

HIV Outbreaks Among People Who Inject Drugs (PWID): Recent U.S. CDC Experience

CAPT Sheryl Lyss, MD, MPH

Detection and Response Branch

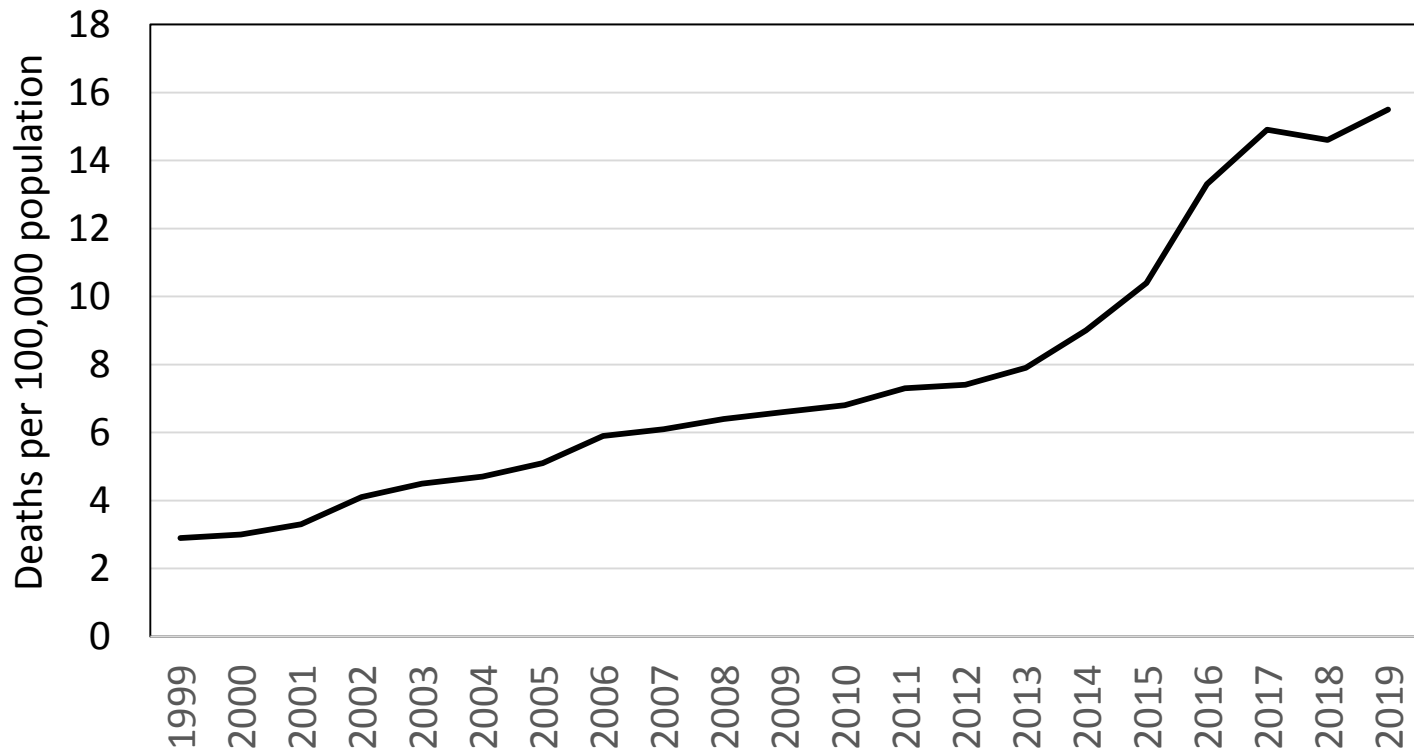
Division of HIV Prevention, CDC

October 26, 2021



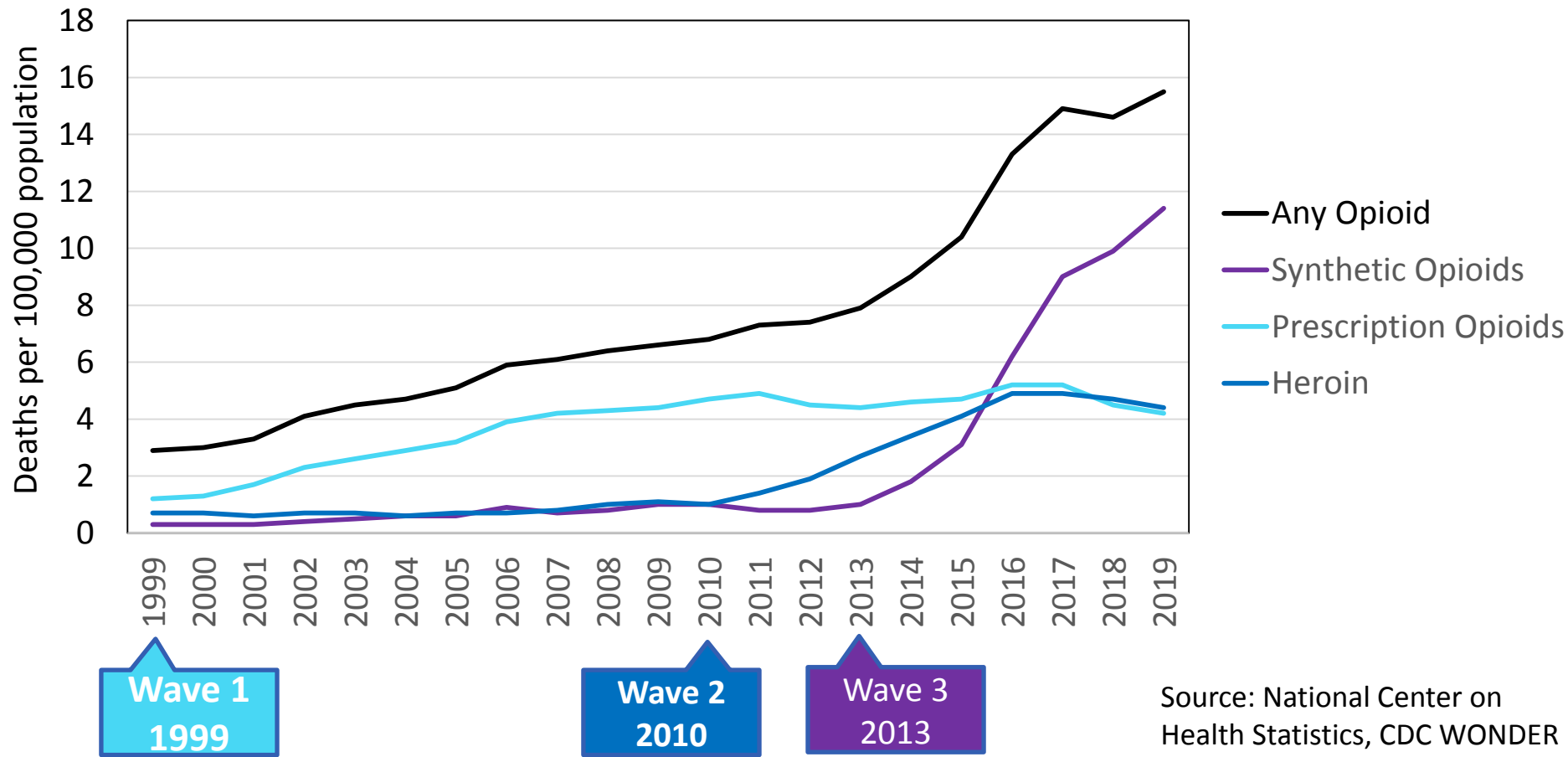
The author has no direct or potential conflicts of interest to report

Opioid Overdose Deaths — United States, 1999–2019

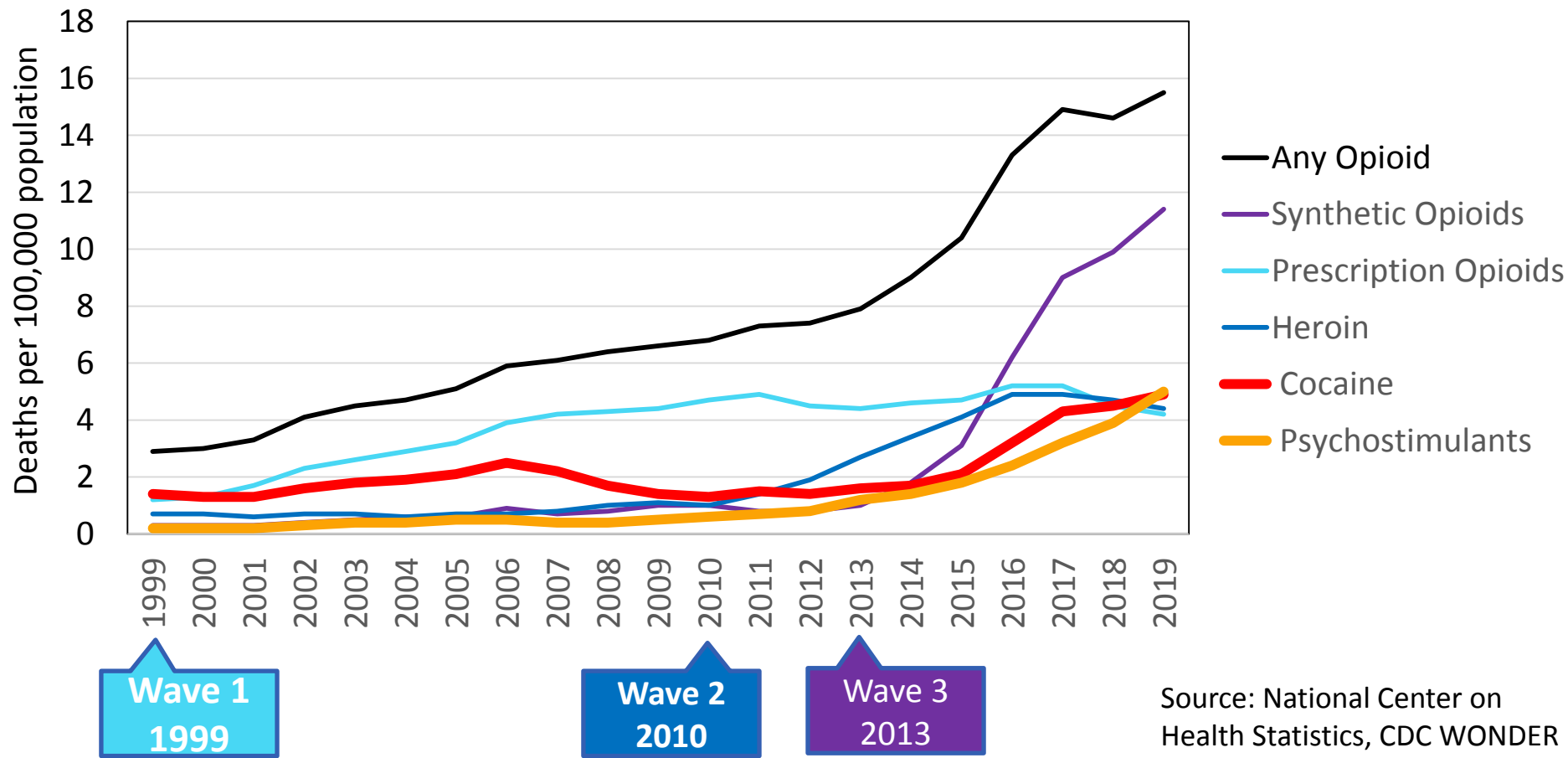


Source: National Center on
Health Statistics, CDC WONDER

Opioid Overdose Deaths — United States, 1999–2019

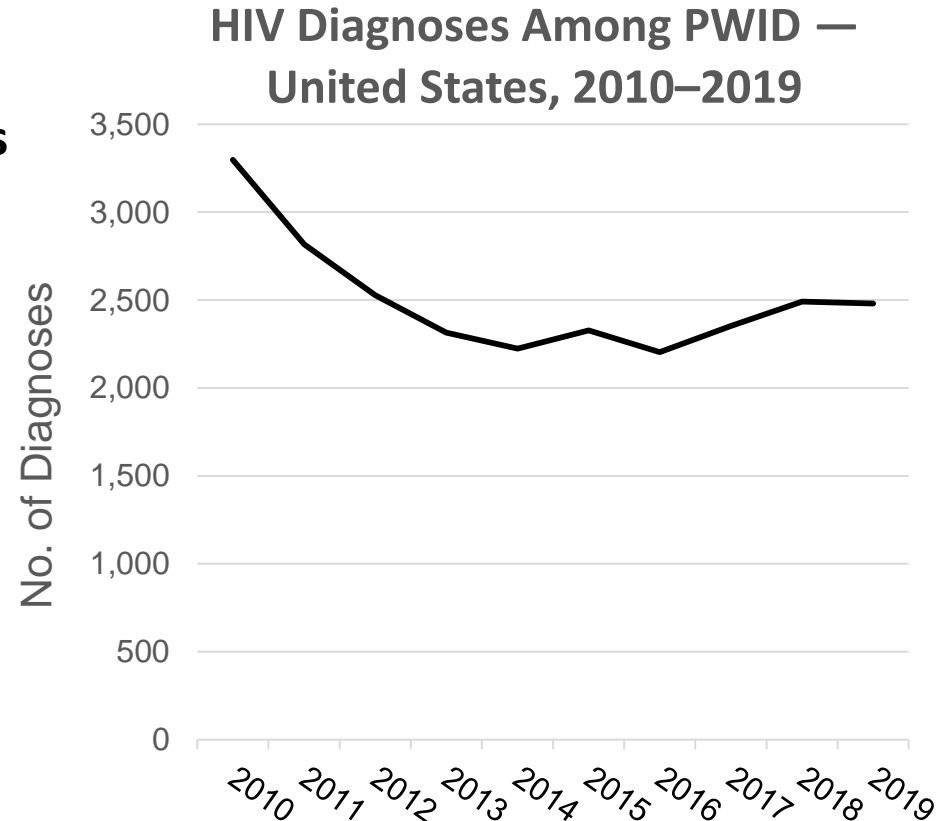


Overdose Deaths — United States, 1999–2019



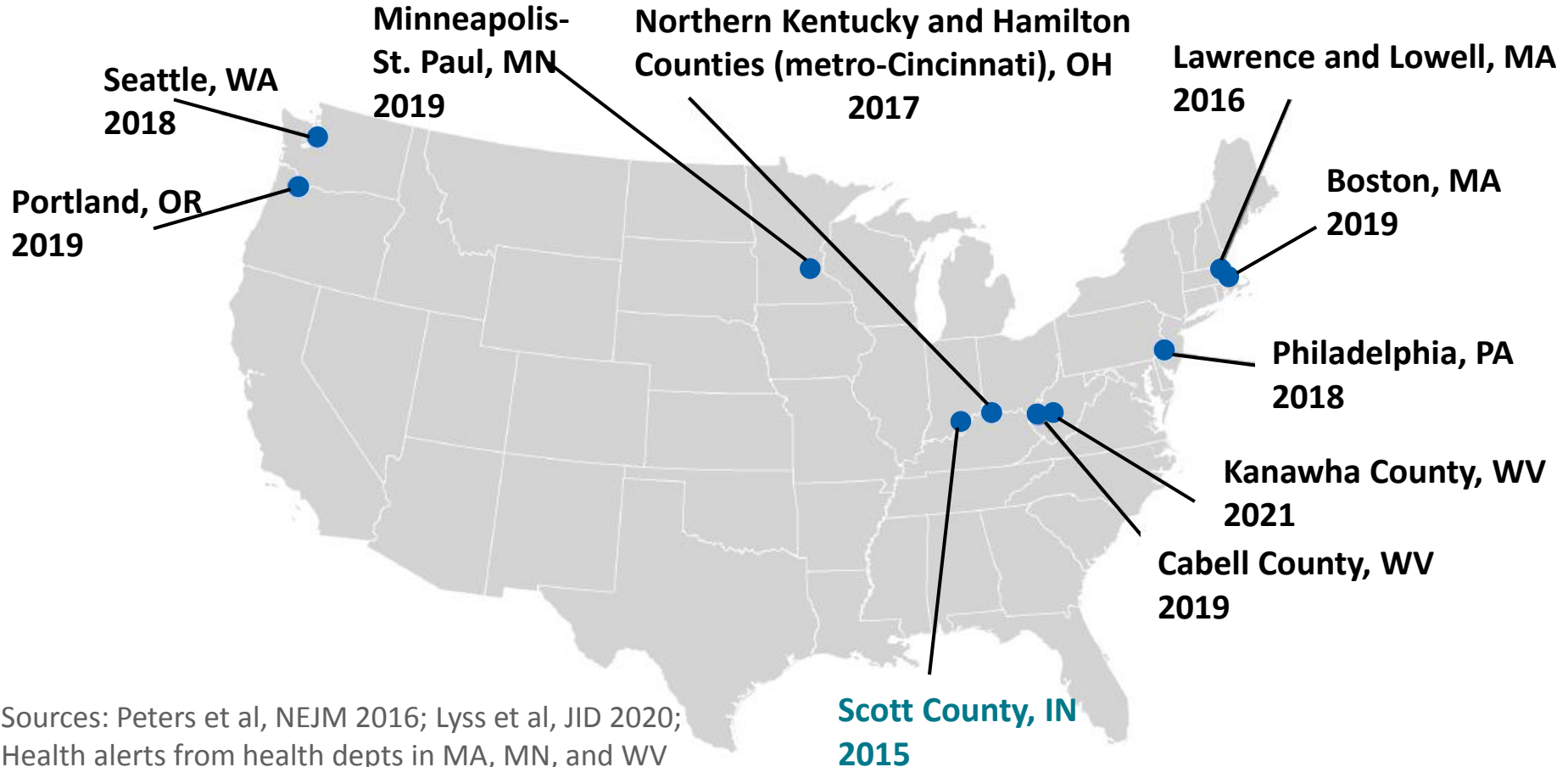
HIV Among People Who Inject Drugs (PWID) in the United States

- The number of annual HIV diagnoses among PWID in the U.S. declined substantially over many years.
- During 2010–2014, the rate of decline slowed.
- During 2016–2019, diagnoses increased nationally.
- Multiple outbreaks of HIV among PWID have contributed to these increases.



Data source: NCHHSTP Atlas Plus: <https://www.cdc.gov/nchhstp/atlas/index.htm>

HIV Outbreaks Among PWID and Year of Recognition



Investigation of Outbreaks

- **Analysis of routine surveillance and program data**
- **HIV molecular sequence analysis helped HDs understand:**
 - Dynamics of transmission
 - Size and scope of outbreaks
- **Supplemental data collection**
 - Enhanced interviews of people with new HIV diagnoses
 - Rapid assessments of needs for or barriers to services
 - Meetings to engage stakeholders
 - Medical record abstraction



Source: Lyss et al. Responding to Outbreaks of HIV among PWID—US, 2016–2019. JID 2020.

Epidemiologic Similarities Across Outbreaks

- Polysubstance use (opioids with methamphetamine or cocaine)
- Injection multiple times per day
- Coinfections: hepatitis C, hepatitis B, STIs
- Marginalizing circumstances:
 - Homelessness or unstable housing
 - Recent incarceration
 - Exchange of sex for money or goods
- Most — but not all — occurred in metropolitan areas in which harm-reduction services were offered



Similarities in Responses to Outbreaks

- Expanded case finding, e.g.:
 - Outreach testing
 - Syringe services programs (SSPs)
 - Emergency departments
 - County jails
- Services for HIV and substance use disorder (SUD)
 - Linking PWID to services, e.g., HIV and SUD treatment, PrEP, SSPs
 - Expanding PrEP and SSP services
 - Flexible appointment times, assisting with transportation
 - Co-locating and integrating services
- Responding to these outbreaks was labor-intensive and existing HD resources were often insufficient



Factors that potentially precipitated the outbreaks varied

- **Recent introduction of HIV into an existing needle-sharing network**
 - Suggested by finding in certain outbreaks that nearly all cases with molecular sequences clustered together in a single cluster
- **Contextual changes such as:**
 - changes in the drug supply,
 - reductions in the supply of clean injection equipment,
 - or worsening social conditions
 - Supported by supplemental data and the finding of multiple distinct molecular clusters in some outbreaks



Lessons Learned



Planning for outbreaks: essential for rapid, efficient response



Engaging community: essential for planning & implementation



Addressing the multiple medical and social needs of PWID



Providing services for people with HIV and those at risk for HIV



Addressing gaps in programs and services that are identified through outbreak response which helps to:

- **Encourage innovation**
- **Decrease transmission**
- **Strengthen routine programs**
- **Meet the needs of affected communities**

Infections Related to Injection Drug Use (IDU) – United States

- **Widespread outbreaks of hepatitis A across the U.S. since 2016**
 - Primarily among people who use drugs (injection or non-injection) and people experiencing homelessness
 - >42,000 cases in 37 states; ~26,000 (61%) hospitalizations; and ~400 deaths
- **Acute HBV & HCV: IDU was most commonly reported risk factor in 2019**
 - Estimated number of acute HCV infections increased 70% during 2015–2019
- **Rates of invasive MRSA associated with IDU more than doubled during 2010–2018**

Hepatitis A outbreaks in the United States <https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>

Viral Hepatitis Surveillance Report 2019; <https://www.cdc.gov/hepatitis/statistics/2019surveillance/index.htm>

Vulnerabilities assessments: <https://www.cdc.gov/pwids/vulnerable.html>

The U.S. *Ending the HIV Epidemic* (EHE) initiative has set ambitious goals for decreasing HIV incidence

- The opioid crisis is fueling increases in infectious diseases
- HIV diagnoses among PWID have begun to increase, and outbreaks are occurring across the U.S.
- Responding to HIV clusters and outbreaks among PWID
 - Focus resources on networks with rapid transmission
 - Tailor interventions for PWID in those networks by identifying and addressing gaps in programs and services
- EHE initiative brings new resources and opportunities for responding to clusters and outbreaks among PWID — and other populations
- Responding to clusters and outbreaks and addressing gaps will be necessary to meet EHE goals

Thank you

Acknowledgments:

Alice Asher, RN, PhD

Dita Broz, PhD, MPH

LCDR Paul McClung, MD

CAPT Alexa Oster, MD

Disclaimer: The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention.

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

Division of HIV/AIDS Prevention

