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

**May 17**
WV BPH and KCHD Requested Epi-Aid to Assist with Three Investigation Objectives

**June 2**
Epi-Aid Kickoff Meeting

**June 24**
Epi-Aid Exit Presentation with Preliminary Findings

**August 3**
Report of Preliminary Findings and Recommendations

Ongoing: Continuing Support Provided as Needed
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

DIS: Disease Intervention Specialists
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.
- 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.

Outreach HIV Testing Data Indicate Geographic Variability in Test Positivity Rates
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

- HIV Surveillance & Partner Services
- CAMC & Health Right Medical Records
- Viral Hepatitis & COVID Vaccinations
- COVID & Viral Hepatitis Diagnoses
- WV Health Information Network

CAMC: Charleston Area Medical Center
Chart Abstraction Results

- **65** People with HIV Included in the Investigation
- **496** Healthcare Encounters Reviewed (in full) from CAMC and Health Right
- **177** 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)

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

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

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

High Frequency of IDU-Associated Infections
Objective 1: Rapid Assessment
Conducted Interviews with 26 PWID and 45 Stakeholders in the Community

People with and without HIV
People Engaged and not Engaged in Care
People Actively Using Drugs and in Recovery
Medical and Substance Use Treatment Providers
Social Service Providers
Law Enforcement
Other Community Leaders

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

- Substance use Disorder (SUD)
- Trauma & Loss
- Depression & Anxiety
- Unemployment

Hopelessness
- Chronic Pain
- Unstable Housing
- Food Insecurity
- HIV
People Often Reuse or Share Syringes Due to Low Access to Sterile Syringes and Syringe Services Programs (SSPs)

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

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

[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

- Low access to sterile syringes & SSPs
- Co-occurring health and social conditions
- Need to expand HIV prevention activities

Primary Recommendation

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

SSP: syringe services program
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
Tookes HE. *Drug and Alcohol Dependence*. 2012
Summary of Findings

- HIV testing infrequent in clinical settings
- No routine screening in correctional settings
- Outreach HIV testing not reaching those at highest risk

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.

Burrell CN. BMC Health Serv Res. 2021.
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.


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

HHS. Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV. http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.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 \( \approx 4 \) 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

- 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

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

Primary Recommendation

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

PWID: people who inject drugs; MOUD: medication for opioid use disorder; SUD: substance use disorder
Next Steps
Epi-Aid: Next Steps

1. **Continue Data Analysis**
2. **Support BPH and KCHD with Dissemination of Findings**
3. **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?