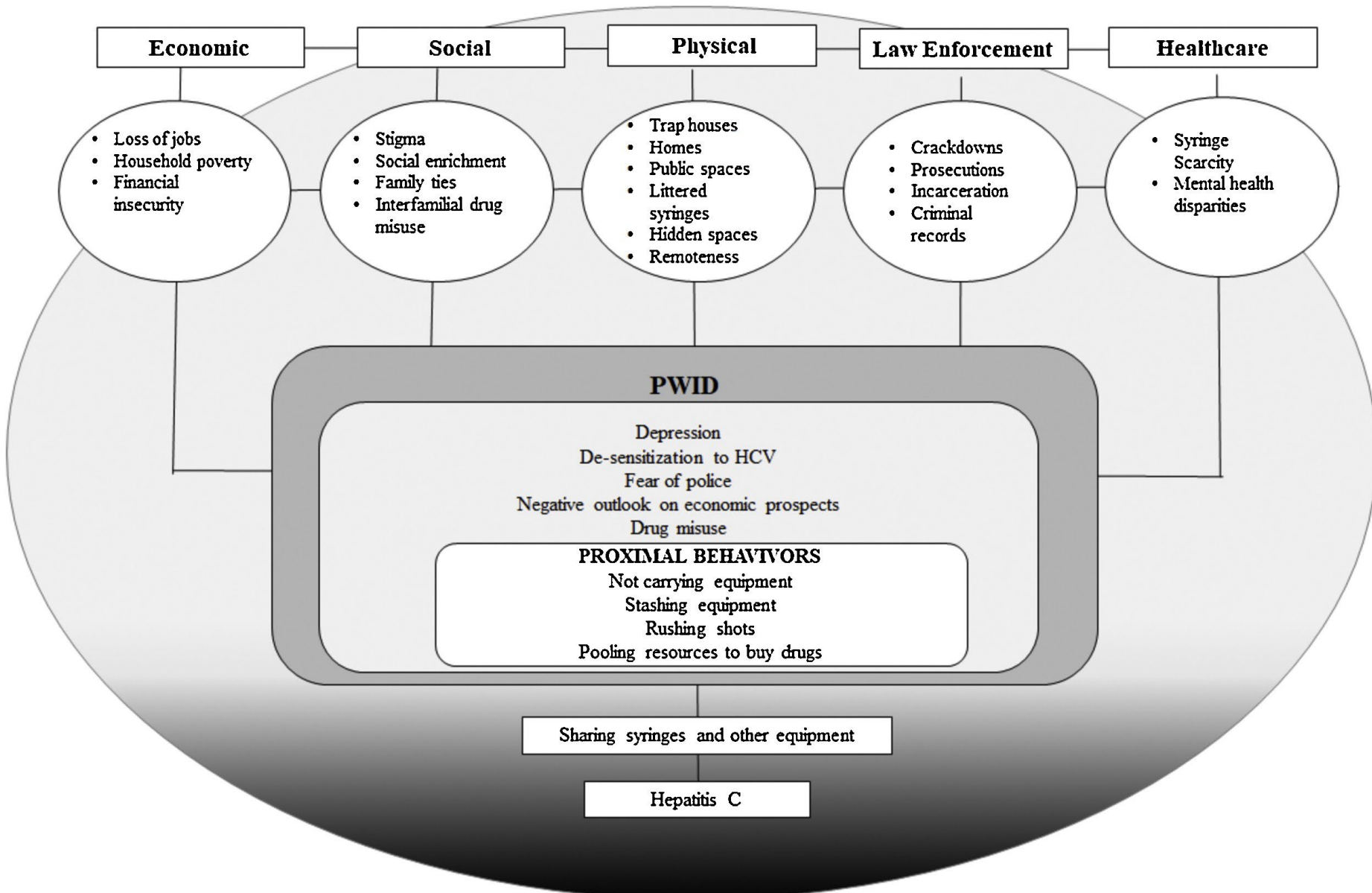
<sup>b</sup> University of Kentucky College of Public Health, United States

#### Economic adversity, lack of social enrichment, and stigma: Drivers of Substance Use

A barren job market, diminished formal opportunities for social enrichment, and stigma were macro-level features of the social and economic environment that shaped drug use among young adults.

*“If jobs could be found around here. It wouldn’t be that bad. We wouldn’t have the depression that people are trying to fix with the drugs.” An 18-year old man said: “Drugs is their [young adults] life...because there’s not activities to do. That is a big thing around here. People do drugs, because there is nothing else to do.”*

# Cloud et al. Rural Risk Environment for HCV





ELSEVIER

Contents lists available at ScienceDirect

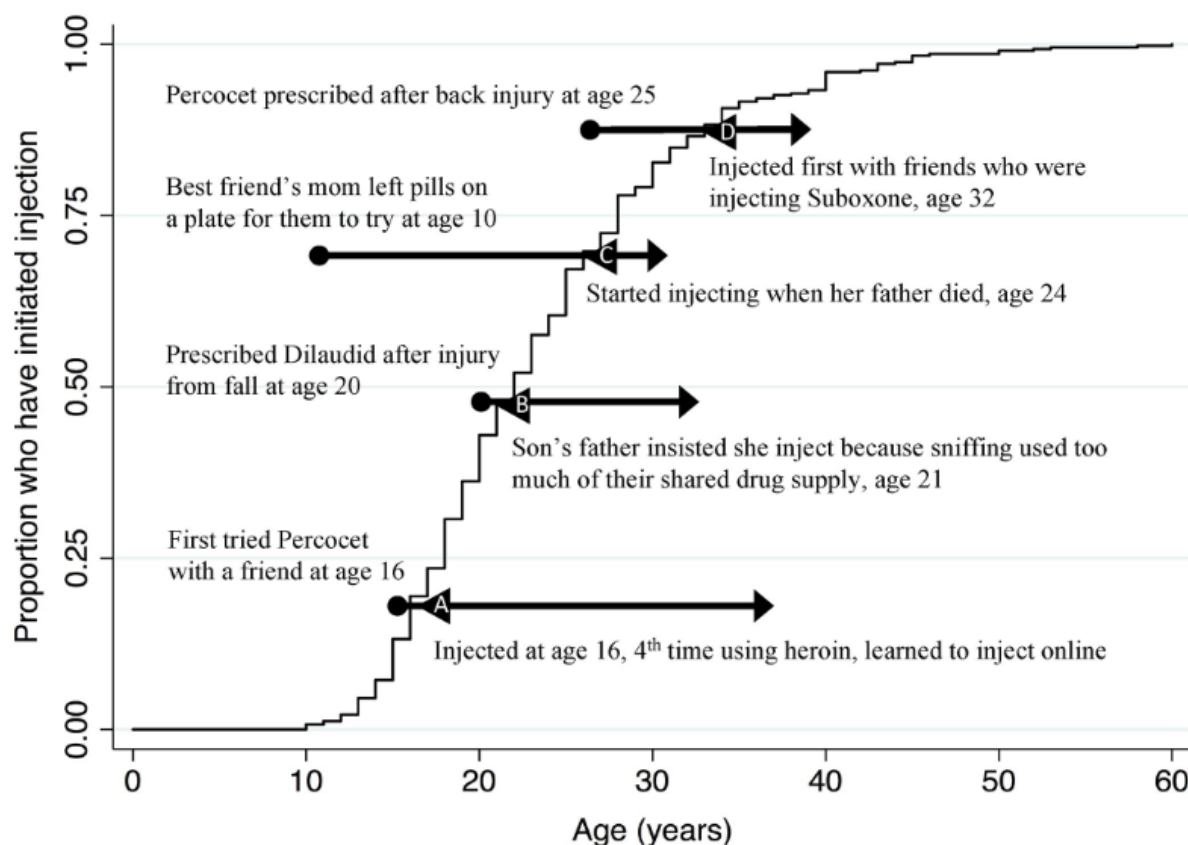
## Drug and Alcohol Dependence

journal homepage: [www.elsevier.com/locate/drugalcddep](http://www.elsevier.com/locate/drugalcddep)

## Opioid initiation and injection transition in rural northern New England: A mixed-methods approach



Kerry Nolte<sup>a,\*</sup>, Aurora L. Drew<sup>b,c</sup>, Peter D. Friedmann<sup>d</sup>, Eric Romo<sup>e</sup>, Linda M. Kinney<sup>b</sup>, Thomas J. Stopka<sup>f</sup>





*I was 12 years old...My father gave me a line of oxycodone...he just broke it out and said here, sniff this. And I said, uh how? And he showed me how he did it, and I did it. (Jacob, 24M)*

### Normalization of Drug Use within the Family and Community

*My god it's horrible. I literally can remember...thinking that [this town] was a great area to grow up in and raise a family. And maybe I was just really extra oblivious then but, uh, it's, drugs were like scarce. [Using drugs] was the exception. Now people that don't do drugs are the exception. There's more drugs or people using... everywhere. (Amanda, 29F)*



## Injection drug use

Lower Cost  
Increased Effect/ Rush  
Greater Availability  
Faster Relief

*So they took me in and did surgery and they put me on, um oxycontin 60 milligrams four times a day...And that's why I got addicted. I was on it for two or three years, and then finally they shut me off...They supposedly got a call saying that we were abusing meds or selling them or whatever...I know like four or five people that... all got shut off the same day...I tried to find the pill if I had the money. But yeah, you couldn't. .. Yes, so I went to the heroin. (Michelle, mid-50s F)*

### Abrupt Discontinuation of Opioid Prescriptions

Transition to Illicit drugs

*And then the doctor took them away from me and I was in pain. I was sick, throwing up... physically was sick from it, from not having it. And where did I go? I went to the streets to find them. And then that became too expensive. And then I went to heroin. (Jessica, 32F)*

### Trauma

Escalation of use

*Last year I lost my baby...it was a stillborn...before that I lost my best friend's dad who was like a father to me growing up... just three weeks ago my mothers' boyfriend shot himself in the head in front of my mom. But it's just a lot of trauma happening lately...it's just a lot of things piling up. Life's pretty unforgiving sometimes. (Matt, 24M)*


Key:

**Themes** Subthemes



## ORIGINAL ARTICLE

# Substance use disorder treatment and technology access among people who use drugs in rural areas of the United States: A cross-sectional survey

 Dana Button MCR<sup>1</sup>  | Ximena A. Levander MD, MCR<sup>1</sup> | Ryan R. Cook PhD<sup>1</sup>

	Received outpatient addiction counseling within past 30 days (OR)	Received any MOUD within past 30 days (OR)
<b>Cell and internet</b>		
Unadjusted	1.28 (1.07-1.53), <i>P</i> = .0072	1.22 (1.01-1.48), <i>P</i> = .036
Adjusted	1.28 (1.05-1.57), <i>P</i> = .014	1.16 (0.94-1.44), <i>P</i> = .16
<b>No cell</b>		
Unadjusted	0.78 (0.65-0.94), <i>P</i> = .011	0.83 (0.68-1.004), <i>P</i> = .057
Adjusted	0.77 (0.62-0.94), <i>P</i> = .013	0.86 (0.69-1.07), <i>P</i> = .19
<b>No internet</b>		
Unadjusted	0.87 (0.64-1.17), <i>P</i> = .36	1.01 (0.74-1.37), <i>P</i> = .94
Adjusted	0.80 (0.57-1.12), <i>P</i> = .19	0.91 (0.64-1.29), <i>P</i> = .61
<b>No cell nor internet</b>		
Unadjusted	0.71 (0.46-1.06), <i>P</i> = .11	0.92 (0.60-1.37), <i>P</i> = .71
Adjusted	0.63 (0.40-0.99), <i>P</i> = .046	0.83 (0.53-1.31), <i>P</i> = .42

N= 3,026 PWUD:

No cell phone: 35%


No internet 30d: 10%

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# Predictors of skin and soft tissue infections among sample of rural residents who inject drugs

Amelia Baltes<sup>1\*</sup> , Wajiha Akhtar<sup>2</sup>, Jen Birstler<sup>3</sup>, Heidi Olson-Streed<sup>4</sup>, Kellene Eagen<sup>1</sup>, David Seal<sup>5</sup>, Ryan Westergaard<sup>2</sup> and Randall Brown<sup>1</sup>

## Factors associated with SSTI among Wisconsin UG3 Sample (N=80)

Risk Factor	Odds Ratio
Female sex	3.07 (p=0.038)
“skin-popping”	6.0 (p=0.038)
Injecting into muscle	17.4 (p<0.01)
Multiple injection attempts	1.7 (p=0.037)

## Emergence of wasp dope in rural Appalachian Kentucky

April M. Young<sup>1,2</sup> , Melvin Livingston<sup>3</sup>, Rachel Vickers-Smith<sup>1,2,4</sup>  & Hannah L. F. Cooper<sup>3</sup>

### WKYT Investigates | 'Wasp dope' becomes new addictive high in pandemic

A new study shows just how prevalent the drug is in eastern Kentucky.

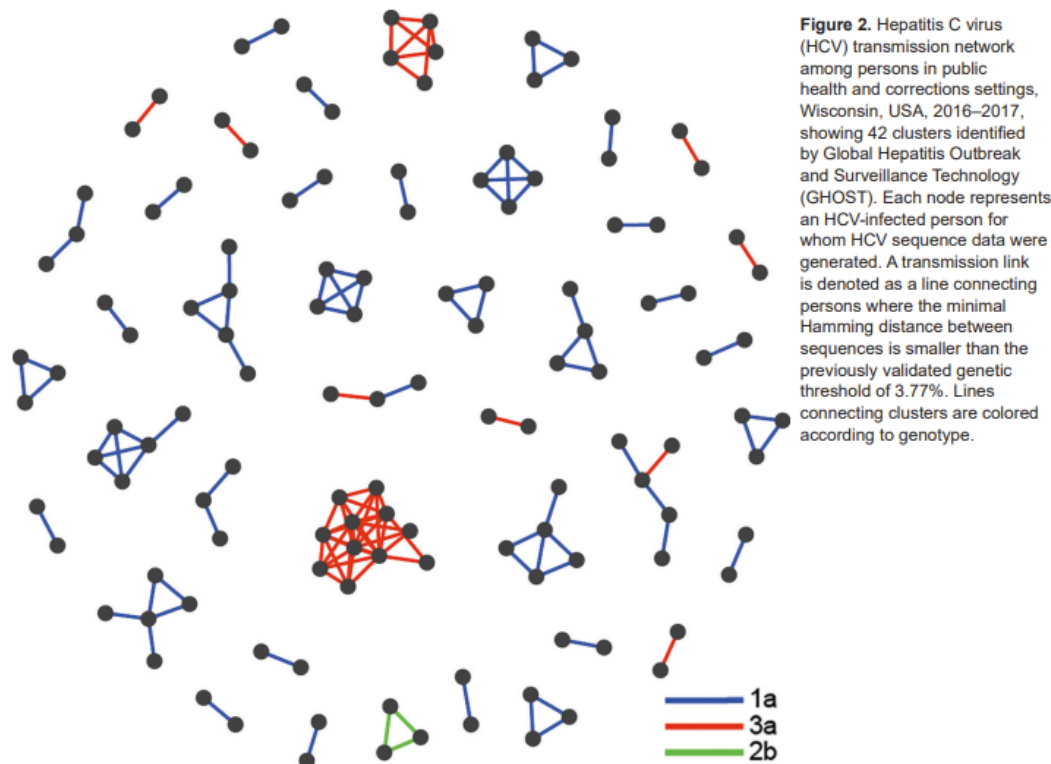


WKYT Investigates | 'Wasp dope'

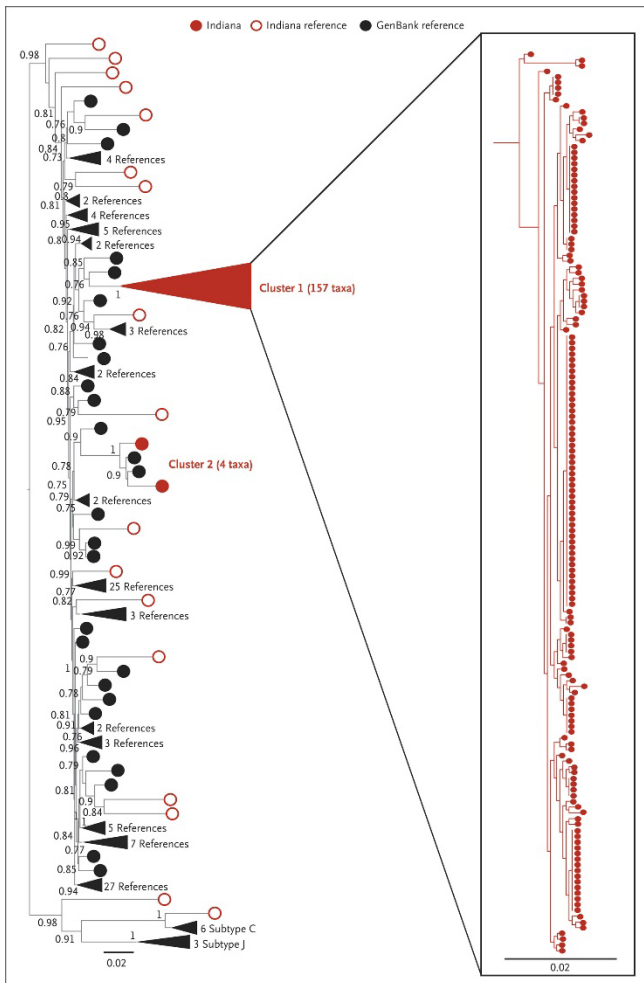
# Hepatitis C Virus Transmission Clusters in Public Health and Correctional Settings, Wisconsin, USA, 2016–2017<sup>1</sup>

Karli R. Hochstatter,<sup>2</sup> Damien C. Tully,<sup>2</sup> Karen A. Power, Ruth Koepke, Wajjha Z. Akhtar, Audrey F. Prieve, Thomas Whyte, David J. Bean, David W. Seal, Todd M. Allen,<sup>3</sup> Ryan P. Westergaard<sup>3</sup>

Hepatitis C Virus Clusters, Wisconsin, USA



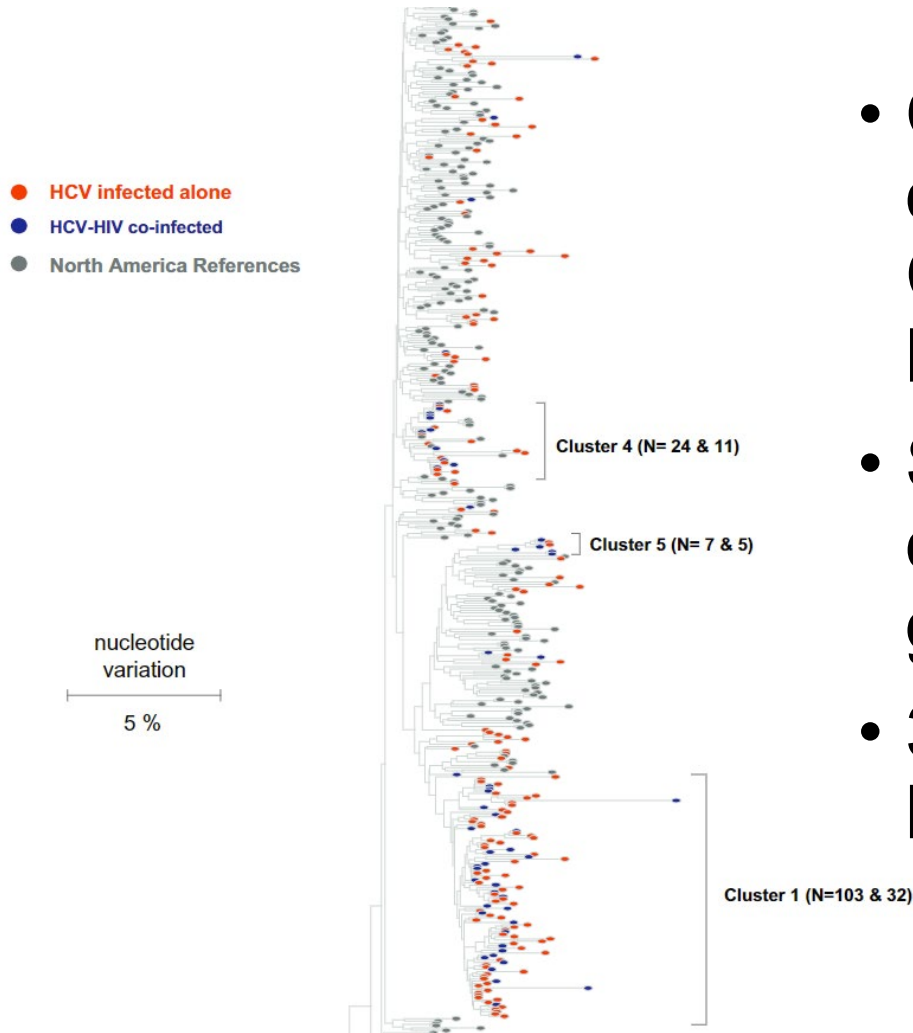
# Molecular epidemiology shows how HIV outbreaks can be prevented



- Of 159 HIV cases identified in the outbreak, 157 (99%) were genetically linked.
- Indicates a single common (recent) introduction.



# Molecular epidemiology shows how HIV outbreaks can be prevented



- Of 181 HIV cases diagnosed in Scott County, 90% also had hepatitis C virus (HCV)
- Sequencing demonstrated 23 distinct genetic clusters
- 30% of HCV cases belonged to no cluster



# Dynamics of the HIV outbreak and response in Scott County, IN, USA, 2011–15: a modelling study



Gregg S Gonsalves, Forrest W Crawford

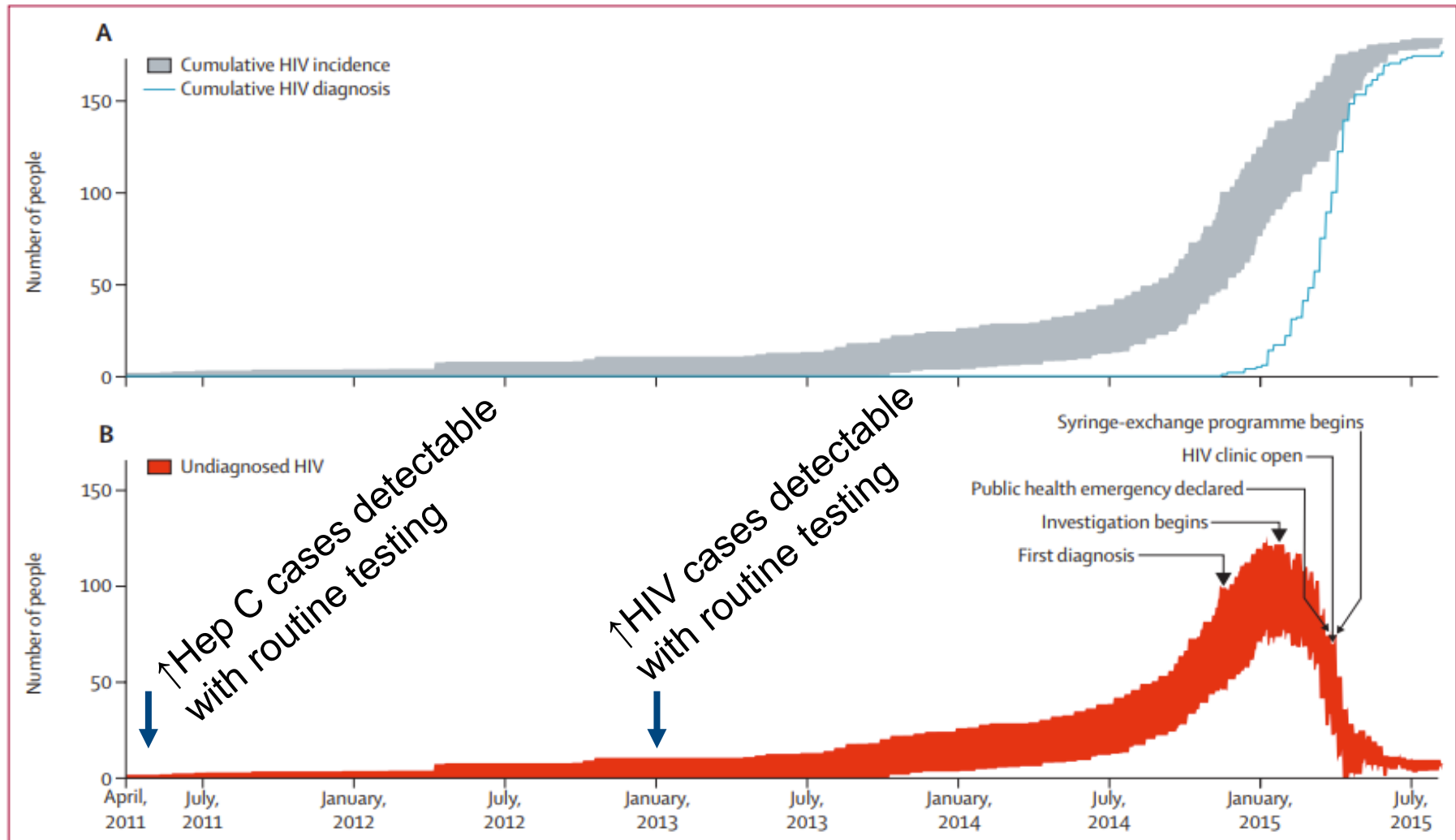


Figure 1: Raw and reconstructed data from the HIV outbreak in Scott County, IN, USA, from April, 2011, to August, 2015

# National Viral Hepatitis Strategic Plan

The plan provides a framework to eliminate viral hepatitis as a public health threat in the United States by 2030.

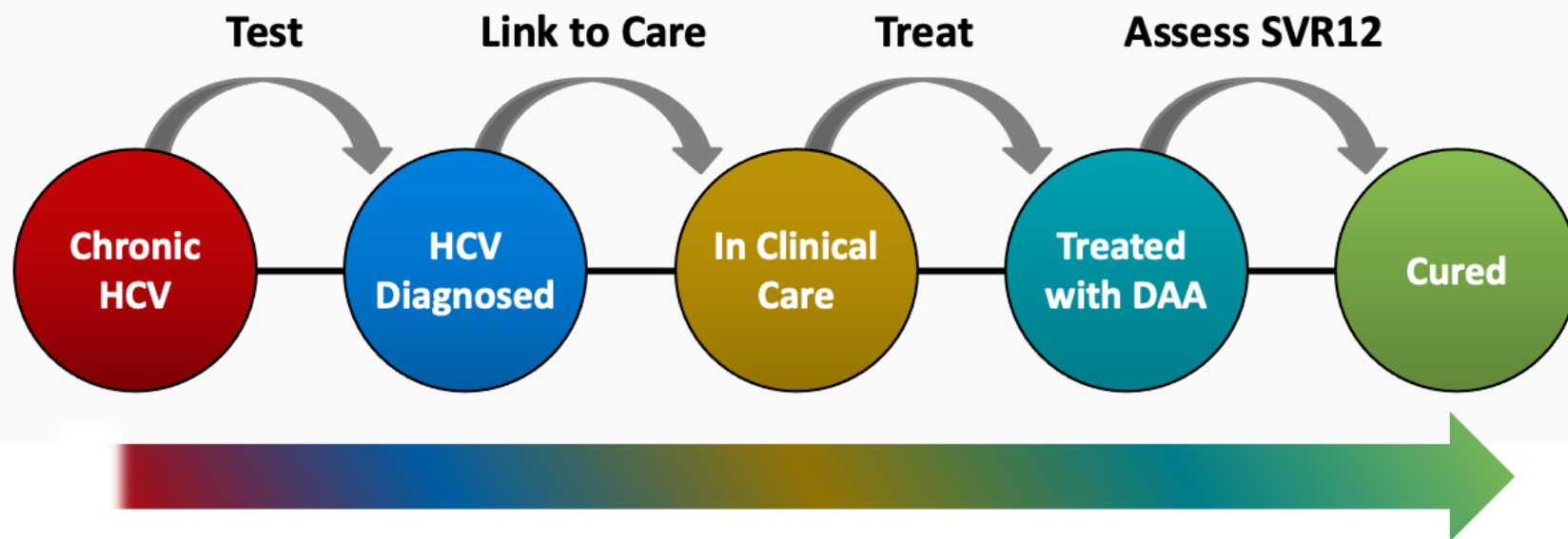
The five goals are to:

- Prevent new viral infections
- Improve viral hepatitis-related health outcomes of people with viral hepatitis
- Reduce viral hepatitis-related disparities and health inequities
- Improve viral hepatitis surveillance and data usage
- Achieve integrated, coordinated efforts that address the viral hepatitis epidemics among all partners

<https://www.hhs.gov/sites/default/files/Viral-Hepatitis-National-Strategic-Plan-2021-2025.pdf>



# Hepatitis C Care Continuum



# Screening for Hepatitis C Virus Infection in Adolescents and Adults

## US Preventive Services Task Force Recommendation Statement

US Preventive Services Task Force

### Summary of Recommendation

The USPSTF recommends screening for hepatitis C virus (HCV) infection in adults aged 18 to 79 years.	B
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How often?	One-time screening for most adults. Periodically screen persons with continued risk for HCV infection (eg, persons with past or current injection drug use). There is limited evidence to determine how often to screen persons at increased risk.
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<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/hepatitis-c-screening>



# HCV Treatment Recommendations



HCV Guidance: Recommendations for  
Testing, Managing, and Treating  
Hepatitis C



## Recommendation for When and in Whom to Initiate Treatment

RECOMMENDED

RATING **i**

Treatment is recommended for all patients with chronic HCV infection, except those with a short life expectancy that cannot be remediated by HCV therapy, liver transplantation, or another directed therapy. Patients with a short life expectancy owing to liver disease should be managed in consultation with an expert.

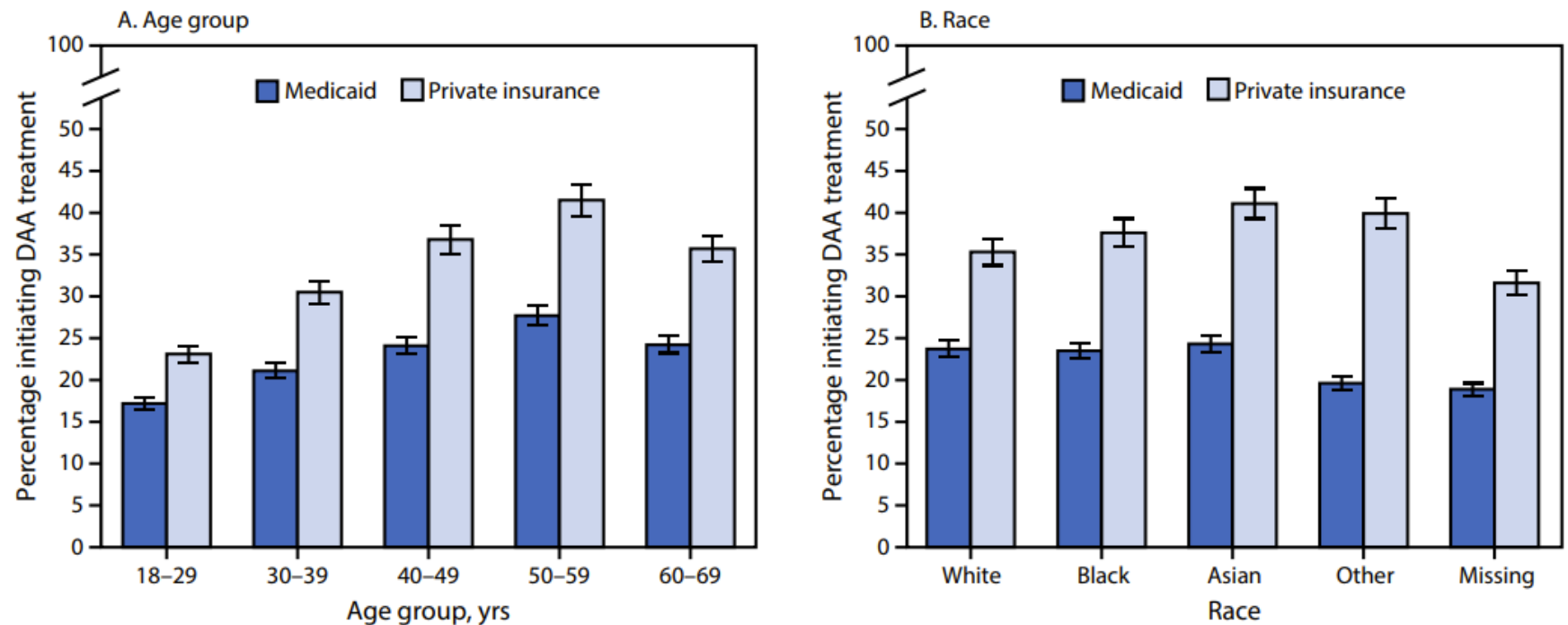
I, A



# Vital Signs: Hepatitis C Treatment Among Insured Adults — United States, 2019–2020

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**FIGURE 2. Percentage of adults\* with hepatitis C initiating direct-acting antiviral treatment, by insurance type, age group (A), and race (B) — United States, 2019–2020**



**Abbreviation:** DAA = direct-acting antiviral.

\* With 95% CIs shown by error bars.

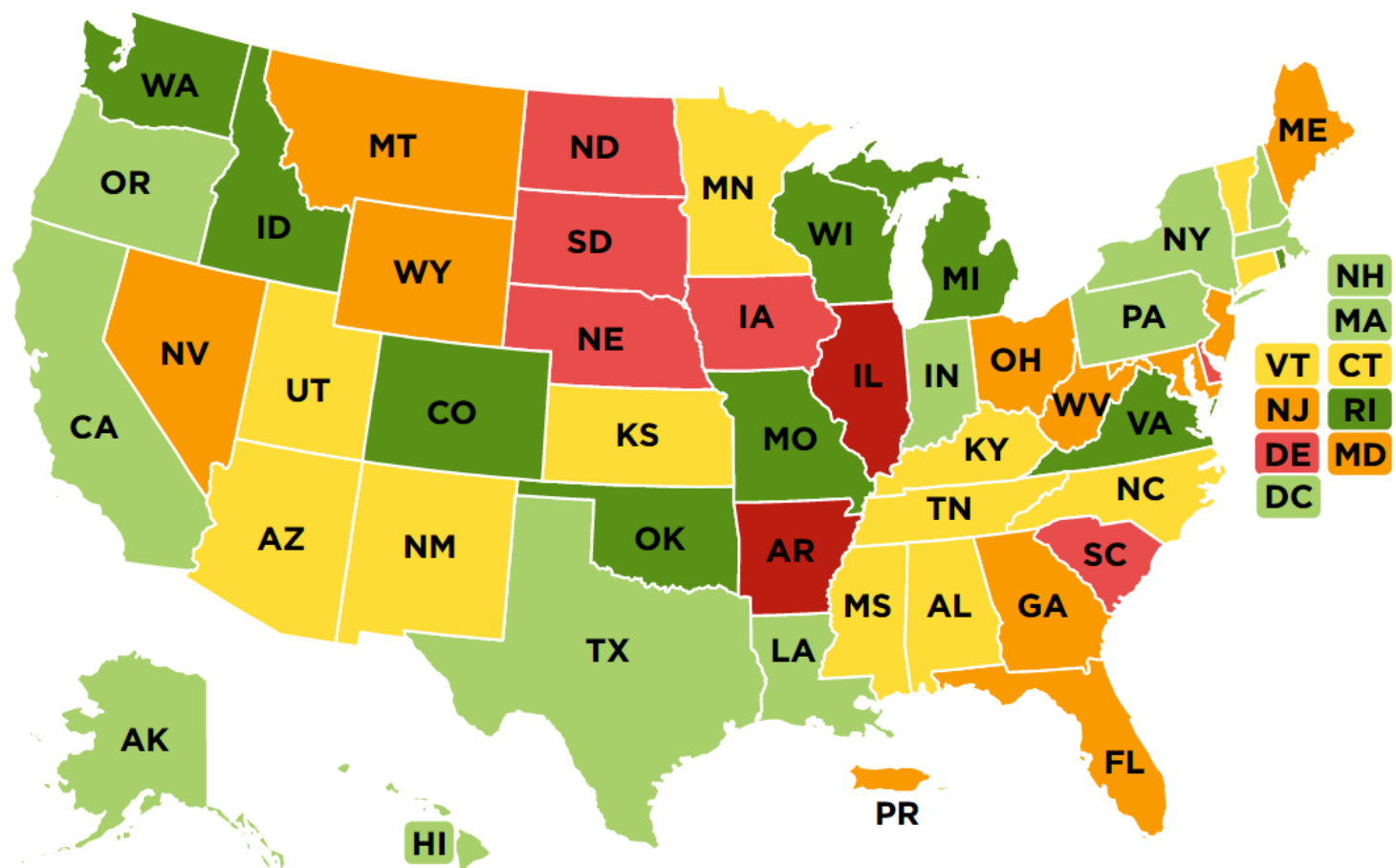
# Medicaid: State of HCV Treatment Access

- The Center for Health Law and Policy Innovation of Harvard Law School (**CHLPI**) and the National Viral Hepatitis Roundtable (**NVHR**) assess the state for access to DAAs for Medicaid enrollees across America.
- The national report and state-by-state report cards provide an in-depth evaluation of Direct Acting Antivirals (DAAs) access in each state's Medicaid program, while highlighting successes in access expansion as well as ongoing challenges.
- Wisconsin went from a grade D to a grade A by lifting all Medicaid restrictions.

<b>A+</b>	PA removed for most patients; no other restrictions
<b>A</b>	PA removed for most patients <b>OR</b> PA required for all patients; minimal restrictions
<b>B</b>	PA removed for most patients; some restrictions <b>OR</b> PA required for all patients; minimal restrictions

<b>C</b>	PA required for all patients; some restrictions
<b>D</b>	PA required for all patients; many restrictions
<b>F</b>	PA required for all patients; harsh restrictions

## SEE HOW YOUR STATE MATCHES UP





UCSF

# DeLIVER Care

MOBILE UNIT

Bringing Liver Health  
Screenings to You



# Thank you!

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