



West Virginia Epi-Aid

Preliminary Findings & Recommendations


August 3, 2021



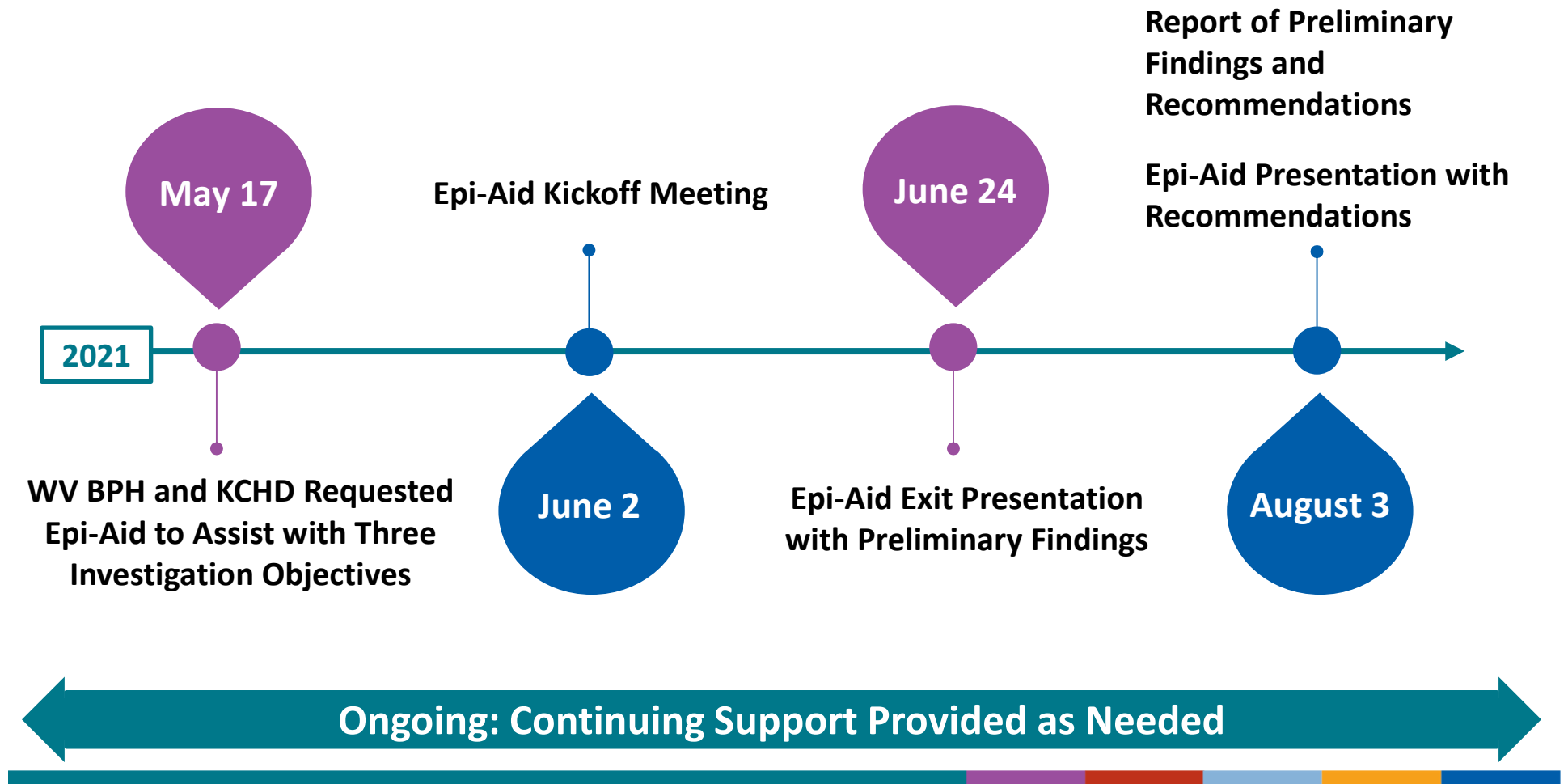
Epi-Aid Objectives

1. **Conduct a rapid assessment with PWID and key stakeholders** to identify factors facilitating HIV transmission and barriers to accessing essential care and prevention services for PWID.
2. **Review, abstract, and analyze data from medical records and other relevant sources** (e.g., community service providers, first responders, SUD treatment) to understand engagement with various services.
3. **Review and analyze partner services procedures and data** from partner services interviews and HIV testing activities to better understand behaviors, networks, and geography of PWID.

PWID: people who inject drugs; SUD: substance use disorder



Epi-Aid Timeline

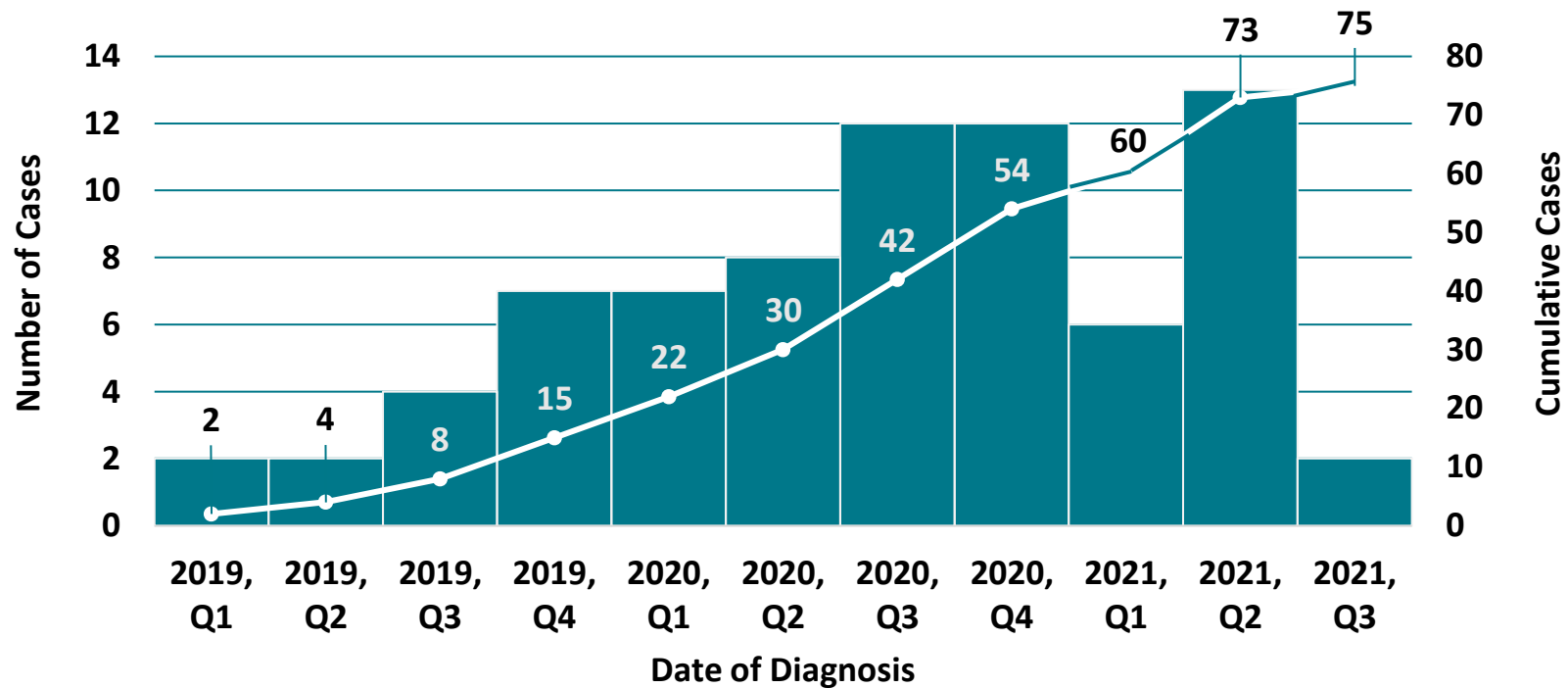


Presentation Outline

- **Background**
- **Summary of Preliminary Findings**
 - Partner Services Procedures and Data
 - Individual Level Records Analysis
 - Rapid Assessment and Qualitative Interviews
- **Recommendations**
- **Next Steps**



Background: New HIV Diagnoses by Quarter Kanawha County, January 1, 2019 to July 22, 2021*



*Confirmed HIV infection diagnosed on or after January 1, 2019, in a person who lived in or reported being homeless in Kanawha County at the time of diagnosis who injects drugs (regardless of other risk factors).



Objective 3: Partner Services Procedures & Data



Partner Services Review Methods

■ Reviewed Data

- WV HIV surveillance system: data for all persons with HIV
- WV BPH outreach testing data: number of tests and percentage of positive tests for each outreach event since April 6, 2021

■ Met with Key BPH Staff

- DIS staff and supervisor
- CDC DIS staff deployed to WV to assist with the response
- HIV surveillance staff
- BPH HIV/STD Program Leadership

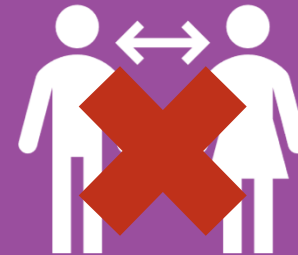


Molecular Epidemiology: A Brief Overview

- HIV mutates over time
- People with very similar viruses are considered molecularly linked
- Infection with very similar viruses suggests that people are in a common network with rapid transmission
- Analysis of nucleotide sequences identifies clusters of sequences indicative of rapid transmission

Important Note

We cannot determine directionality or direct transmission between two individuals.



Molecular Data from HIV Surveillance Indicate Rapid Transmission

- Of 25 persons meeting the outbreak case definition with sequences available, 19 (76%) are molecularly linked to ≥ 1 other person
- 74% of Kanawha County persons that are molecularly linked are in one rapid transmission cluster (14/19)
 - Cluster also includes 7 persons from other WV counties and 1 from prior to 2019
 - Estimated transmission rate was 47 transmissions per 100 person-years (12 times the national average)
 - 86% of transmissions occurred after January 1, 2019
- Molecular data indicate this outbreak is distinct from the Cabell County outbreak



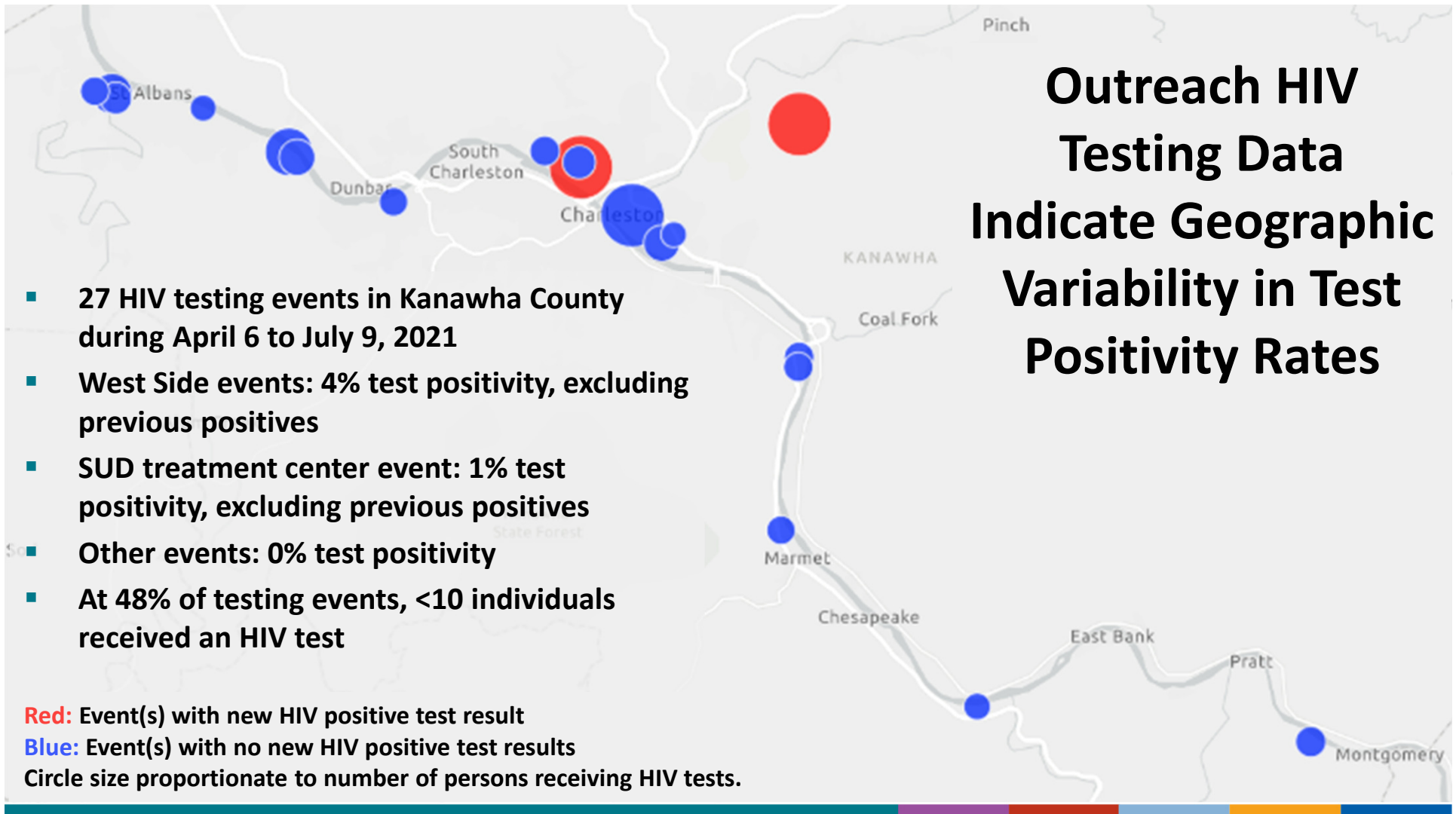
Outreach HIV Testing Data Indicate Geographic Variability in Test Positivity Rates

- 27 HIV testing events in Kanawha County during April 6 to July 9, 2021
- West Side events: 4% test positivity, excluding previous positives
- SUD treatment center event: 1% test positivity, excluding previous positives
- Other events: 0% test positivity
- At 48% of testing events, <10 individuals received an HIV test

Red: Event(s) with new HIV positive test result

Blue: Event(s) with no new HIV positive test results

Circle size proportionate to number of persons receiving HIV tests.



Observations Related to Partner Services

- Partner services (DIS) staffing was insufficient to manage the increase in reported persons with HIV.
- Partnerships with community organizations have been instrumental in helping CDC DIS locate, interview, and notify persons involved in the outbreak and their partners.
- CDC DIS noted challenges to HIV testing and linkage to care for people residing in correctional settings:
 - Absence of routine screening
 - Absence of rapid HIV testing
 - Limited protocols for provision of results and linkage to services



DIS: Disease Intervention Specialists



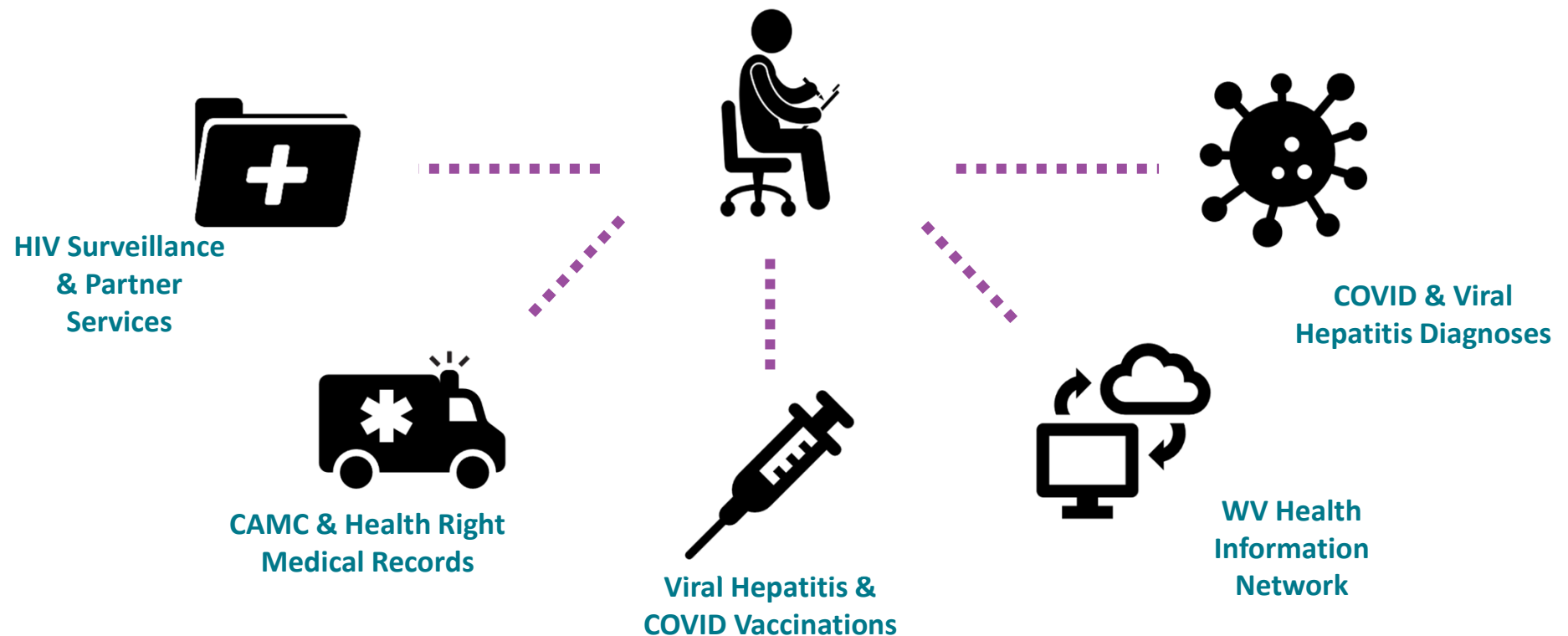
Objective 2: Chart Abstraction

Chart Abstraction Methods

- Reviewed medical record and public health data sources to assess health care encounters pre- and post-HIV diagnosis
- Inclusion criteria: Persons who inject drugs with an HIV diagnosis 1/1/2019 or later who had ≥ 1 visit to CAMC or Health Right
- Review period: 1 year prior to HIV diagnosis through 6/18/21
- Only highest level of care recorded for an encounter

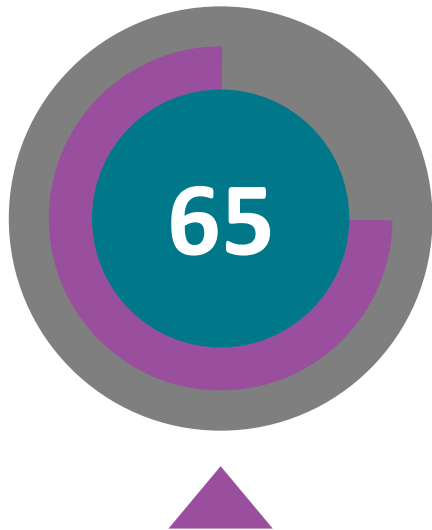


Chart Abstraction Methods: Data Sources

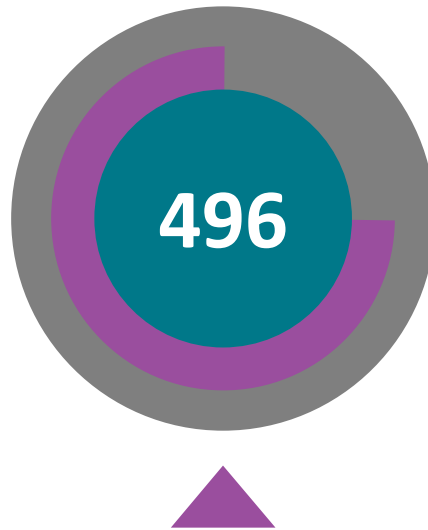


CAMC: Charleston Area Medical Center

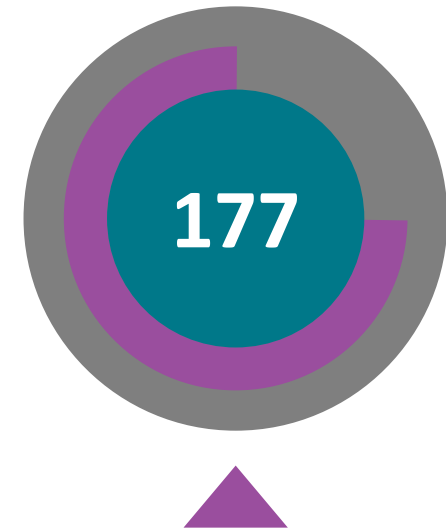
Chart Abstraction Results



**People with HIV Included
in the Investigation**



**Healthcare Encounters
Reviewed (in full) from
CAMC and Health Right**



**Reviewed from WV HIN
for Date of Encounter and
Location**

CAMC: Charleston Area Medical Center; WV HIN: West Virginia Health Information Network



ED and Inpatient Utilization is High (Especially Prior to HIV Diagnosis)

	Healthcare Encounters		
	Overall	Pre-HIV Diagnosis	Post-HIV Diagnosis
Clinical Setting	n (%)	n (%)	n (%)
Total	496	211	285
ED	207 (42%)	125 (59%)	82 (29%)
Inpatient	100 (20%)	59 (28%)	41 (14%)
Ryan White Clinic	79 (16%)	-	79 (28%)
Other Outpatient	97 (20%)	20 (9%)	77 (27%)
Health Right	13 (3%)	7 (3%)	6 (2%)

ED: emergency department

Chart Abstraction: Prior to HIV Diagnosis

- **Diagnoses at pre-HIV medical encounters**
 - Overdose: 8 (4%)
 - Intoxication: 5 (2%)
 - IDU-associated infections: 105 (50%)
 - STI: 3 (1%)
- **5 HIV-negative tests recorded**
- **0% of individuals prescribed PrEP**



IDU: injection drug use; PrEP: pre-exposure prophylaxis

Substance Use Related Services are Infrequently Provided

- Among IDU-related encounters* (n=198), naloxone prescribed at 10% of encounters
- Among OUD-related encounters** (n=290), medications for opioid use disorder prescribed at 20% of encounters
- Syringe services provided at 4 encounters (of 13 total Health Right encounters), once each to 4 unique individuals

*Includes encounters where syringe services received or overdose, intoxication, or IDU-associated infections diagnosed

**Includes encounters in which opioids documented in clinician notes or on toxicology screen

IDU: injection drug use; OUD: opioid use disorder




Chart Abstraction: Additional Results

- **26% of ED and inpatient encounters end in patient leaving against medical advice**
- **Hepatitis C infection preceded HIV diagnosis by ~4 years**
 - 94% of individuals ever tested positive for hepatitis C
- **Incorporating WV HIN encounters, CAMC accounted for 72% of total visits**
 - No other facility accounted for more than 13% of visits

Major Findings from Healthcare Encounters Among People with HIV who Inject Drugs (n=65)



Healthcare Utilization is High:
Especially for ED & Inpatient Prior to HIV Diagnosis



HIV Testing is Infrequent



Patients Leave Against Medical Advice
Frequently



PrEP was NOT Prescribed at Any Encounter



Few Received
Syringe
Services

ED: emergency department; PrEP: pre-exposure prophylaxis



Major Findings from Healthcare Encounters Among People with HIV who Inject Drugs (n=65)



Medication for Opioid Use Disorder
Infrequently Prescribed



Medical Encounters for Overdose and STIs
Infrequent



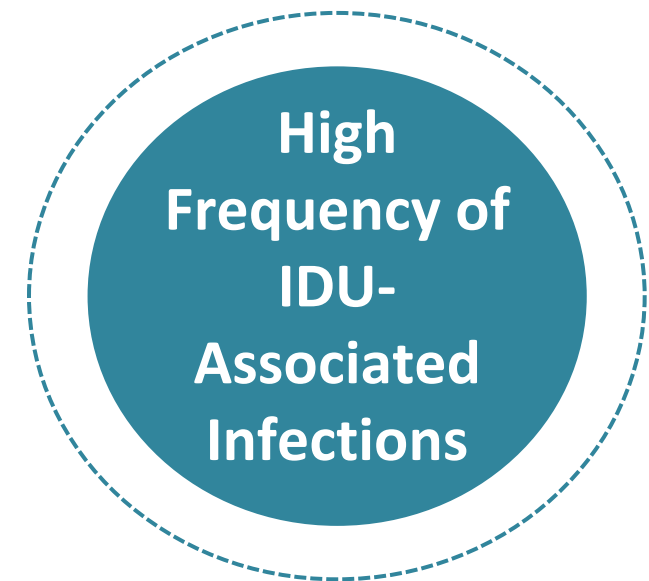
Hepatitis C Diagnosis Preceded HIV Diagnosis
by About 4 Years



Over 80% of Individuals Covered by
Medicaid



Housing Instability & Incarceration are
Prevalent



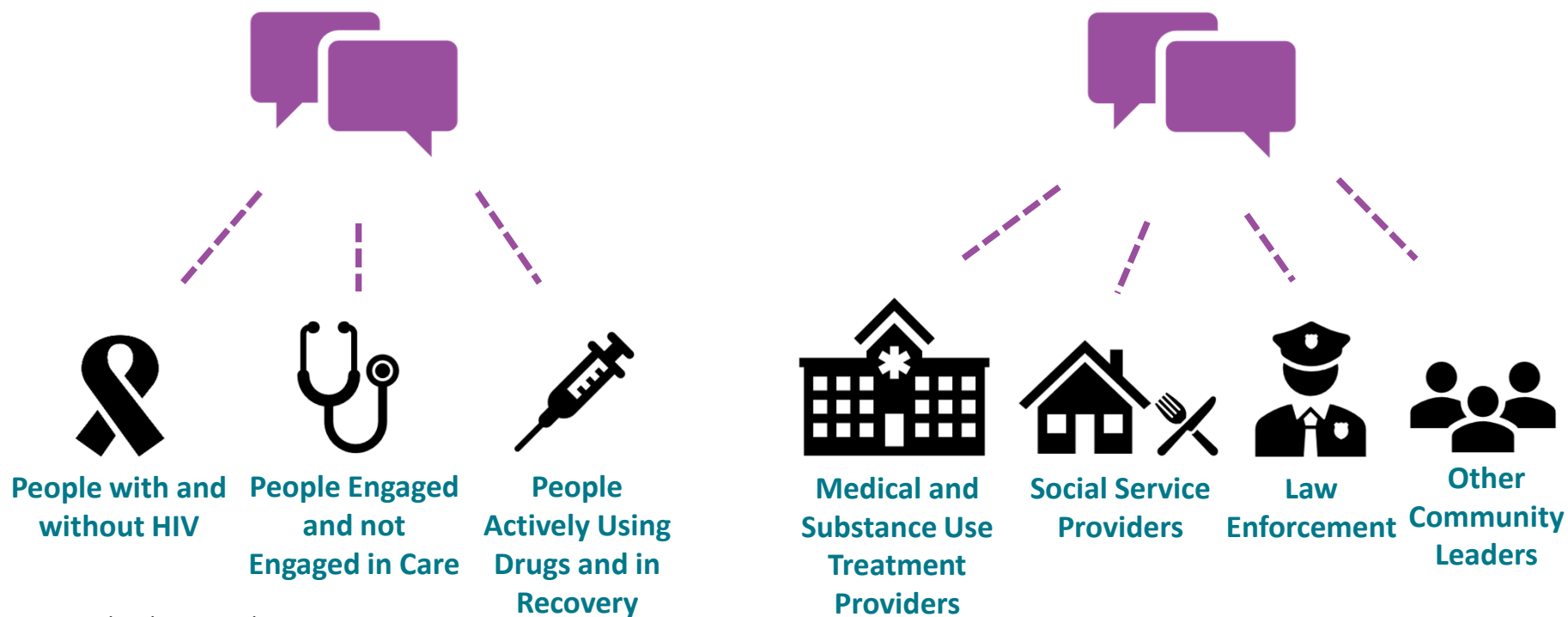
IDU: injection drug use



Objective 1: Rapid Assessment



Conducted Interviews with 26 PWID and 45 Stakeholders in the Community



PWID: people who inject drugs

Data were Analyzed by Identifying Themes Across Areas of Interest

- **Areas of Interest**
 - Drug use behavior
 - HIV risk behavior
 - Barriers to accessing HIV or substance use services
 - Suggestions to address HIV outbreak
- **Identified patterns across interviews and between sub-groups**
 - Compared responses across participants for each topic area



People are Facing Multiple, Co-occurring Health and Social Challenges



People Often Reuse or Share Syringes Due to Low Access to Sterile Syringes and Syringe Services Programs (SSPs)

Drug Use
&
HIV Risk
Behavior

We [PWID] **use the same needle until we can't...** I say that from experience because that's how I got it [HIV]... I don't feel like [HIV] rates would be so high if we had needle exchange.

-- PWID, woman with HIV



There are Misconceptions Related to HIV and HCV among PWID and Community Members

HIV Risk Behavior

If I was having sex with you, we was having a sexual relationship, **I didn't care to share a needle because we had sex.** To me, there wasn't no big difference because I didn't ever use a condom or anything.

-- PWID, man without HIV

...**We [community leaders] need to be there in the forefront, educating people.** First, removing the stigma of people that are struggling with substance use disorder. Also, pushing back against that fear narrative that the people in the streets are evil, they're druggies. **These are human beings that need our assistance.**

-- Community leader

PWID Expressed Strong Negative Views Towards Hospitals Due to Previous Experiences of Injection Drug Use Stigma and Discrimination

Barriers to
HIV services

[Hospital providers] have no respect. They see you as a user and they automatically are real nasty people. They're nasty. That's what I can say about them...That's probably why, well **another reason why I wouldn't go to the hospital unless I was dying, because they don't care about you.**

-- PWID, man without HIV

[PWID have] been **let down** by the healthcare system and **mistreated.**
-- Medical provider

Participants Suggested Expanding HIV Testing in Clinical and Nonclinical Settings

- **HIV testing in clinical settings:**

- Train medical providers on SUD, SUD treatment, and stigma reduction
- Link patients with SUD to the Ryan White HIV/AIDS program for HIV testing and linkage to treatment through a consult service

- **HIV testing in nonclinical settings:**

- Increase focus on hot-spot areas (West Side, Kanawha City, South Charleston)
- Operate in the afternoons and evenings
- Implement discreet, mobile outreach
- Provide comprehensive services (wound care, linkage to services)

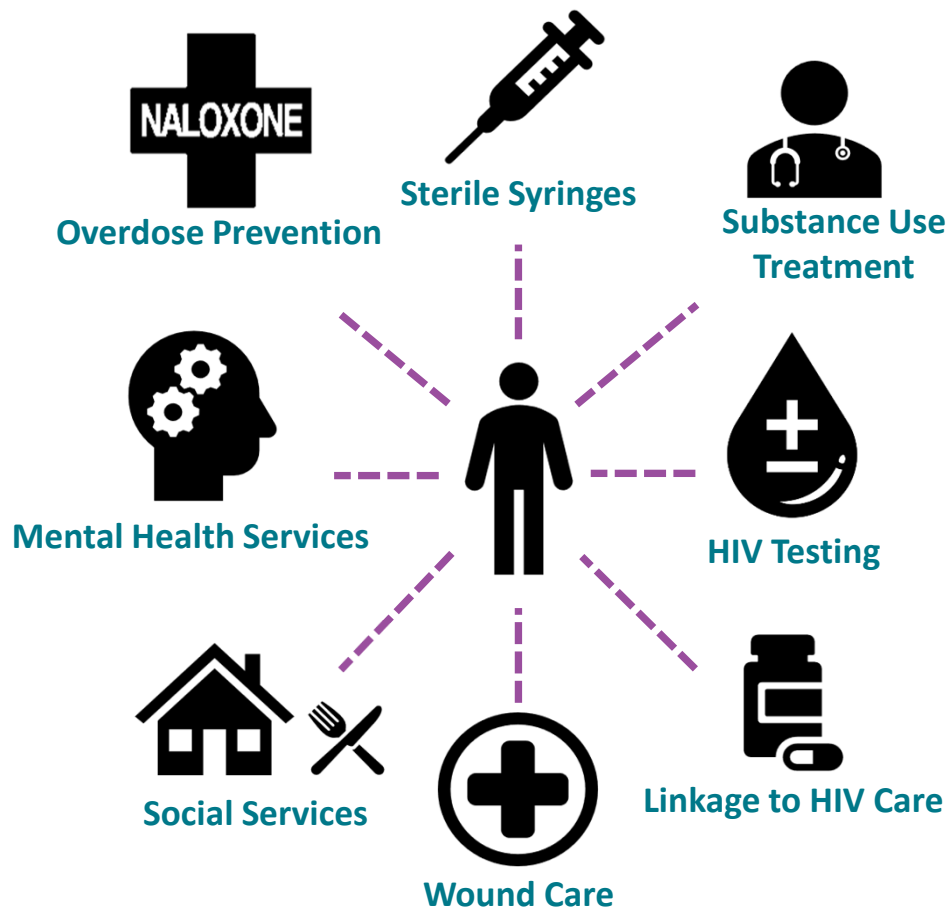
SUD: substance use disorder



**Participants
Suggested Expanding
HIV Prevention
Efforts Beyond HIV
Testing and Linkage
to Care**

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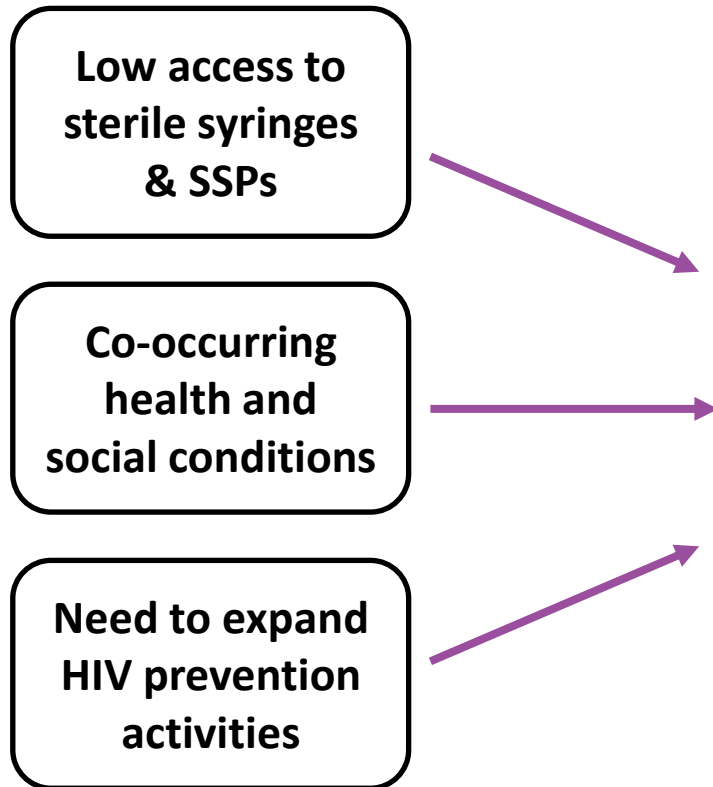
**Including Access to
Comprehensive
Harm Reduction
Services**





Primary Recommendations

Summary of Findings

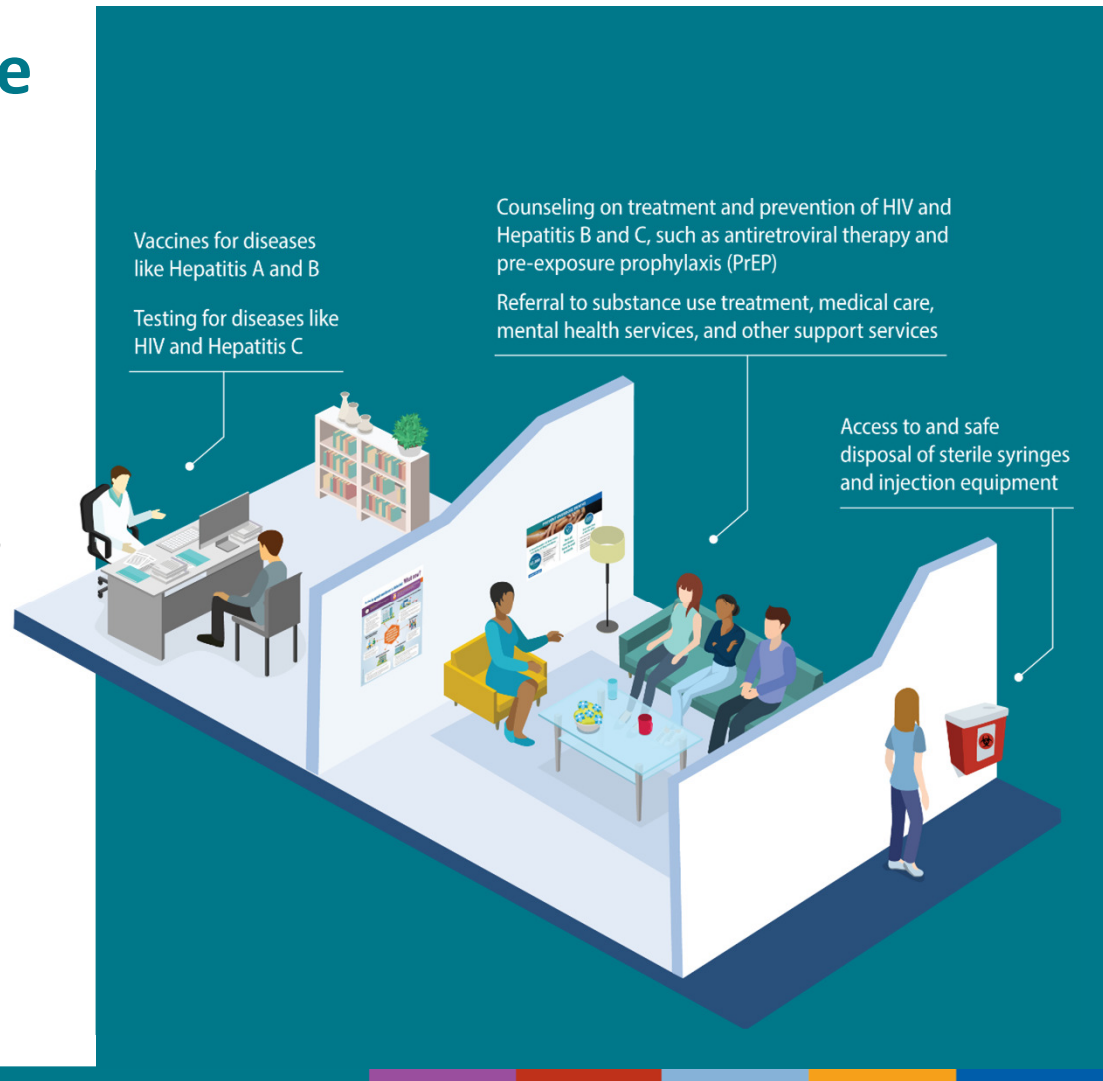


Primary Recommendation

Expand access to sterile syringes and other injection equipment through comprehensive harm reduction services

What do Comprehensive SSPs Provide?

- **Access to and safe disposal of sterile needles and syringes**
- **Services – or referrals to services – including**
 - Substance use disorder treatment
 - Prevention education on infectious diseases
 - Screening and treatment for infectious diseases
 - Overdose prevention education
 - Naloxone distribution
 - Vaccinations
 - Social, mental health, and other medical services



SSP: syringe services program

SSPs Prevent Transmission of Blood-Borne Infections

- Nonsterile injections can lead to serious health consequences
- Access to sterile injection equipment can prevent infections



- » SSPs associated with ~50% decline in viral hepatitis and HIV transmission
- » Further declines noted when medication for opioid use disorder (MOUD) is offered

SSP: syringe services program

Platt. Cochrane Database Syst Rev. 2017

Fernandes. BMC Public Health. 2017



SSPs Help Stop Substance Use and Prevent Overdose Deaths

- SSPs offer medication for opioid use disorder (MOUD)
- People who inject drugs who regularly use an SSP are **three times more likely to stop** using drugs than those who don't use an SSP
- SSPs prevent overdose deaths by providing Naloxone



SSP: syringe services program

Des Jarlais. *MMWR*. 2015

Seal. J. *Urban Health*. 2005

SSPs are Tailored to the Communities they Serve



- Nearly 30 years of research demonstrates that SSPs protect the public's health
- SSPs do not increase crime
- SSPs protect communities and first responders by providing safe needle disposal

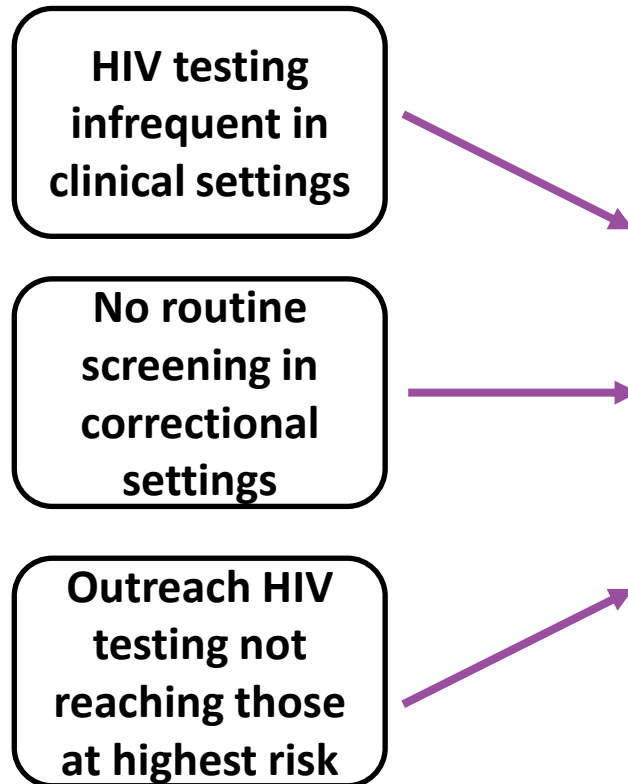
SSP: syringe services program

Galea, S. *Journal of Acquired Immune Deficiency Syndromes*. 2000

Marx, M. A. *American Journal of Public Health*. 2001

Tookes HE. *Drug and Alcohol Dependence*. 2012

Summary of Findings



Primary Recommendation

Improve opportunities for earlier HIV diagnosis through rapid expansion of routine, opt-out HIV and HCV screening in clinical and correctional settings and using non-traditional outreach strategies



HIV Screening in Clinical and Correctional Settings



- Routine, opt-out HIV and HCV screening in hospital settings, including emergency departments, has been shown to increase detection of undiagnosed HIV and HCV infection and linkage to care.



- Routine opt-out HIV testing should be provided by correctional medical staff during the intake medical exam.

Branson BM. *MMWR Recomm Rep*. 2006.

Burrell CN. *BMC Health Serv Res*. 2021.

Faryar KA. *PLoS One*. 2021.

CDC. *HIV Testing Implementation Guidance for Correctional Settings*. 2009. <http://www.cdc.gov/hiv/topics/testing/resources/guidelines/correctional-settings>

HIV Screening in Nonclinical or Community-Based Settings



- CDC guidance supports offering rapid HIV testing in nonclinical or community-based settings to facilitate access for those who are not engaged in medical services.



- Distributing HIV self-tests through community outreach may be another effective strategy to facilitate access to HIV testing.

CDC. *Implementing HIV Testing in Nonclinical Settings: A Guide for HIV Testing Providers*. 2016.

https://www.cdc.gov/hiv/pdf/testing/CDC_HIV_Implementing_HIV_Testing_in_Nonclinical_Settings.pdf

CDC. Self-Testing. <https://www.cdc.gov/hiv/testing/self-testing.html>



Summary of Findings

Missed opportunities
for HIV testing in
clinical and nonclinical
settings

PrEP and MOUD
prescription is
infrequent

Co-occurring health
and social conditions

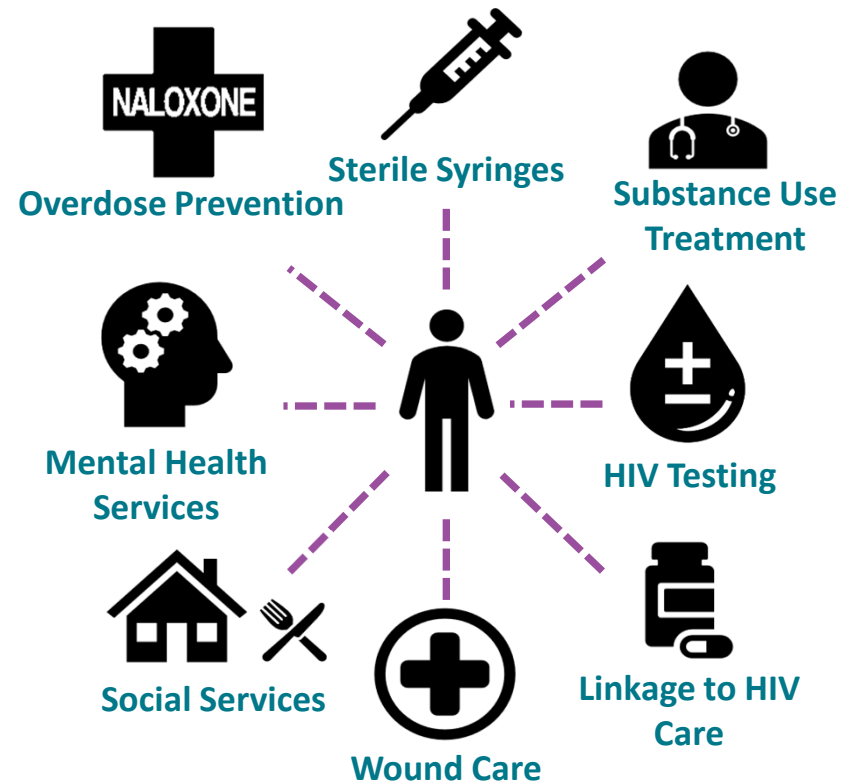
Primary Recommendation

Improve access to HIV,
hepatitis C, substance
use, and mental health
services through
**service integration by
co-locating services and
cross-training service
providers**

PrEP: pre-exposure prophylaxis for HIV prevention; MOUD: medication for opioid use disorder

Integration of Prevention Services for PWID Improves Access and Effectiveness

- Co-location of services, along with multi-disciplinary teams and intensive case management, can help address important barriers to HIV care.
- Same-day linkage to HIV care and ART models have been shown to increase ART uptake, decrease time to linkage to care, and improve viral suppression.



PWID: people who inject drugs; ART: antiretroviral therapy

Belani H. *MMWR Recomm Rep*. 2012. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6105a1.htm>

HHS. Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV. <http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf>

HRSA. 2019. <https://hab.hrsa.gov/sites/default/files/hab/Publications/careactionnewsletter/rapid-art.pdf>

Coffey S. 2019. https://www.cdc.gov/hiv/pdf/research/interventionresearch/compendium/lrc/cdc-hiv-RAPID_ART_Program_HIV_Diagnosis_LRC_EI_Linkage.pdf

Summary of Findings

Misconceptions related to HIV and HCV, including current HIV outbreak and evidence-based interventions, among PWID and stakeholders

PWID experienced stigma and discrimination

Primary Recommendation

Implement a **comprehensive health communication plan and ongoing community engagement activities** to share information about the HIV outbreak, facilitate community discussion about response activities, and address stigma related to HIV and drug use

PWID: people who inject drugs

Summary of Findings

Size of PWID population in Kanawha County is not well understood

HCV infection preceded HIV diagnosis by ≈ 4 years

Molecular analysis indicates rapid HIV transmission affecting people from other WV counties

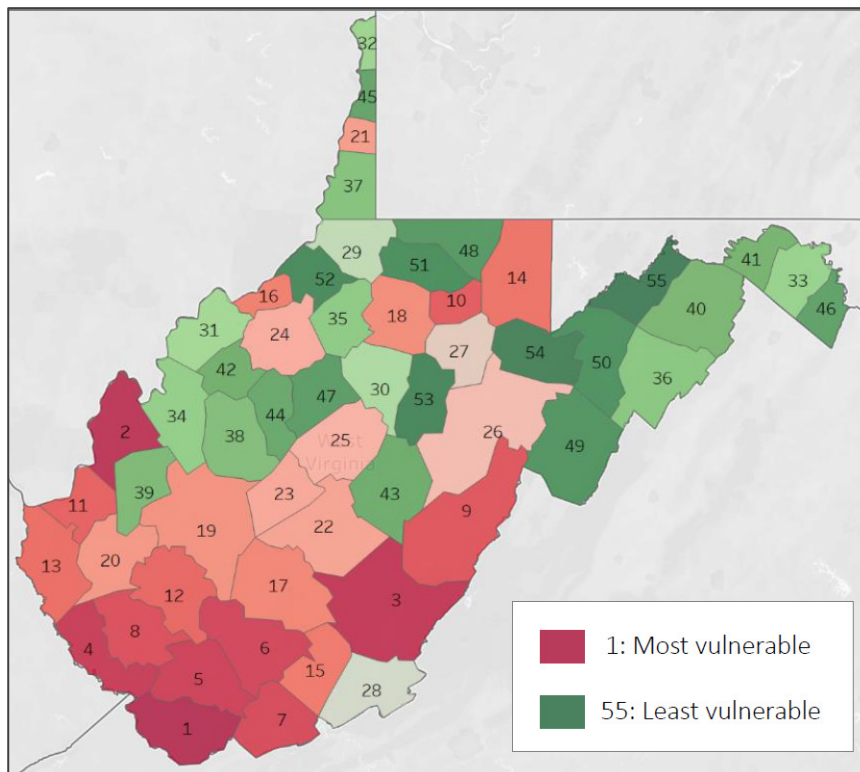
Primary Recommendation

Estimate the **size and characteristics of the PWID population** and use surveillance data to **prioritize proactive outreach and promote early detection of and response to HIV transmission**



Promote Early Detection of and Response to HIV Transmission

County Rankings for Vulnerability to Rapid Spread of HIV/HCV via Unsterile Injection Drug Use



https://oepe.wv.gov/HCV/documents/data/WV_Vulnerability_Assessment.pdf

- Use data indicating vulnerability to HIV and HCV outbreaks
 - Overdose
 - HCV
 - Serious bacterial infections related to injection drug use
- Prioritize proactive outreach and partnership with communities at risk
- Ensure that comprehensive harm reduction services are available in those areas

Primary Recommendation

Given evidence of ongoing rapid HIV transmission, response activities should be approached with urgency





Additional Recommendations

Recommendations: Harm Reduction Across Multiple Settings

Implement low-barrier, one-stop shop models to provide harm reduction services: hospitals, FQHCs, brick-and-mortar settings, mobile units

- **Assess the needs of clients and stakeholders to eliminate barriers to implementation**
- **Monitor and evaluate services**
- **Involve PWID in the development, implementation, and monitoring of programs**
 - **Members of community advisory boards**
 - **Offer employment or incentivized volunteering**
- **Minimize improper or unsafe disposal of used syringes**
- **Expand naloxone and fentanyl test strip distribution to prevent overdose**

FQHC: federally qualified health center; PWID: people who inject drugs



Recommendations: Care Coordination



- Prioritize holding regular meetings to discuss ways to support clients with or at risk for HIV



- Increase the number of trusted outreach workers, case managers, peer educators/recovery coaches, and systems navigators working across medical and social service settings



- Identify strategies for streamlining enrollment procedures for medical and social services



Recommendations: Health Department



- Improve HIV testing outreach by changing event locations and hours of operation and offering comprehensive services



- Use public health data to adjust outreach efforts and estimate the size of the PWID population, care use patterns, and costs of care



- Improve partner services by increasing staffing, expanding use of non-traditional field outreach approaches, and building relationships with community organizations

PWID: people who inject drugs



Recommendations: All Health Care Settings



- Screen all patients with SUD for HIV and hepatitis C



- Assess and treat opioid withdrawal symptoms

- Link patients with SUD to a social worker, peer recovery coach, and/or nurse



- Train providers on compassionate treatment of PWID, MOUD and other SUD treatment options, harm reduction, HIV and SUD stigma reduction, and the HIV outbreak



- Expand PrEP delivery by increasing clinician and patient awareness and offering PrEP through mobile services



- Address barriers to preventative health care through mobile services or street medicine, increased availability of walk-in services, and partnerships with organizations serving PWID

SUD: substance use disorder; PWID: people who inject drugs; MOUD: medication for opioid use disorder; PrEP: pre-exposure prophylaxis

Recommendations: HIV Health Care Settings



- Consider implementing a same-day linkage to HIV care and ART model



- Increase ordering of HIV drug resistance testing at entry to care



- Integrate evidence-based pharmacotherapy for SUD, including MOUD, as part of comprehensive HIV care services

ART: antiretroviral therapy; SUD: substance use disorder; MOUD: medication for opioid use disorder



Recommendations: Correctional Settings



- Implement opt-out rapid HIV and HCV testing during intake



- Increase provision of MOUD for people who are incarcerated or detained



- Improve linkage to comprehensive health and social services upon release from correctional settings, including establishing a plan of action to ensure care for individuals with HIV

MOUD: medication for opioid use disorder



Recommendations: Social Services and Other Settings



- Offer spaces for PWID to access drop-in services



- Establish crisis stabilization units or places to serve as waiting areas while persons are being linked to SUD treatment or mental health services



- Provide medication storage and consider innovative approaches for delivery of medications through case managers or outreach workers



- Expand access to low-barrier housing services

PWID: people who inject drugs; SUD: substance use disorder

Recommendations: Public Safety



- **Develop and implement training of law enforcement and other public safety personnel on compassionate treatment of PWID, MOUD, harm reduction, and the HIV outbreak**

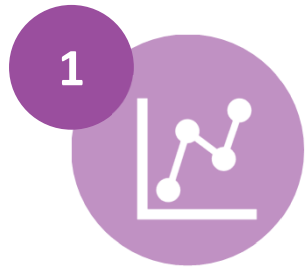


- **Consider law enforcement diversion programs to link people to SUD treatment or mental health services during encounters instead of focusing on arrest or incarceration**

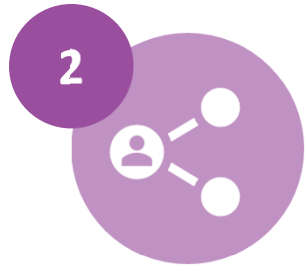


Next Steps

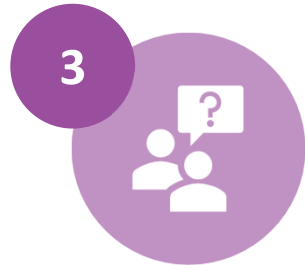
Epi-Aid: Next Steps



Continue Data Analysis



Support BPH and KCHD with Dissemination of Findings



Provide Technical Assistance with Response Activities



Disclaimer

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of Health and Human Services.

Questions?

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of HIV/AIDS Prevention

