The SUD / HCV / HIV/ STI Syndemic

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Learning Objectives

Participants will be able to explain the concept of a Syndemic

Participants will recognize the impact of the opioid epidemic in relation to the HIV and HCV epidemics

Participants will be able to describe interventions to mitigate the HIV/STI/SUD/HCV syndemic at a Macro, Micro and individual level

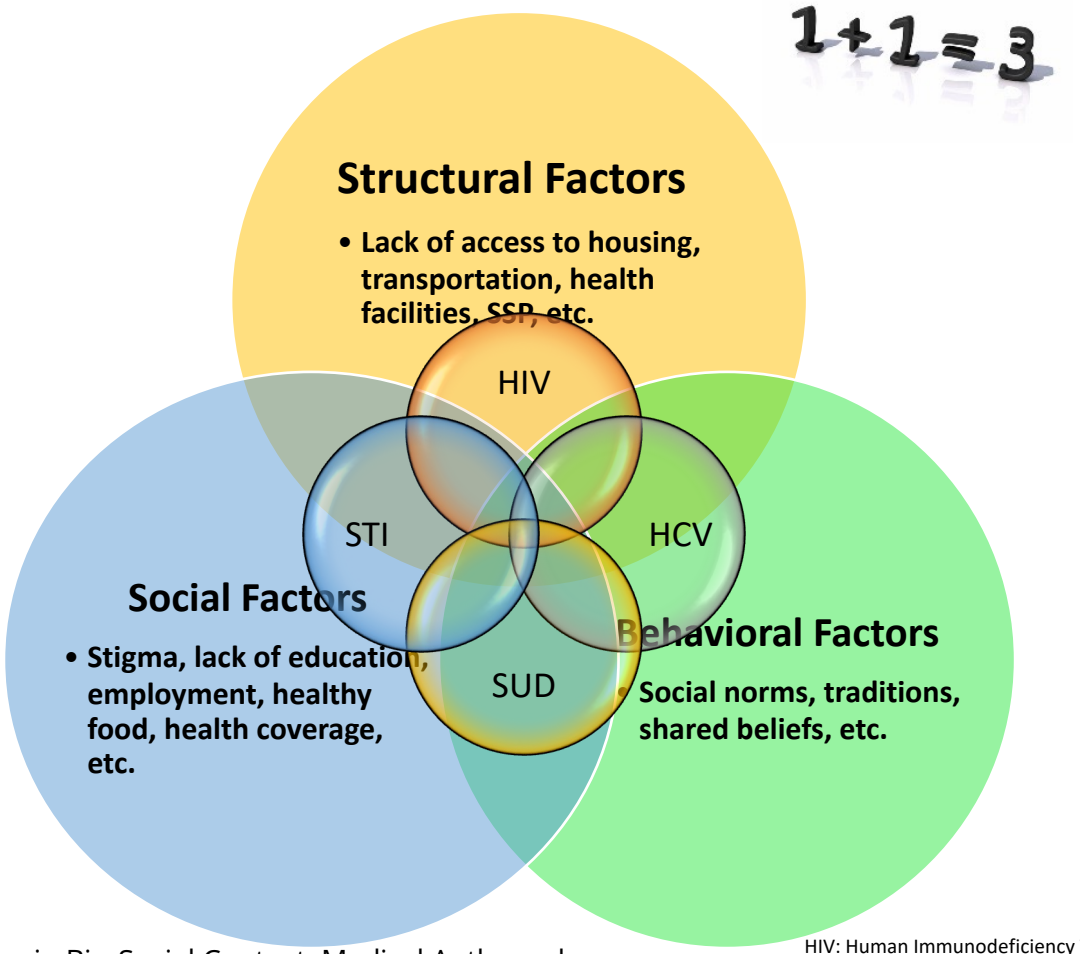
Outline

- 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)
- Conclusions

Syndemic

Core principles:

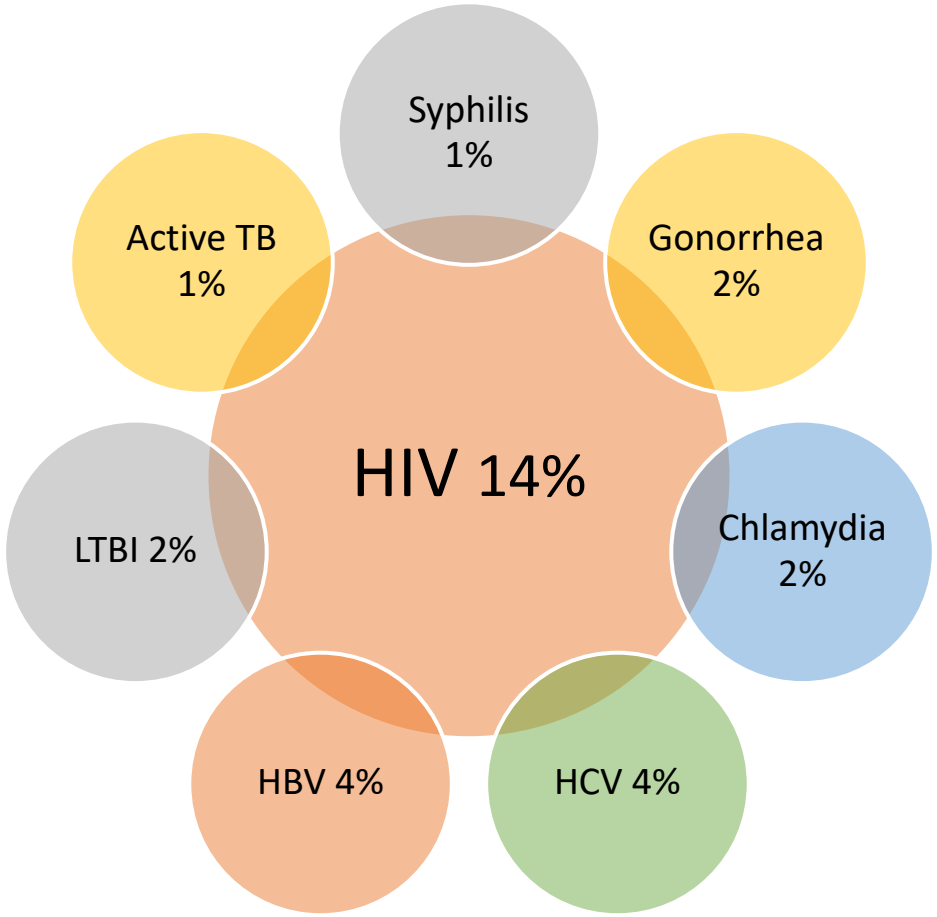
- **Clustering** of two or more conditions in a specific population
- Their **synergism** in producing excess burden of disease in a population
- **Precipitation and propagation** by large scale behavioral, structural and social forces

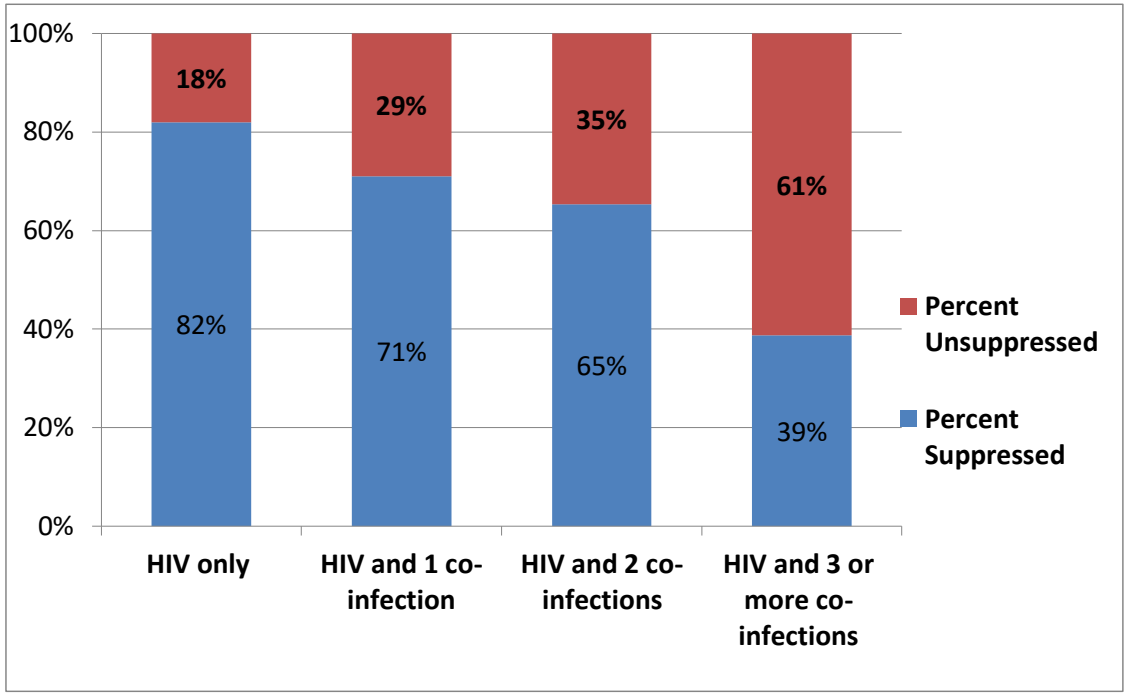


Singer, M. and Clair, S. (2003), Syndemics and Public Health: Reconceptualizing Disease in Bio-Social Context. Medical Anthropology Quarterly, 17: 423-441. https://doi.org/10.1525/maq.2003.17.4.423

HIV: Human Immunodeficiency Virus
HCV: Hepatitis C virus
SUD: Substance Use Disorder

HIV Syndemic Outcomes





- 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 I integrated health system

Chu PL, Santos GM, Vu A et al. Journal of the International AIDS Society 2012. 15:102-103

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

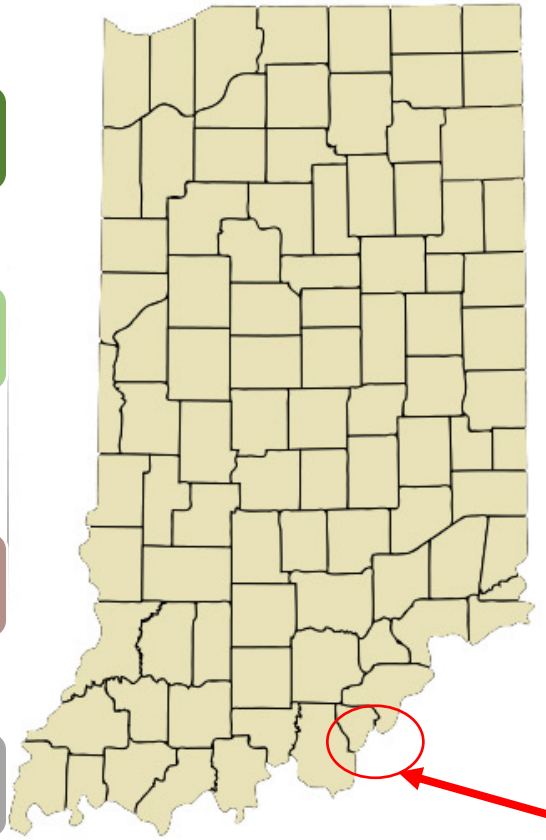
- Through contact tracing ISHD identified 8 more new infections
- The source of infection: Injection of the opioid oxymorphone (semi-synthetic opioid analgesic)

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

Indiana HIV/HCV Outbreak: Syndemic Risk Factors in Scott County

High poverty (19.0%)

Unemployment (8.9%)

- Few affected persons were employed or insured

Education

- Low educational attainment (21.3% no high school)
- Little HIV awareness in the general population
- Unaware of transmission risks and treatment benefits
- No routine HIV education in schools (abstinence only)

Ranked lowest in the State for health indicators and life expectancy

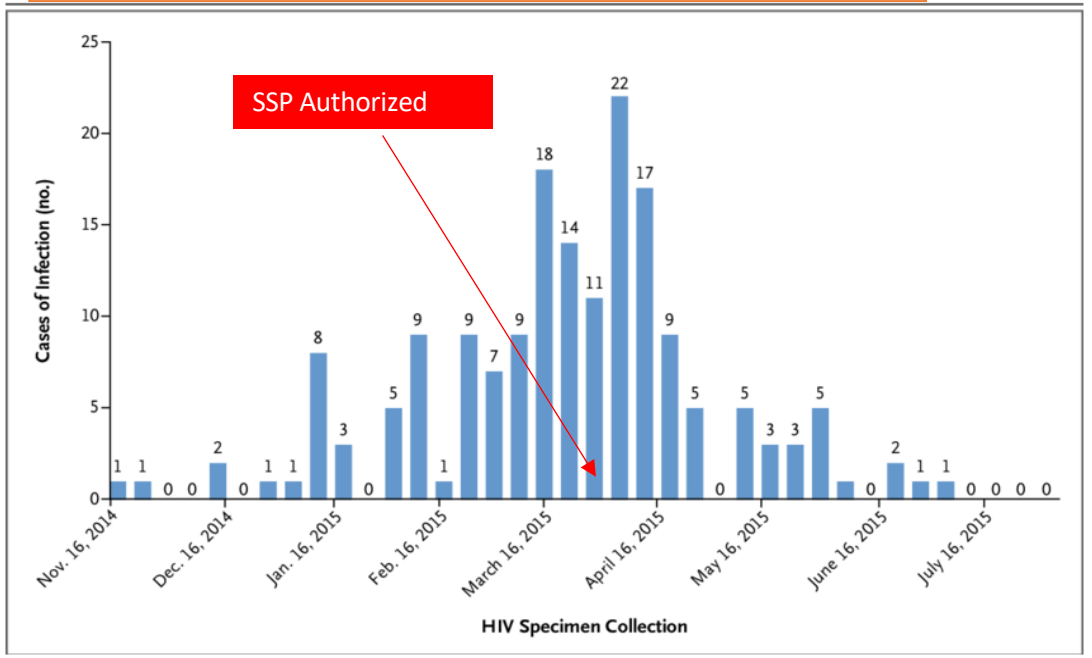
SSP program not permitted by state law

No outpatient HIV/HCV care available

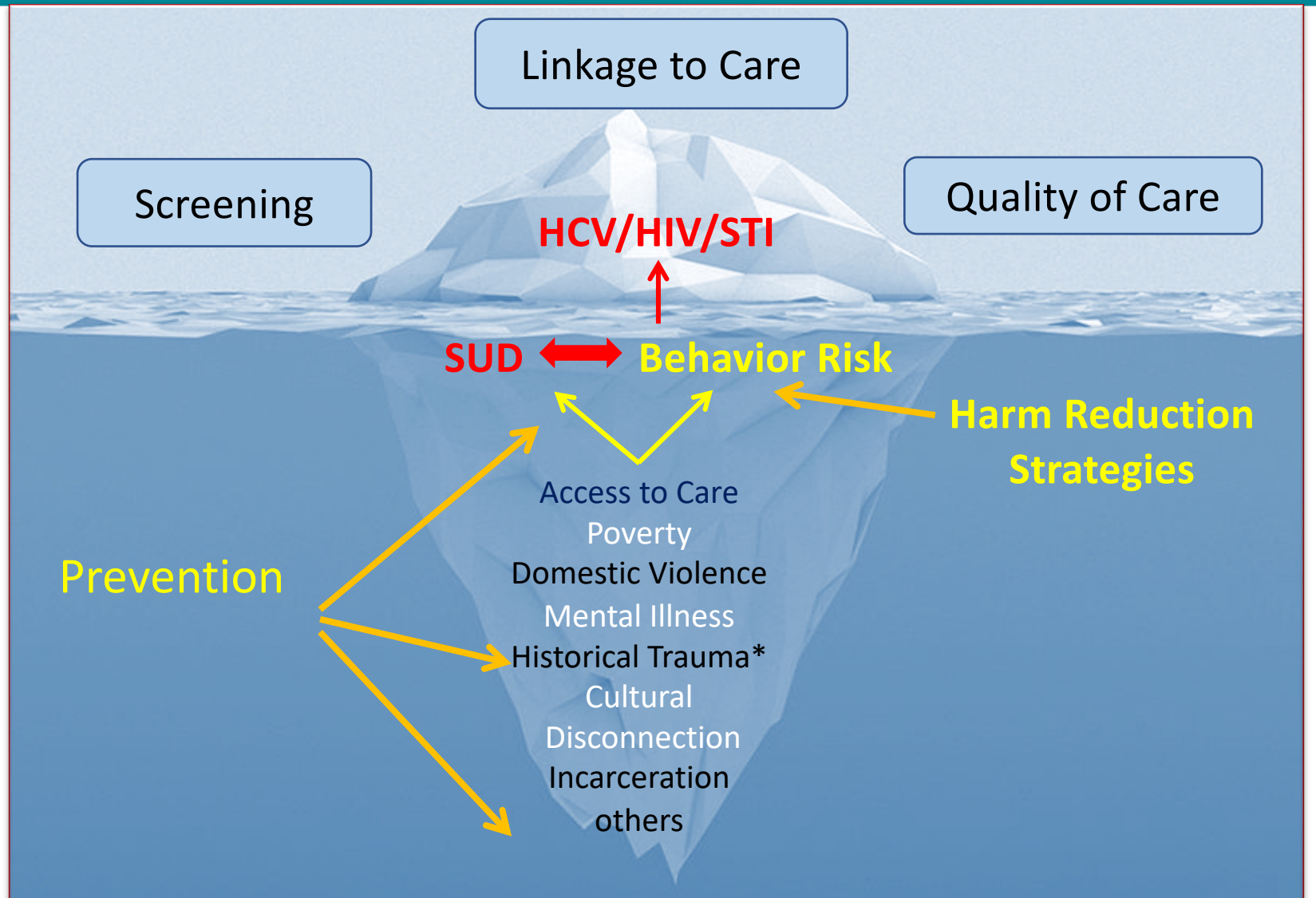
Limited addiction services, including MAT

How Was the Outbreak Controlled?

- **One stop shop**
  - Behavioral health treatment
  - HCV/HIV/MAT treatment provided
- **SSP emergency authorization**



Syndemic



Maria Yellow Horse Brave Heart Journal of Psychoactive Drugs Vol. 35, Iss. 1, 2003

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 in medication assisted treatment (MAT).** 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, syringes and paraphernalia. Unfortunately, he lost his job and health insurance and is now homeless.

Clinical Case: Mr. S

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

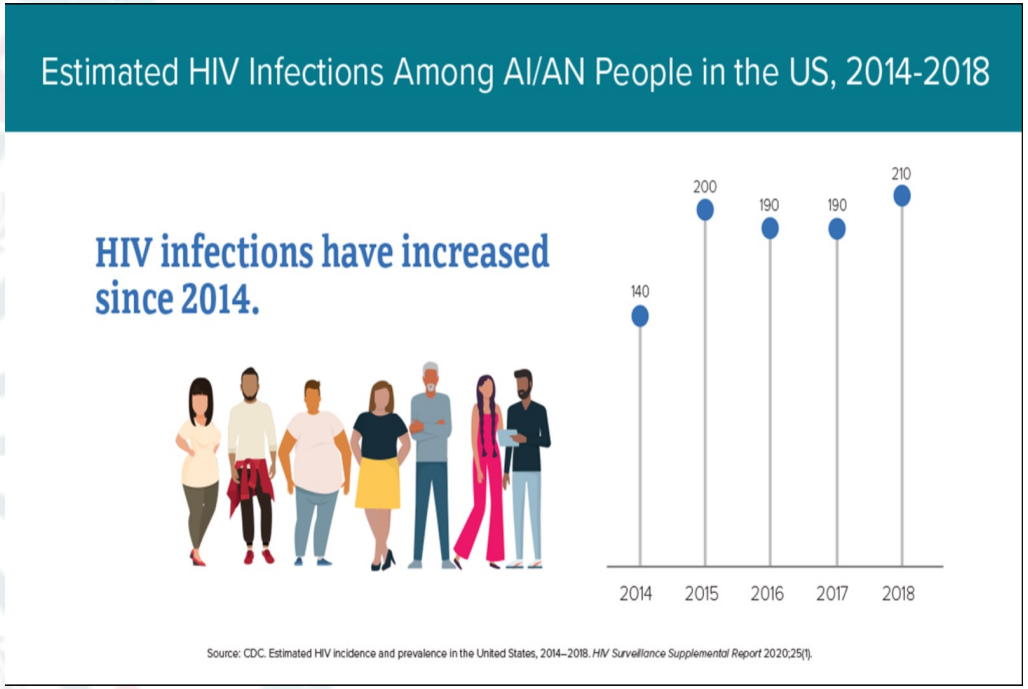
Clinical Case: Mr. S

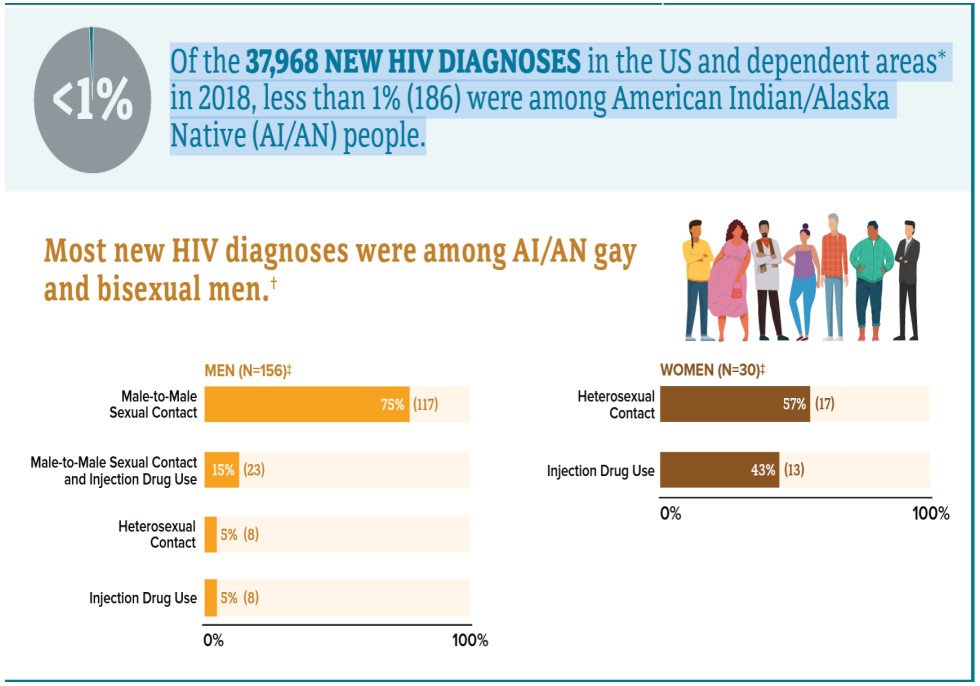
Fortunately, **the ED medical provider was trained in SUD management** and induced him with Buprenorphine/Naloxone and gave him a 3-day prescription, enough until he could be evaluated and placed on MAT.

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 our clinic for HIV PrEP, HCV treatment and MAT follow-up.

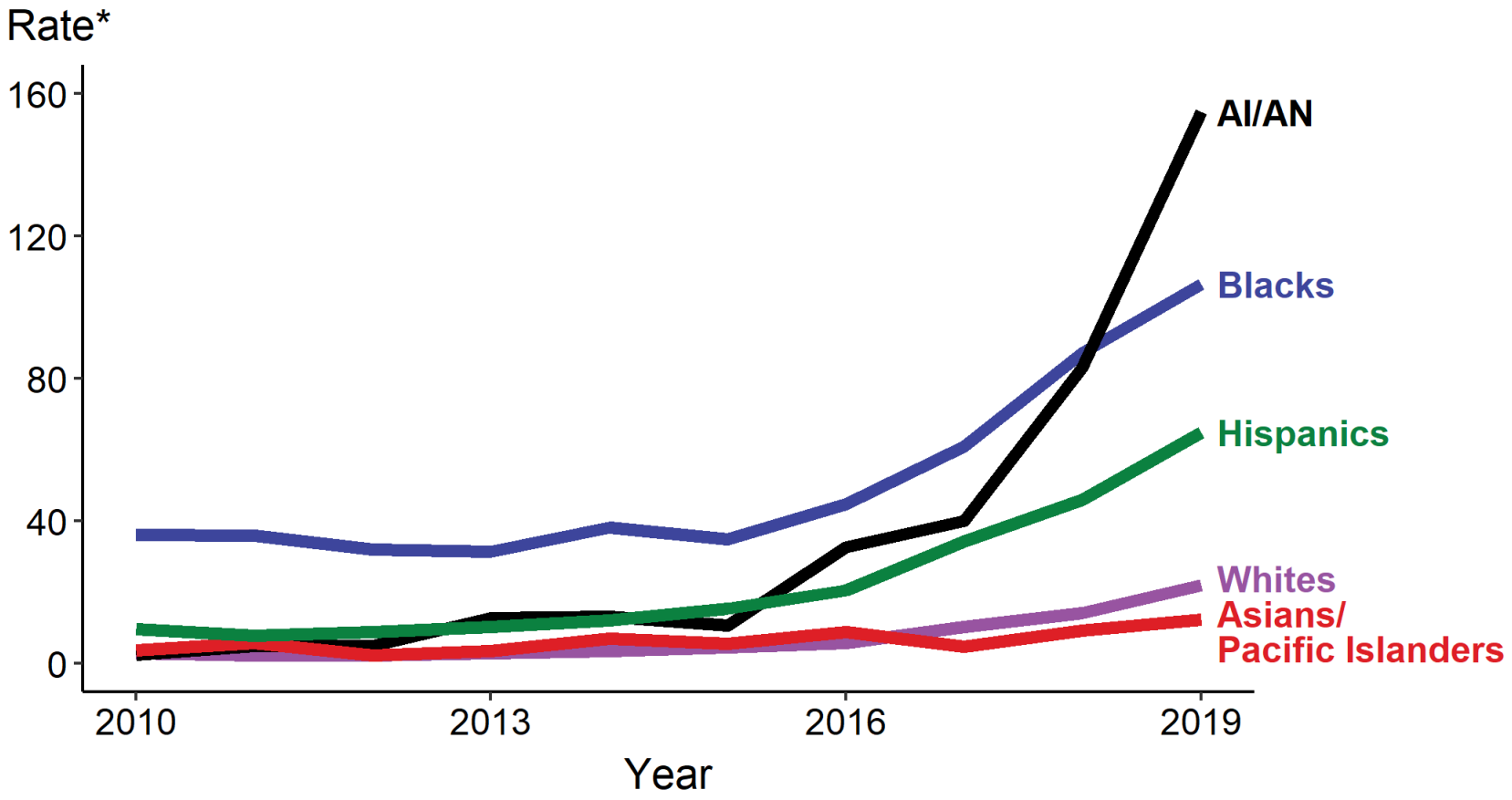
HIV in American Indian/Alaska Native Populations





- 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.

Congenital Syphilis — Rates of Reported Cases by Year of Ethnicity of Mother, United States, 2010–2019



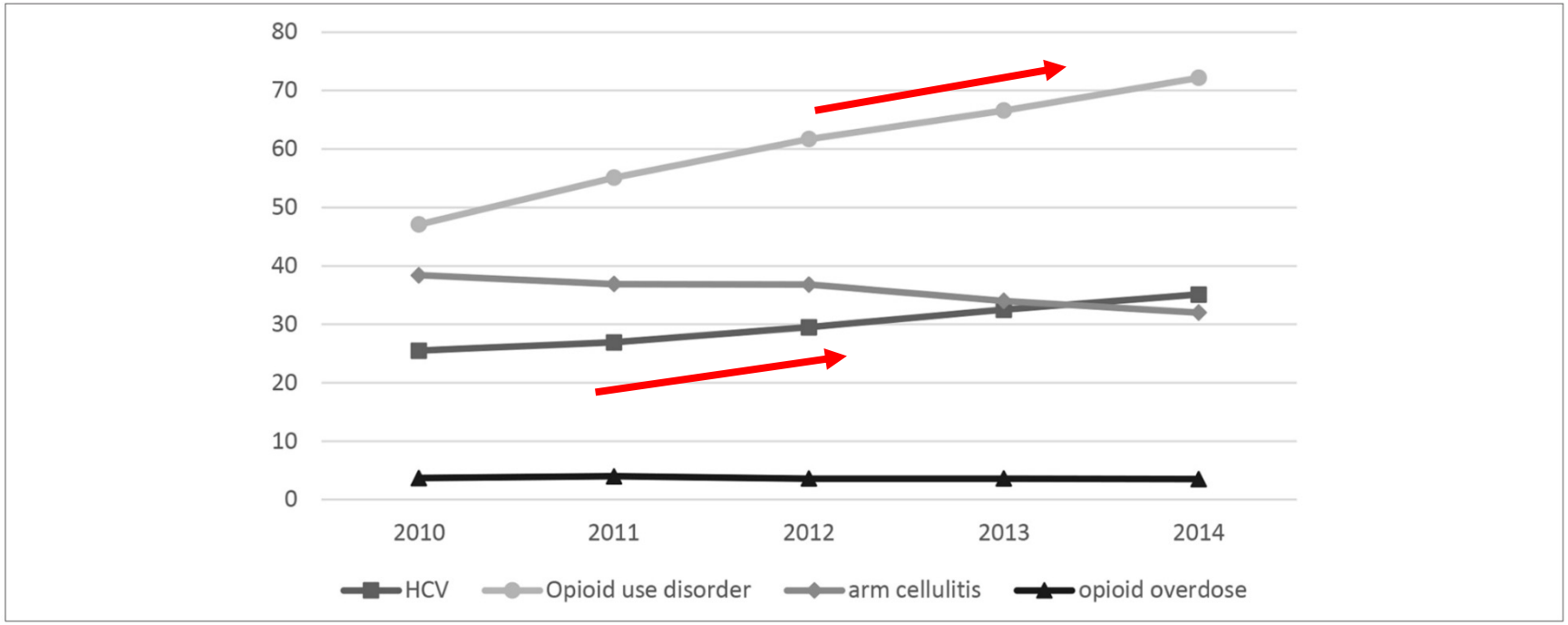
https://www.cdc.gov/std/statistics/2019/overview.htm#Syphilis

HCV in American Indian/Alaska Native (AI/AN) Population

- 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

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.

Evans ME, Person M, Reilley B, Leston J,. Public Health Rep. 2020 Jul/Aug;135(4):461-471.

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

- **STIs**
  - Implement universal screening for syphilis
  - Test patients and their sexual or drug-injection partners for HIV, HCV, and STIs
  - Offering immediate treatment according to established guidelines
  - Providing Hep B vaccinations
- **HCV and HIV**
  - Offer and deliver HIV PrEP
  - Treat HCV

Threading the Needle — How to Stop the HIV Outbreak in Rural Indiana Steffanie A. Strathdee, Ph.D., and Chris Beyrer, M.D., M.P.H. NEJM 373;5 nejm.org July 30, **2015**

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

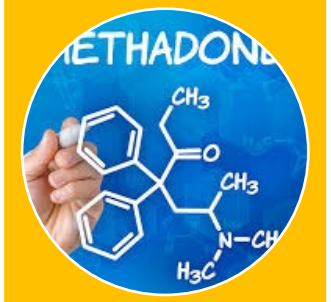
- **SUDs**
  - Screening patients for SUDs and mental health disorders
  - Providing naloxone to opioid users and their families/partners
  - Obtaining training to provide opioid agonist therapy
  - Immediate referrals to SUD treatment programs that provide opioid agonist therapy
  - Supporting injection-drug users by providing sterile syringes or referring them to syringe service program

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

What can the Healthcare Worker do for Mr. S?

HCV/HIV Testing and Treatment

Mental Health Services



Medication Assisted Treatment

PREP for PWUDs

Naloxone, Syringe Service Programs, and Safer Injection Practices

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

Recognize	the problem and embrace it as a syndemic
Have	SUD/HCV/HIV/STI policies in place
Enforce Policies	Encourage, facilitate and motivate SUD, HCV, HIV and STI screening and treatment
Allow provider time	For training and participation in these activities
Create	Performance-based outcomes around SUD/HCV/HIV/STI

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

- **Decrease Injection Drug Use and/or make it safer**
  - Make SSP available
  - Easy access to MAT
  - 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)

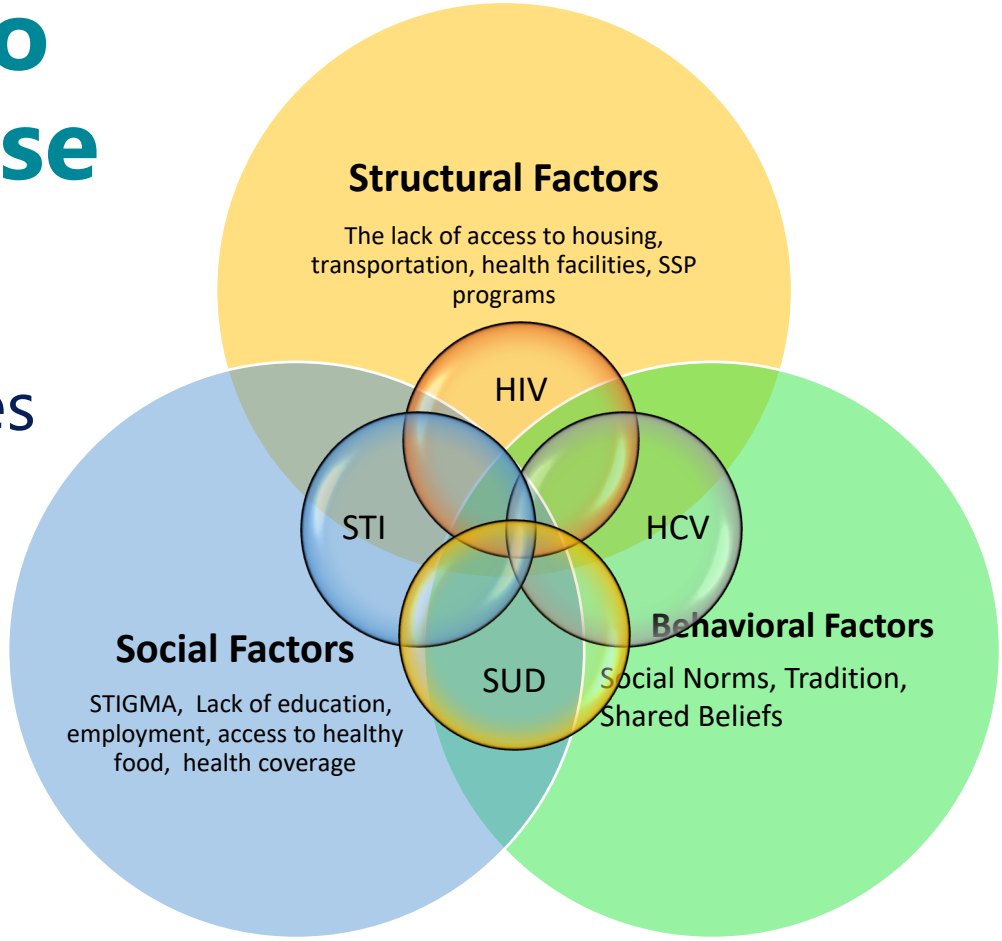
Addressing the root of the problem is critical for the elimination of present SUD/HCV/HIV/STI syndemic and the prevention of future ones

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

Recognize and Understand

When people are unable to seek or receive care because of socioeconomic barriers

- Treatable diseases persist at higher rates
- With a higher baseline rate of transmissible infections, it is more likely for the community to be exposed



No one is safe until everybody is safe

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