



The SUD/HCV/HIV/STI Syndemic

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- Northwest Portland Area Indian Health Board

Learning Objectives

Participants will be able to:

- Explain the concept of a syndemic
- Recognize the impact of the opioid epidemic in relation to the HIV and HCV epidemics
- Describe interventions to mitigate the syndemic at a macro, micro and individual level



Outline

- **Syndemic Concepts**
- **Clinical Case**
- **The SUD/HCV/HIV/STI Syndemic in Indian Country**
- **Interventions to Mitigate the Syndemic:**
 - **Societal (Macro), Health System (Micro), Health Professional (Individual)**



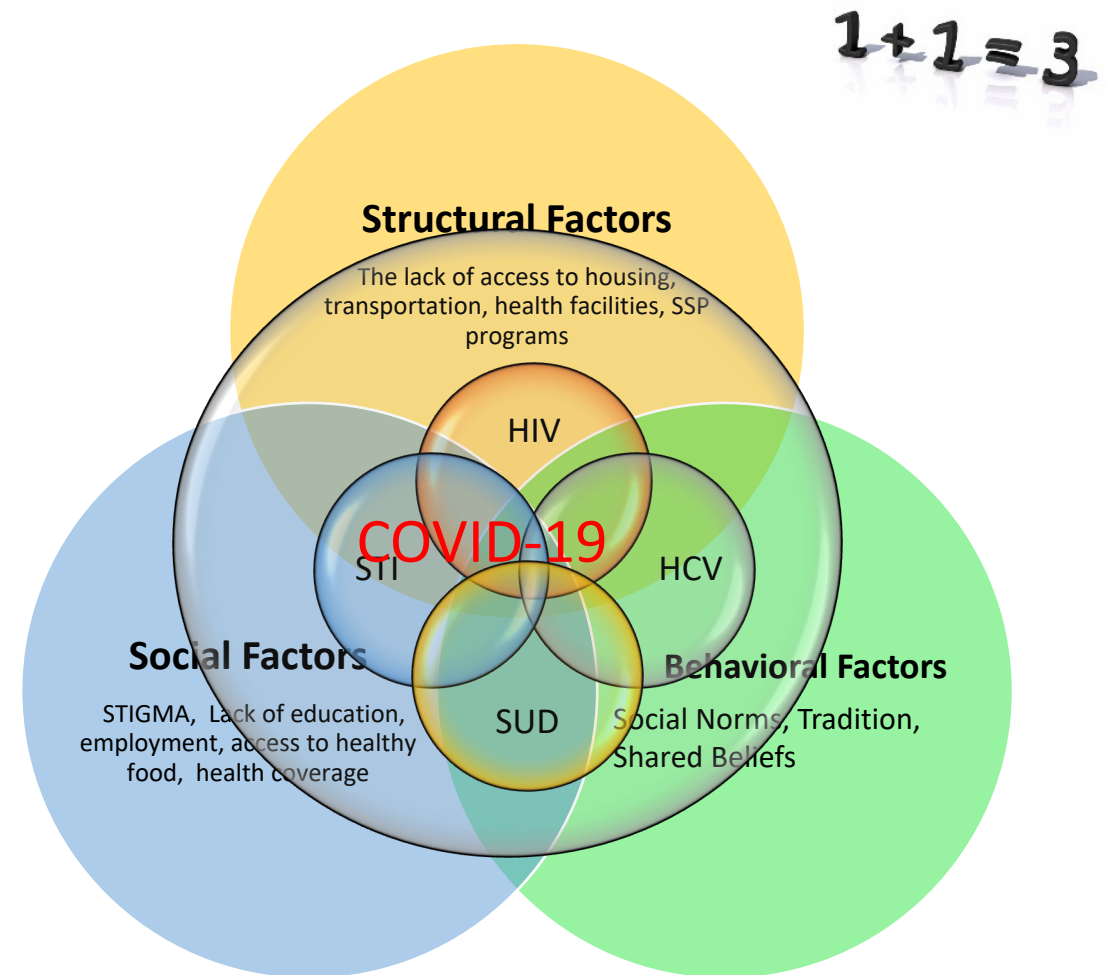
Unconscious Bias Disclosure

- I recognize that language is constantly evolving, and while I make every effort to avoid bias and stigmatizing terms, I acknowledge that unintentional lapses may occur in my presentation.
- I value your feedback and encourage you to share any concerns related to language, images, or concepts that may be offensive or stigmatizing.
- Your input will help me refine and improve my presentations, ensuring they remain inclusive and respectful to participants.

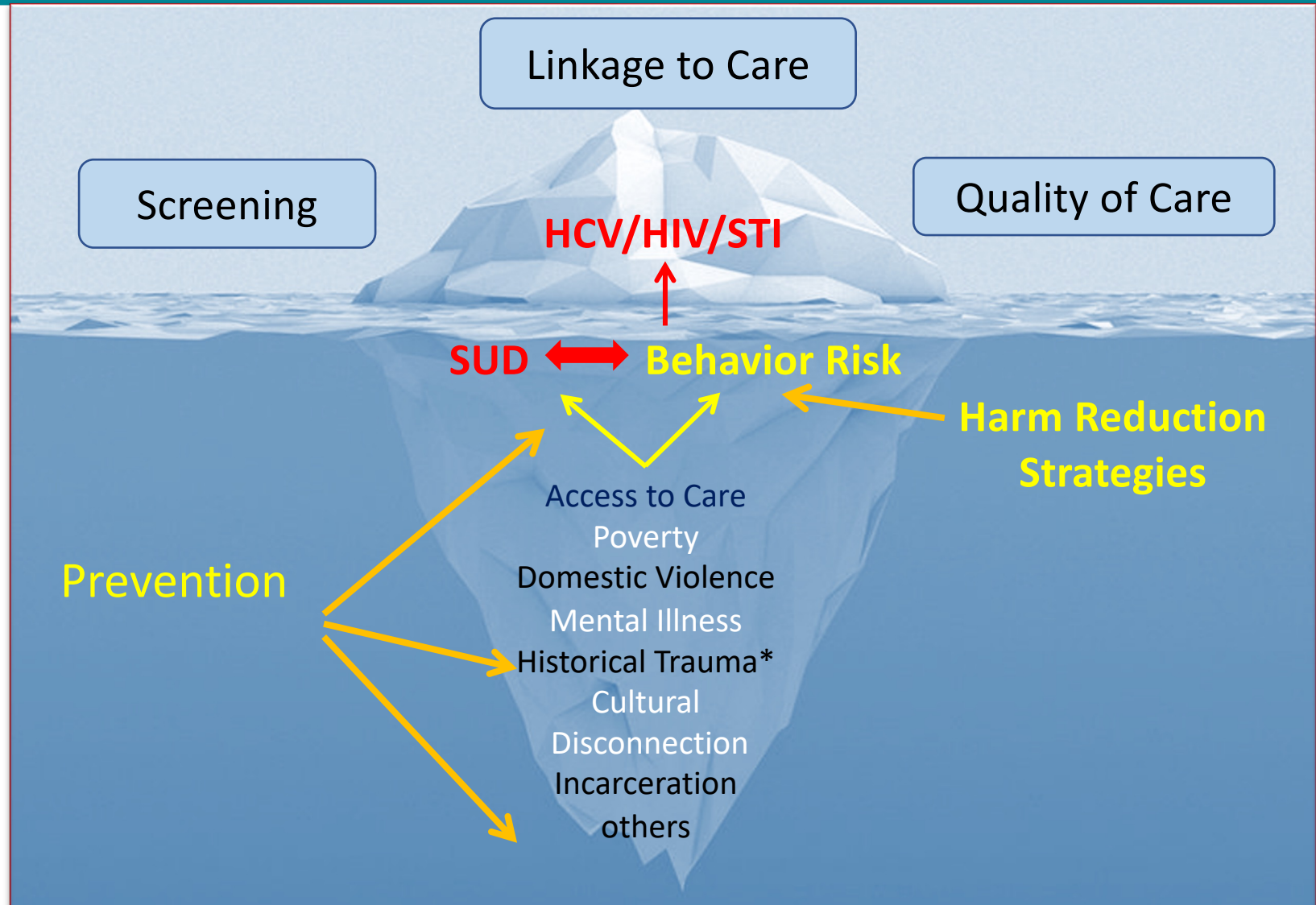
SYNDEMIC

Core principles:

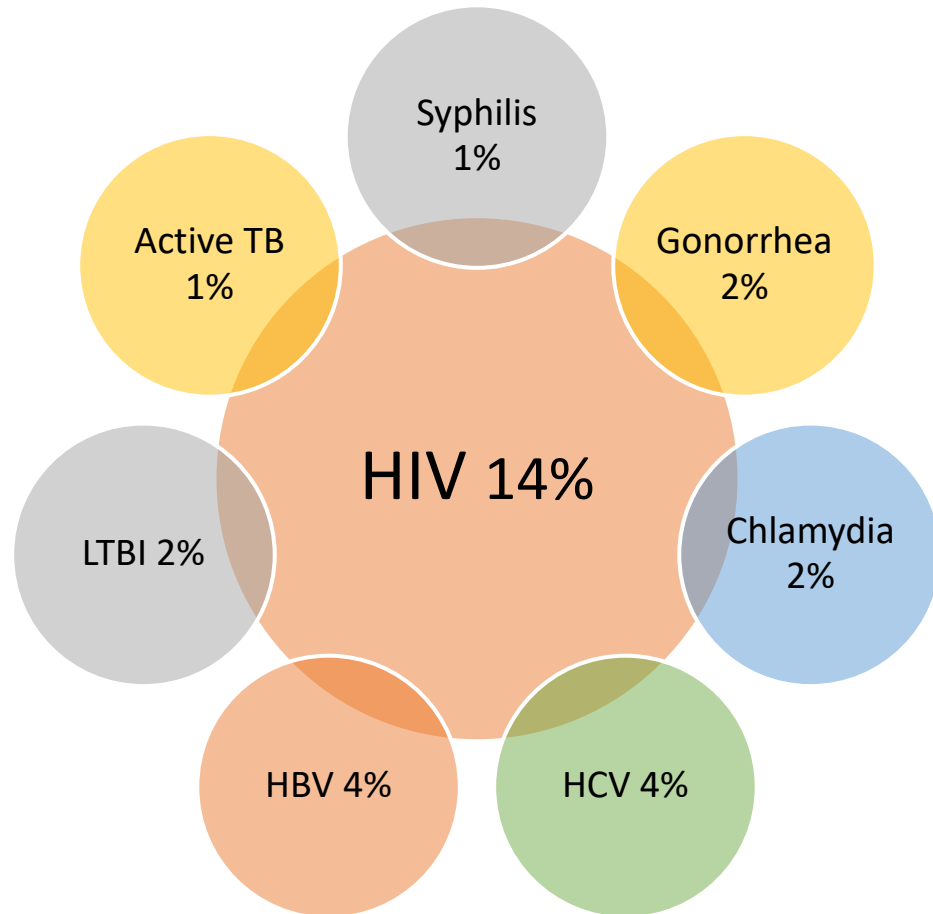
- **Clustering** of two or more conditions in a specific population
- Their **synergism** in producing excess burden of disease in a population
- **Precipitation and propagation** by large scale behavioral, structural and social forces



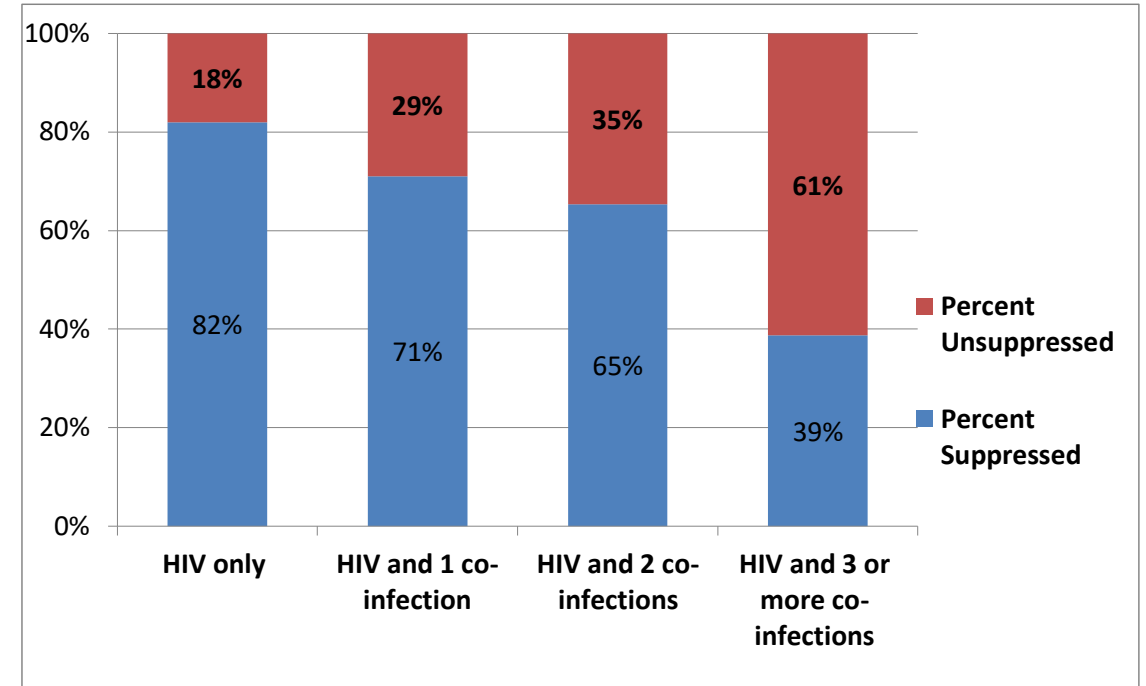
SYNDEMIC



HIV Syndemic Outcomes



Viral suppression rates by number of co-infections



- Syndemics are associated with poorer HIV health outcomes among PLWHA
- Significant “dose-response relationship” between the number of co-infections and mean VLs
- In addition to numbers of co-infections, particular demographic subgroups, and certain geo-clusters were also associated with poorer health outcomes, underscoring the need to address multiple conditions in tandem in an integrated health system

Indiana HIV/HCV/SUD Outbreak

From 2004-2013

- < 5 HIV infections reported annually in Austin, Indiana

In late 2014

- 3 new HIV diagnoses in Austin IN, 2 of them had shared needles

By mid-January 2015

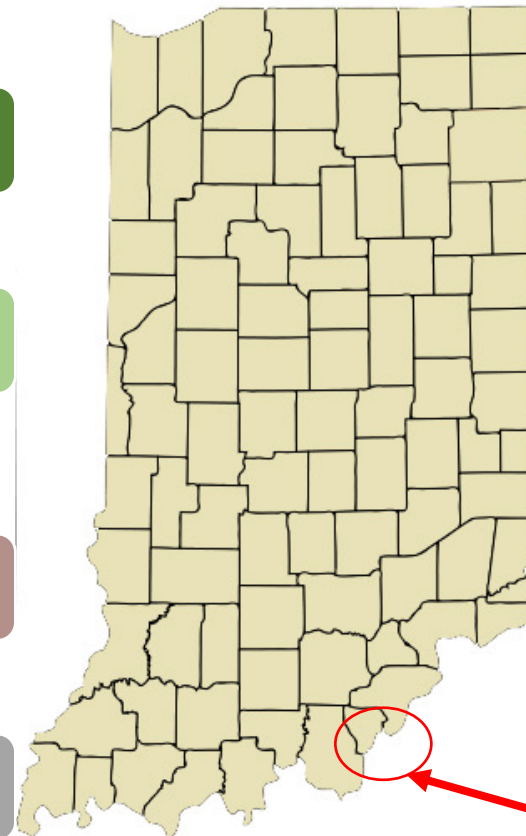
- Through contact tracing ISHD identified 8 more new infections
- The source of infection: Injection of the opioid oxymorphone (semi-synthetic opioid analgesic)

As of June 14, 2015:

- 170 new HIV infections and 115 co-infected with HCV in a Community of 4200 people

All epidemiologically linked to Austin, IN

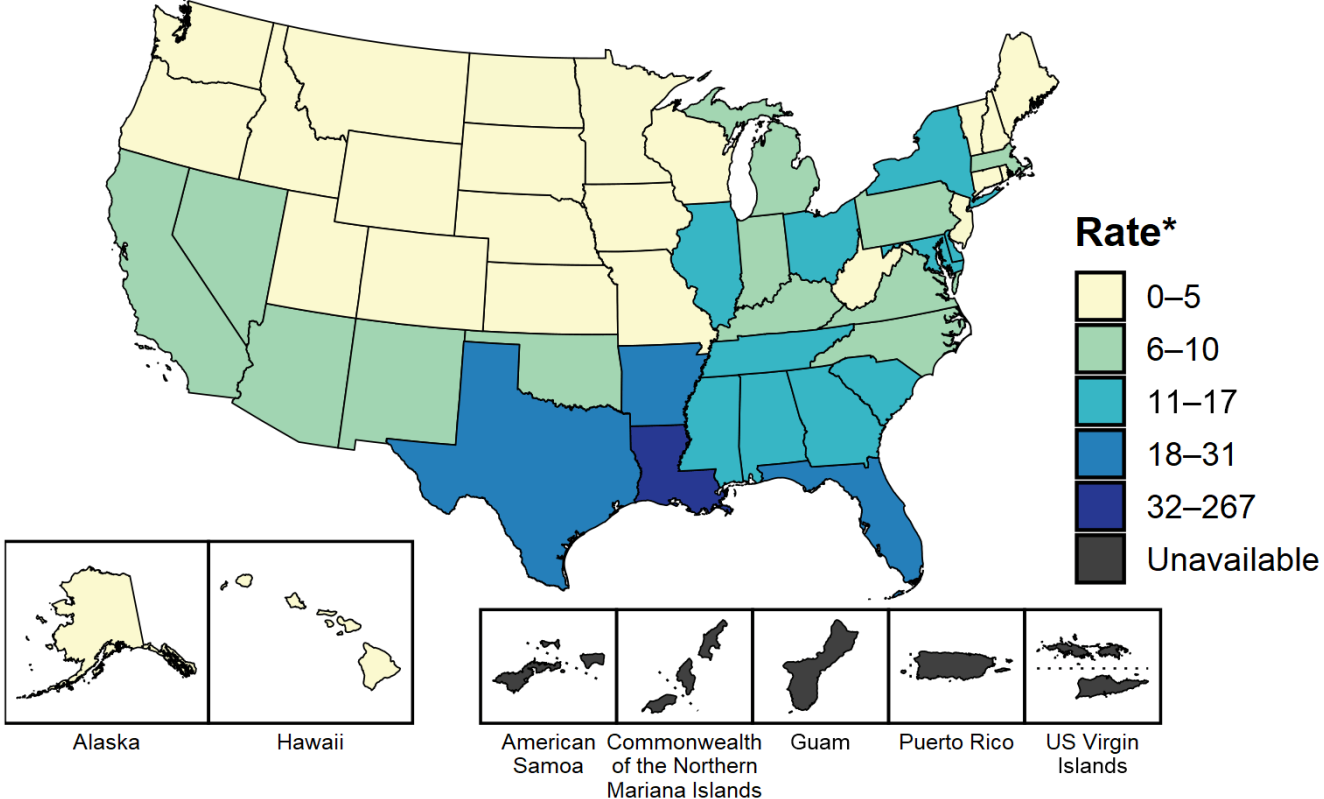
- Infections were recent and from a single HIV strain



Scott County: Among the state's 92 counties, ranked 92nd in a variety of health and social indicators, including life expectancy

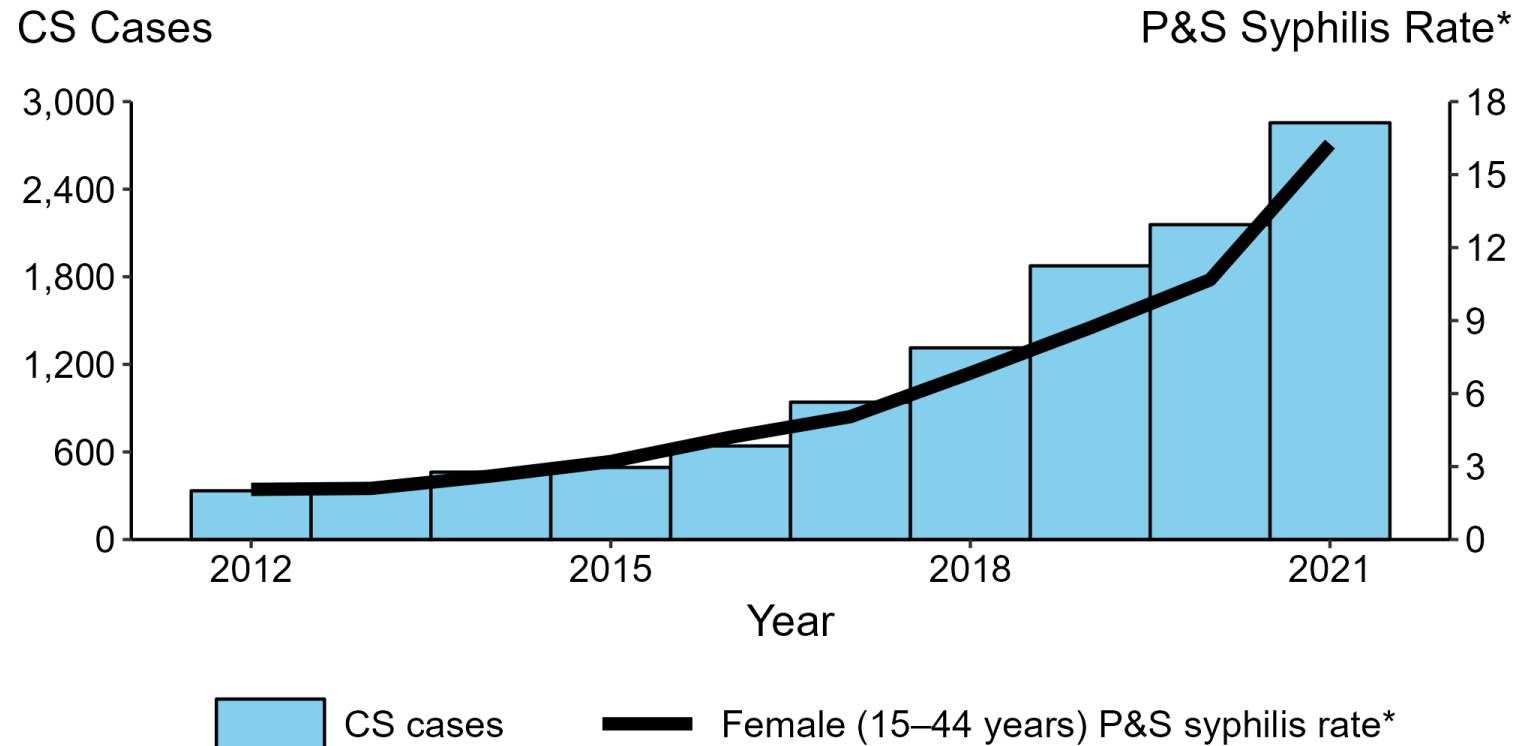
Primary and Secondary Syphilis — Rates of Reported Cases Among Women Aged 15–44 Years by State, United States and Territories, 2012–2021

2012



* Per 100,000

Congenital Syphilis — Reported Cases by Year of Birth and Rates of Reported Cases of Primary and Secondary Syphilis Among Women Aged 15–44 Years, United States, 2012–2021

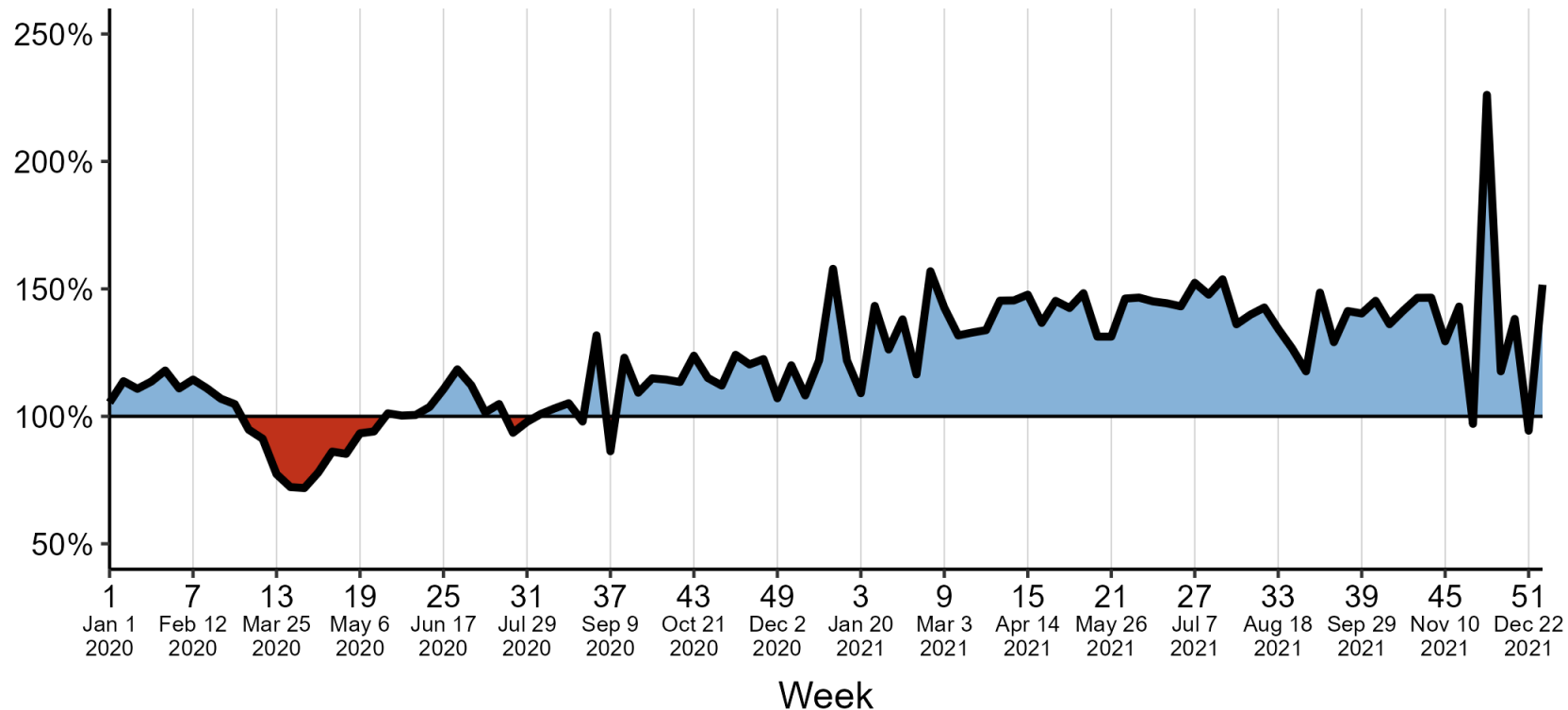


* Per 100,000

ACRONYMS: CS = Congenital syphilis;
P&S Syphilis = Primary and secondary syphilis

Primary and Secondary Syphilis — Reported 2020 and 2021 Cases as a Percentage of 2019 by *MMWR* Week, United States

Weekly Percentage of Cases Reported Compared to 2019



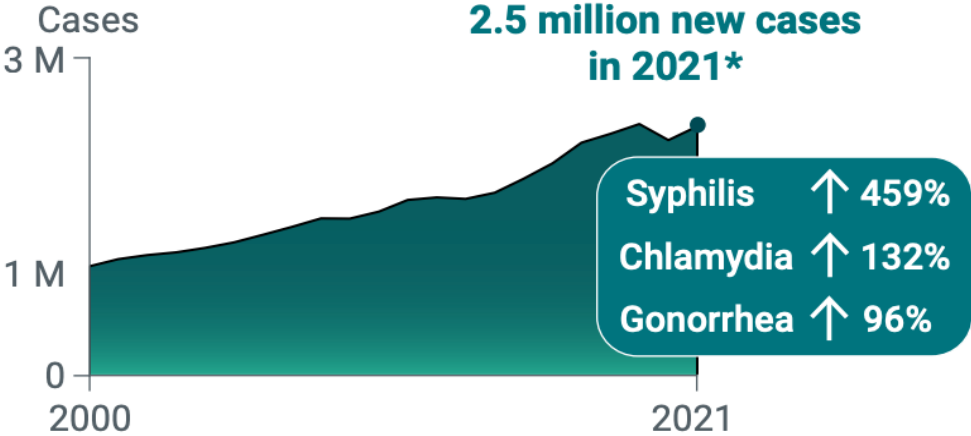
NOTE: The *MMWR* week is the week of the epidemiologic year for which the case is assigned by the reporting local or state health department. For the weeks displayed, the midpoint of the date range (i.e., the Wednesday of the week) is provided for reference.

Adapted from Pagaoa et al., *Sexually Transmitted Diseases*, 2021

Reversing the Rise in STIs: Integrating Services to Address the Syndemic of STIs, HIV, Substance Use, and Viral Hepatitis

STI Overview

Chlamydia, gonorrhea, and syphilis cases have been increasing for years.



People most affected by STIs include:

- Adolescents and people aged 15-24 years
- Gay, bisexual, and other men who have sex with men
- Pregnant people
- People from some racial and ethnic minority groups



A holistic, whole-of-society approach, including addressing social and economic barriers, is required to improve this syndemic and America's health

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Clinical Case: Mr. S



Mr. S is a 24-year-old AI/AN male who suffered a right femur fracture (MVA) 6 years ago. Unfortunately, **pain management training or policies were not available** in the institution, and he was discharge from the hospital with oxycodone hydrochloride for pain control.

Clinical Case: Mr. S



Two years ago, his new medical provider refused to refill the oxycodone. Unfortunately, **the provider was not trained in screening for SUDs. Nor did he have an MAT waiver.** The patient then turned to his friends who gave him oxycodone, but later he had to purchase it in the streets.

Clinical Case: Mr. S



One year ago, he started injecting heroin since it was cheaper. Unfortunately, **SSPs are not available** where he lives, and he has been sharing needles and syringes. Unfortunately, he lost his job and health insurance and is homeless.

Clinical Case: Mr. S



Three days ago, he presented to the ED with opioid withdrawal symptoms (nausea, vomiting, diarrhea, restlessness, abdominal pain).

Clinical Case: Mr. S: Questions

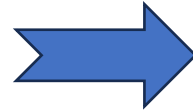


- **For the Public Health Participants:**
 - Name 2 structural and 2 Social factors that were drivers in Mr. S outcomes
- **For the Clinical Participants**
 - Name 1 medical intervention that could have prevented this patient from ending up in the ED and 4 interventions you would have done for Mr. S in the ED

Clinical Case: Mr. S: Questions

- **For the Public Health Participants:**

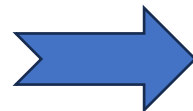
- Name 2 structural and 2 Social factors that were drivers in Mr. S outcomes



- Structural:
 - Access to housing and SSP
- Social:
 - Stigma, Health Coverage

- **For the Clinical Participants**

- Name 1 medical intervention that could have prevented this patient from ending up in the ED and 4 interventions you would have done for Mr. S in the ED



- Preventive Medical Intervention:
 - Pharmacotherapy/SSP
- ED Interventions:
 - Screening for HCV/HIV/Syphilis/HBV
 - Buprenorphine Induction
 - Behavioral health evaluation
 - Social services
 - HIV PrEP

Missed Opportunities

Individual Provider

- Orthopedic surgeon did not recognize that opioids are not the first line of treatment for management of pain in the outpatient setting
- The patient's PCP did not recognize that the patient has an SUD

Health System

- Should have had guidelines/policies in place for pain management, pharmacotherapy and screening for SUD, HIV, HCV and STIs

Society

- Should recognize that SSP are evidence-based practice

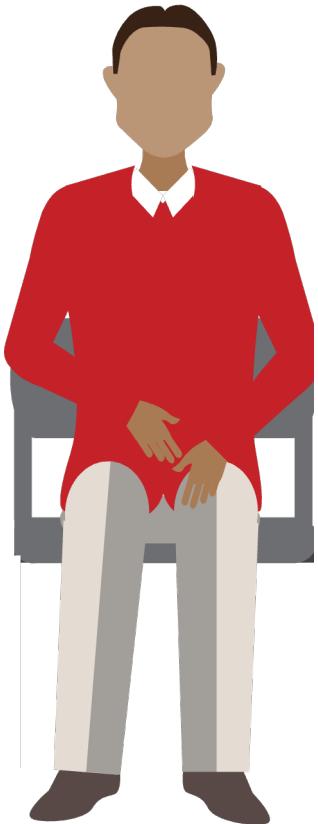


Clinical Case: Mr. S



Fortunately, **the ED medical provider was trained in SUD management** and induced him with Buprenorphine/Naloxone and gave him a 3-day prescription, enough until he could be evaluated and placed on maintenance therapy.

Clinical Case: Mr. S



In addition, **the provider was also trained in screening for STIs, HCV, HIV, and HIV PrEP.** During the ED visit he was screened and tested positive for HCV. HIV and other STIs screens were negative, and he was referred to the Primary Care clinic for HIV PrEP, HCV treatment and pharmacotherapy follow-up.

Outline

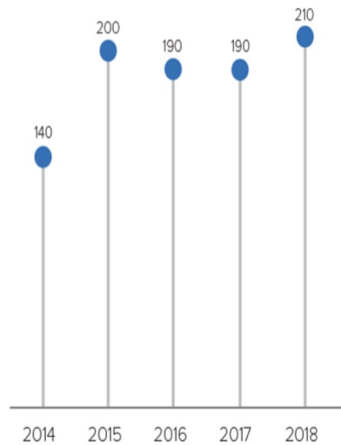
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HIV in American Indian/Alaska Native Populations

Estimated HIV Infections Among AI/AN People in the US, 2014-2018

HIV infections have increased since 2014.

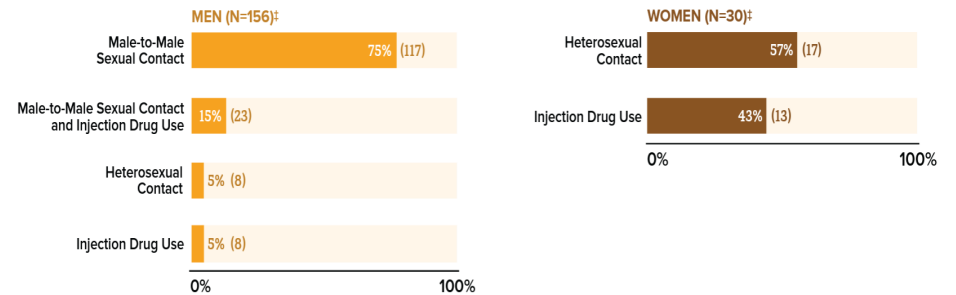


Source: CDC. Estimated HIV incidence and prevalence in the United States, 2014–2018. *HIV Surveillance Supplemental Report 2020,25(1)*.

<1%

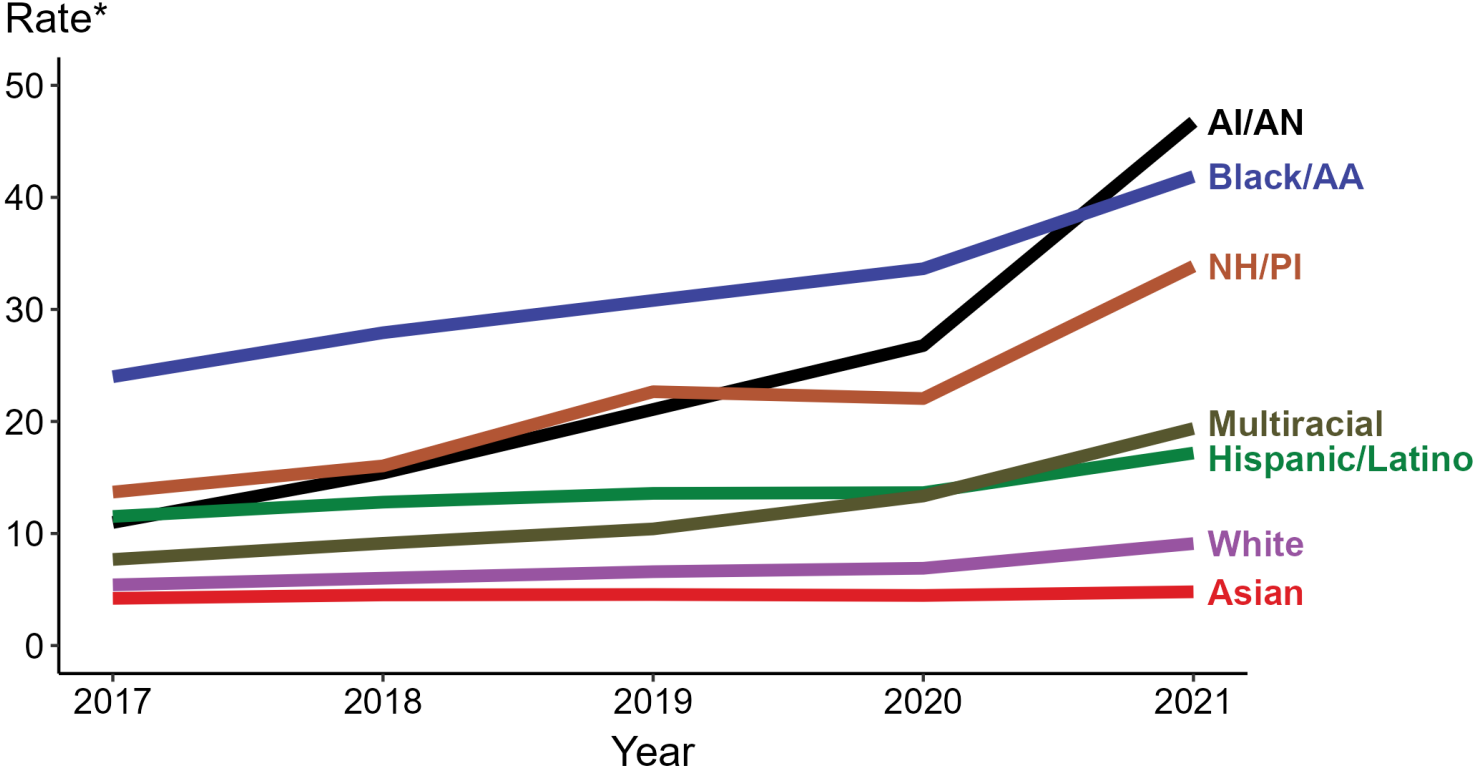
Of the **37,968 NEW HIV DIAGNOSES** in the US and dependent areas* in 2018, less than 1% (186) were among American Indian/Alaska Native (AI/AN) people.

Most new HIV diagnoses were among AI/AN gay and bisexual men.†



- In the U.S. in 2018, both male and female AI/AN had the highest percent of estimated diagnoses of HIV infection attributed to injection drug use, compared with all races/ethnicities.
- Among men, 15% (23) of new HIV diagnoses were attributed to injection drug use, and 11% (21) were attributed to both male-to-male sex and injection drug use.
- Among women, 43% (13) of new HIV diagnoses were attributed to injection drug use.

Primary and Secondary Syphilis — Rates of Reported Cases by Race/Hispanic Ethnicity, United States, 2017–2021

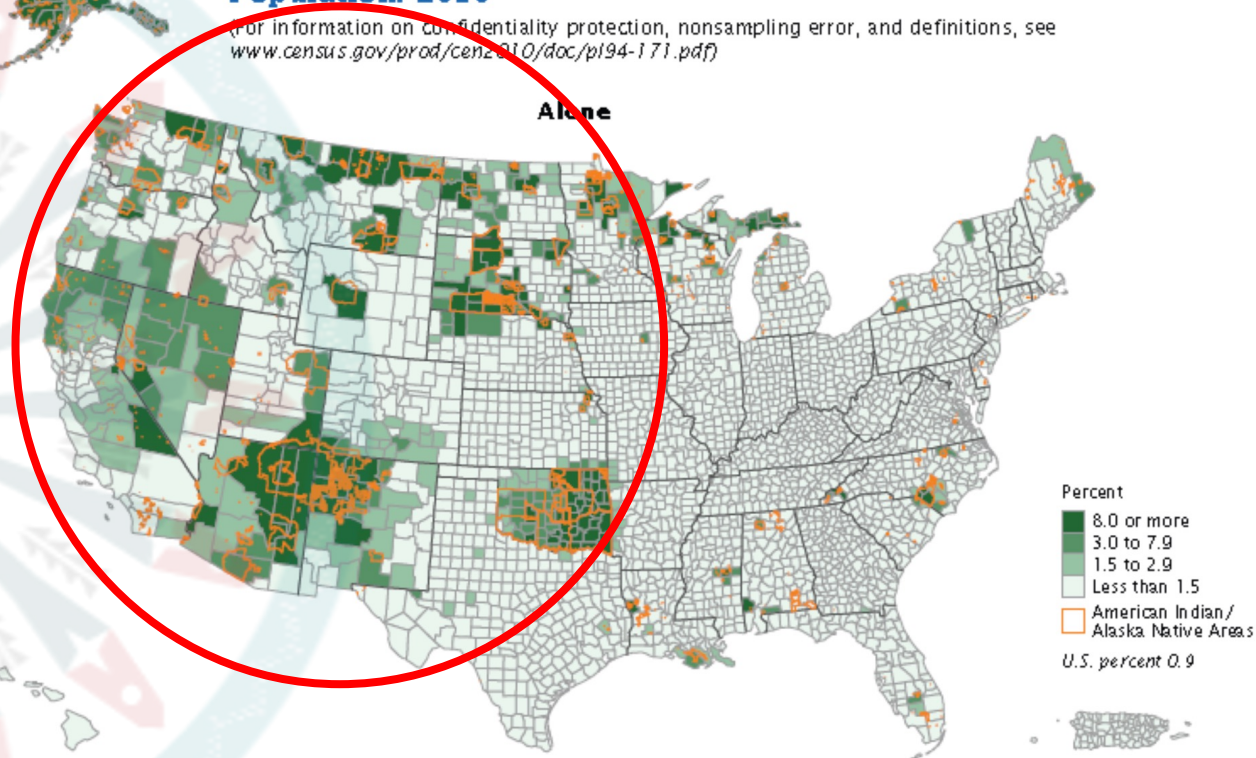


* Per 100,000
ACRONYMS: AI/AN = American Indian or Alaska Native; Black/AA = Black or African American; NH/PI = Native Hawaiian or other Pacific Islander

American Indian/Alaska Native (AI/AN) Statistics in the United States

Figure 4.
American Indian and Alaska Native as a Percentage of County Population: 2010

For information on confidentiality protection, nonsampling error, and definitions, see www.census.gov/prod/cen2010/doc/pl94-171.pdf



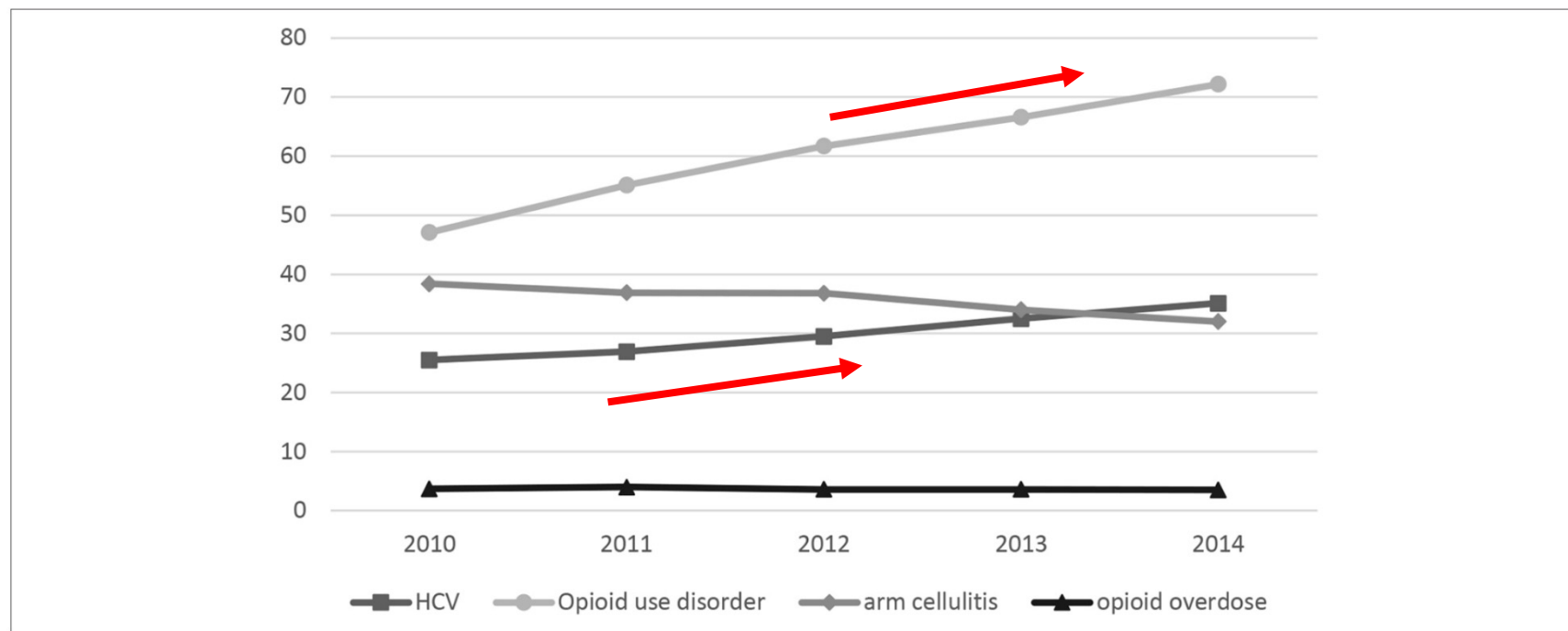
- 573 Federally recognized tribes
 - 5.2 million AI/AN alone or in combination
 - California and Oklahoma have the highest rate of AI/AN population
- **Hepatitis C in AI/AN in the US**
 - HCV disproportionately affects AI/AN^{1,2}
 - The AI/AN HCV **mortality** rate is 10.8 deaths per 100,000, compared to 4.5 per 100,000 nationally.
 - From 2015 to 2016, **incidence** rates of acute HCV among AI/ANs rose from 1.8 to 3.1 cases per 100,000.
 - Rates of **chronic liver disease** and cirrhosis deaths are 2.3 times higher among AI/ANs than Whites.

1. Centers for Disease Control and Prevention. Surveillance for Viral Hepatitis: United States, 2016. Retrieved from <https://www.cdc.gov/hepatitis/statistics/2016surveillance/commentary.htm>

2. Center for Disease Control and Prevention. Deaths: Final Data for 2014. http://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf

3. US Census Bureau. <https://www.census.gov/www>. Accessed Nov 2, 2019

Trends in Indicators of Injection Drug Use, Indian Health Service, 2010-2014: A Study of Health Care Encounter Data



Overall national annual rates (per 10 000 adults) of diagnoses among American Indian/Alaska Native persons for hepatitis C virus (HCV) infection, opioid use disorder, arm cellulitis and abscess, and opioid-related overdose, Indian Health Service, 2010-2014. Rates of diagnoses represent 1 health care encounter per person per year. Data for HCV infections are for adults aged 18-35; all other data are for adults aged ≥ 18 . Arm cellulitis was counted only among adults with no diabetes on or before the health care encounter for arm cellulitis visit (since 2001). Data source: National Patient Information Reporting System.

HIV, HCV, STIs, Drug Use Among AI/AN

- AI/AN had the highest percent of estimated diagnoses of HIV infection attributed to injection drug use
- Syphilis rates rapidly increasing
 - Exacerbates HIV transmission
- Drug use is increasing nationwide and in Indian Country
- AI/AN have greatest rates of new HCV diagnoses
 - Over 2x national rate of HCV-related mortality
 - Rates are decreasing with greater availability of treatment

What can we do for Mr. S?



**AS A PRIMARY CARE HEALTH WORKER?
(INDIVIDUAL)**



**AS HEALTH SYSTEM LEADERSHIP?
(MICRO)**



**AS A SOCIETY
(MACRO)**



Actions to Address the Syndemics Among People Who Inject Drugs as a Primary Care Health Care Worker



- Screening patients for SUDs and mental health disorders
- Testing patients and their sexual or drug-injection partners for HIV, HCV, and STIs
 - With appropriate pre and post-test counseling
- Offering immediate treatment according to established guidelines for patients who test positive

Actions to Address the Syndemics Among People Who Inject Drugs as a Primary Care Health Care Worker



- Providing Hep B vaccinations
 - Even one dose can be effective!
- Providing naloxone to opioid users and their families/partners
- Providing opioid agonist therapy

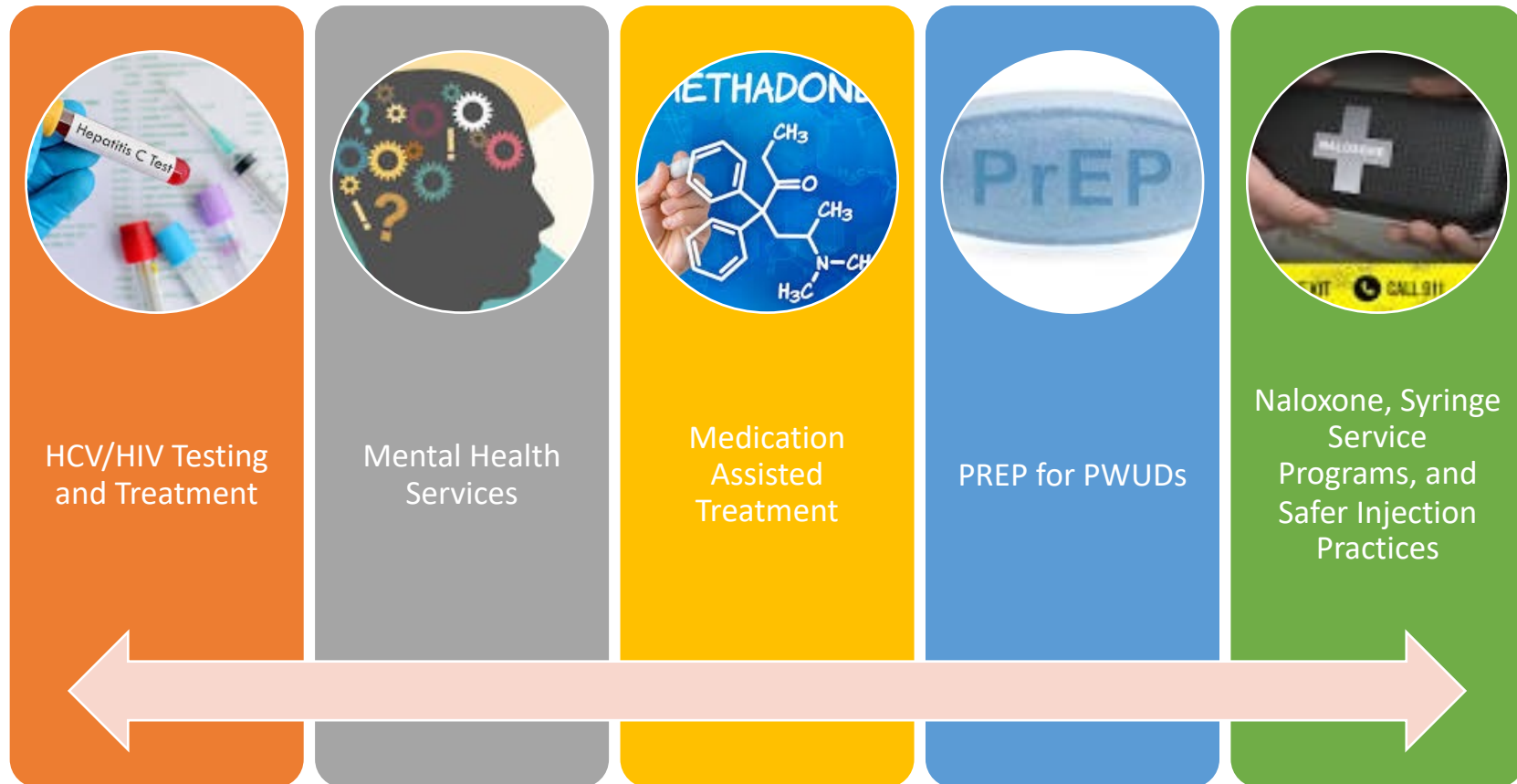
Actions to Address the Syndemics Among People Who Inject Drugs as a Primary Care Health Care Worker



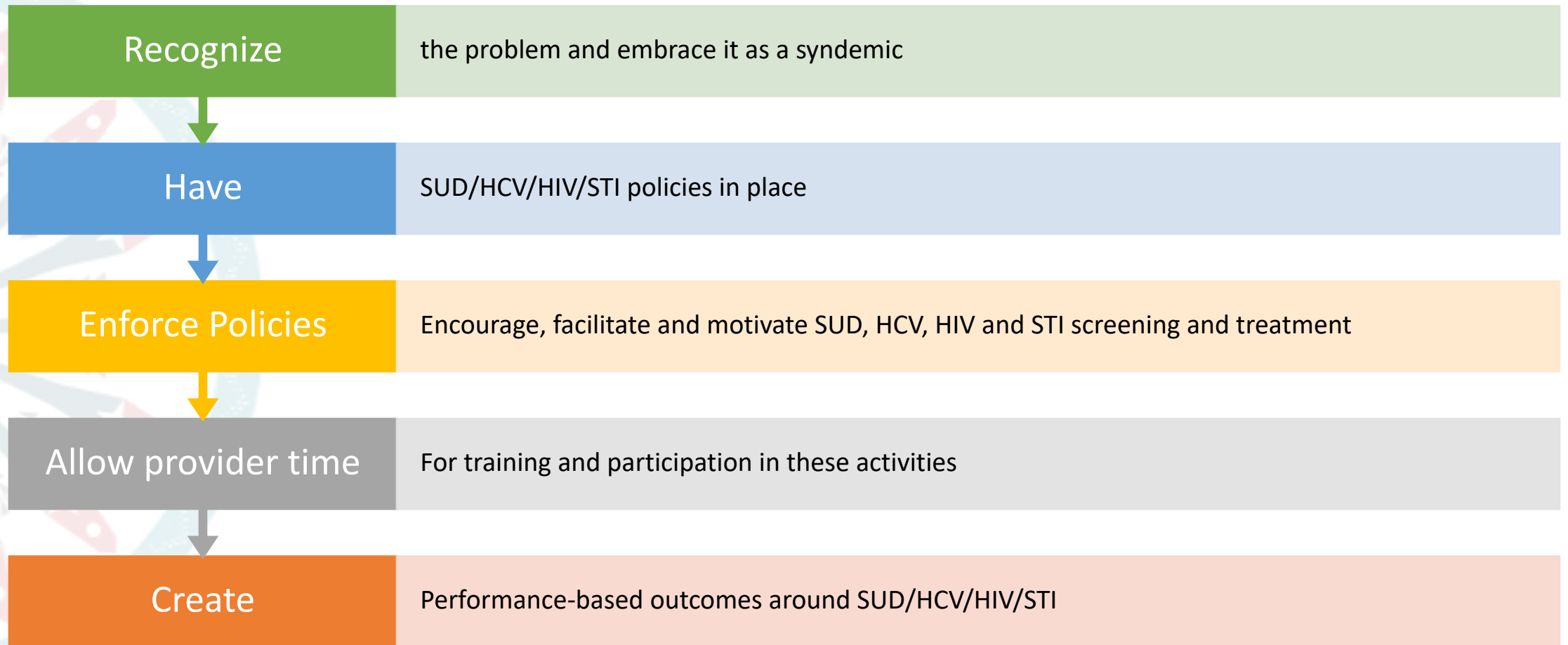
- Supporting injection-drug users by providing sterile syringes or referring them to SSP
- Supporting legislative reforms to expand Medicaid and allow federal funds to support SSPs
- Using PDMPs in clinical decision making involving opiate prescribing

SSPs: Syringe Service Program, PDMPs: Prescription Drug Monitoring Programs

What can the Healthcare Worker do for Mr. S?



What can the Health Care system (Leadership) do for Mr. S (Micro level)



What Can Society Do For Mr. S (Macro level)?

- **Decrease Injection Drug Use and/or make it safer**
 - Make SSP available
 - Easy access to pharmacotherapy
 - Easy access to behavioral health
- **Eliminate social and structural determinants associated with injection drug use**
 - Poverty (Decrease the economic inequality gap)
 - Housing
 - Lack of education
 - Racism
 - Stigma
 - Mass incarceration (Reform drug laws)

Addressing the root of the problem is critical for the elimination of present SUD/HCV/HIV/STI syndemic and the prevention of future ones

A coordinated approach between society, government, public health will be needed

Syringe Services Programs

SSPs adapt to local needs by providing comprehensive support services, such as ways to get treatment, medicines to prevent overdoses, and tools to prevent HIV and viral hepatitis. Many support services may be operated in partnership with federal government funding¹

Combined use of OST and high coverage of NSP was associated with a 74% risk reduction in HCV acquisition²



1. HIV.gov: Syringe Service Programs. <https://www.hiv.gov/federal-response/policies-issues/syringe-services-programs>

Holistic, Coordinated Care Is Critical for Addressing These Overlapping Epidemics

- **A “no-wrong-door” approach**
 - Providing services that meet the persons needs wherever they seek care
- **Provide spaces for people** who are uninsured, need flexible appointments, need low- or no-cost services, or are looking for expert and confidential services.
- **Address the social determinants of health**
 - Key contributors to negative health outcomes, including STI transmission.
 - Providing patients with housing, food, transportation, and employment.
- **Integrating existing programs**
 - Such as SSP, SUD treatment programs, and HIV testing and pre-exposure prophylaxis programs in the same clinic

Conclusions

Ending the syndemic will require a multipronged approach

- SUD services should be integrated into primary care – **barriers for harm reduction should be removed**
- The efficacy of PrEP and HIV treatment has been established – **access for the most vulnerable is critical**
- Syphilis is taking a toll in AI/AN communities – **zero tolerance for congenital syphilis should be the standard**

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Questions?

Thank You

