INDIAN COUNTRY ECHO

LEADING THE WAY

Growing the Ability to Deliver Quality Healthcare to American Indian and Alaska Native People.

Ending the Syndemic (SUD/HCV/HIV/STI) at Your Tribe or Facility

September 10, 2024

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Learning Objectives, Participants will be able to:

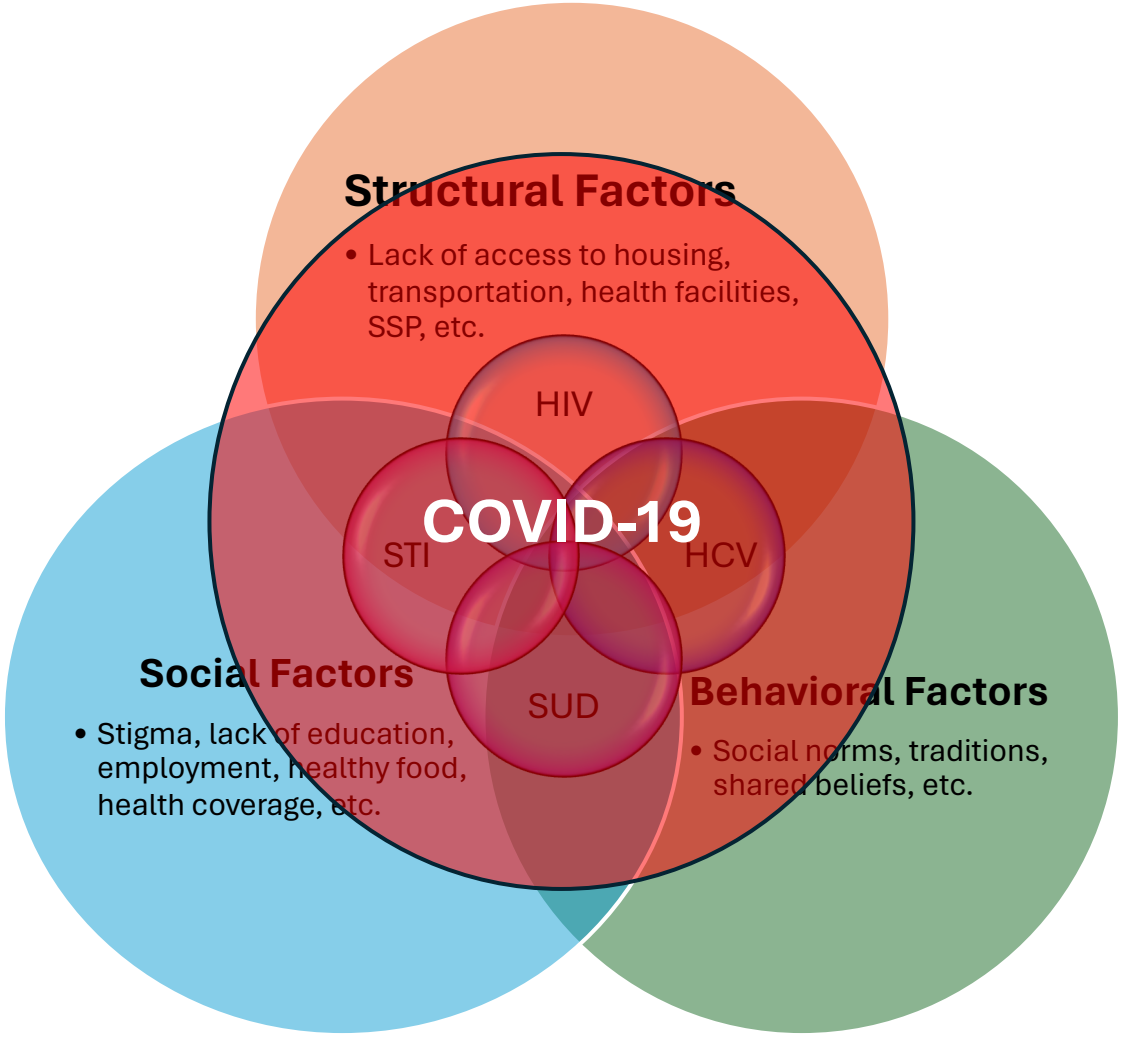
- Explain the concept of a Syndemic
- Recognize the impact of the opioid epidemic in relation to the HIV and HCV epidemics
- Describe interventions to mitigate the HIV/STI/SUD/HCV syndemic at a Macro, Micro and individual level

Outline

- **Syndemic concepts**
- Clinical case
- The SUD | HCV | HIV | STI syndemic in Indian Country
- Interventions to mitigate the syndemic
- Conclusions

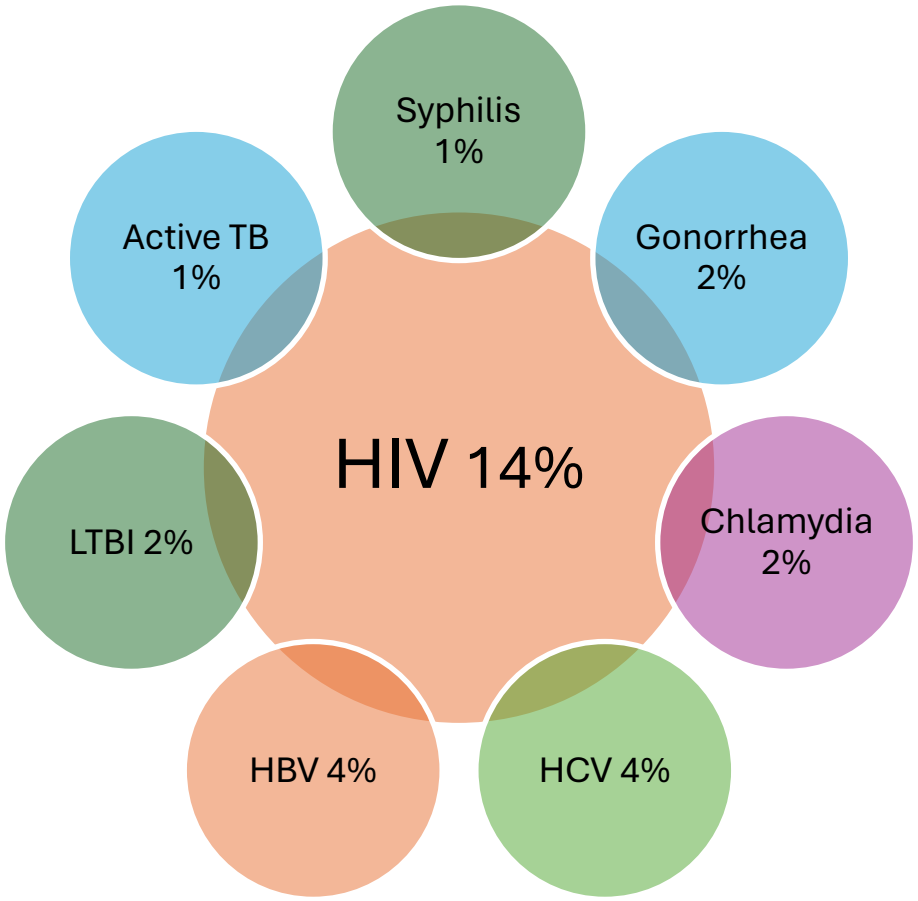
Syndemic Core Principles

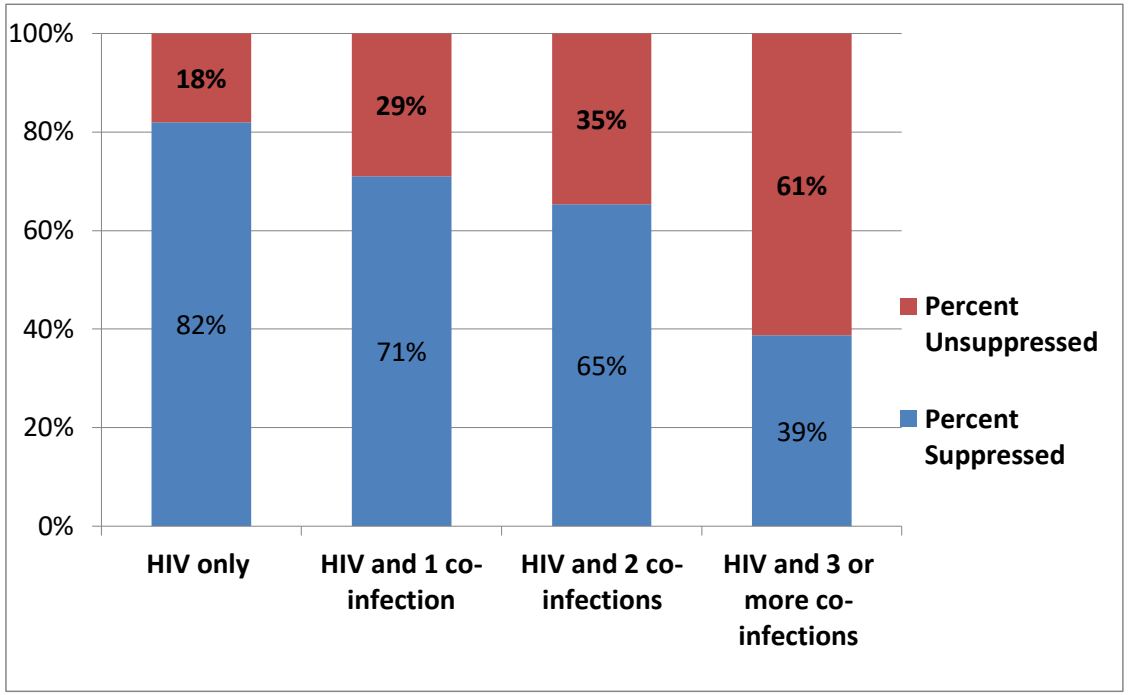
- Clustering of two or more conditions in a specific population
- Their synergism in producing excess burden of disease in a population
- Precipitation and propagation by large scale behavioral, structural and social forces



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 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

Community in Scott County, Indiana From 2004-2013

- Population of ~ 4200
- Only 5 infections had been diagnosed from 2004-2013

In January 2015

- ISDH investigates a cluster of 11 newly diagnosed HIV infections
- Identified by an alert disease intervention specialist

From November 18, 2014 – November 1, 2015

- HIV infection was diagnosed in 181 case patients.
- 92.3% were coinfected with HCV
- Most patients (87.8%) reported injecting oxymorphone an extended-release semi-synthetic opioid analgesic

All cases were epidemiologically linked

- 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

N Engl J Med 2016;375:229-239

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

Social Factors

- High poverty (19.0%)
- Unemployment (8.9%)
- Few affected persons had medical insurance
- Low educational attainment (21.3% no high school)

Structural Factors

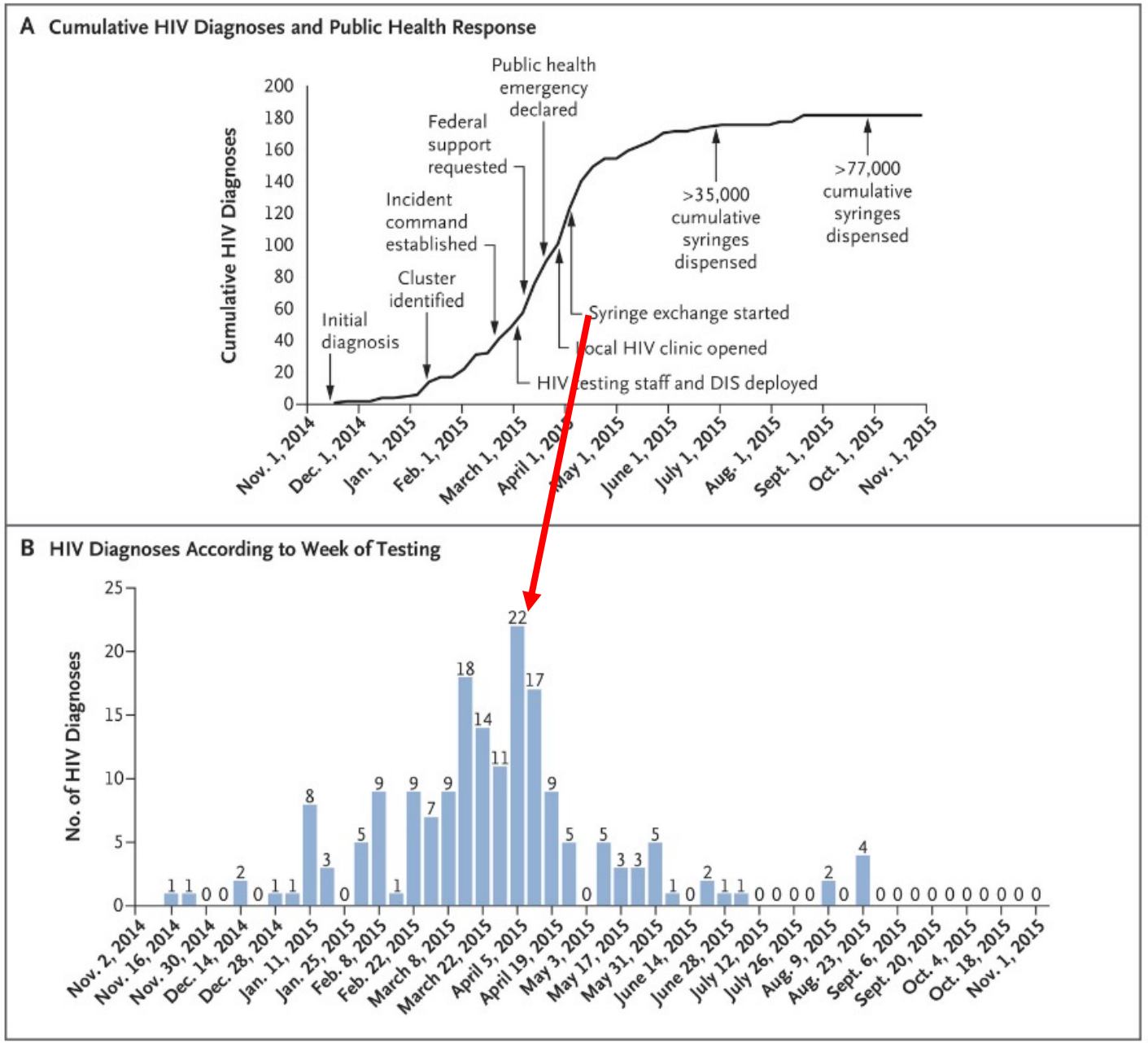
- Syringe service programs not permitted by state law
- Scarce HIV/HCV care available
- Limited substance use disorder services

Behavioral Factors

- Sharing of paraphernalia

How Was the Outbreak Controlled ?

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



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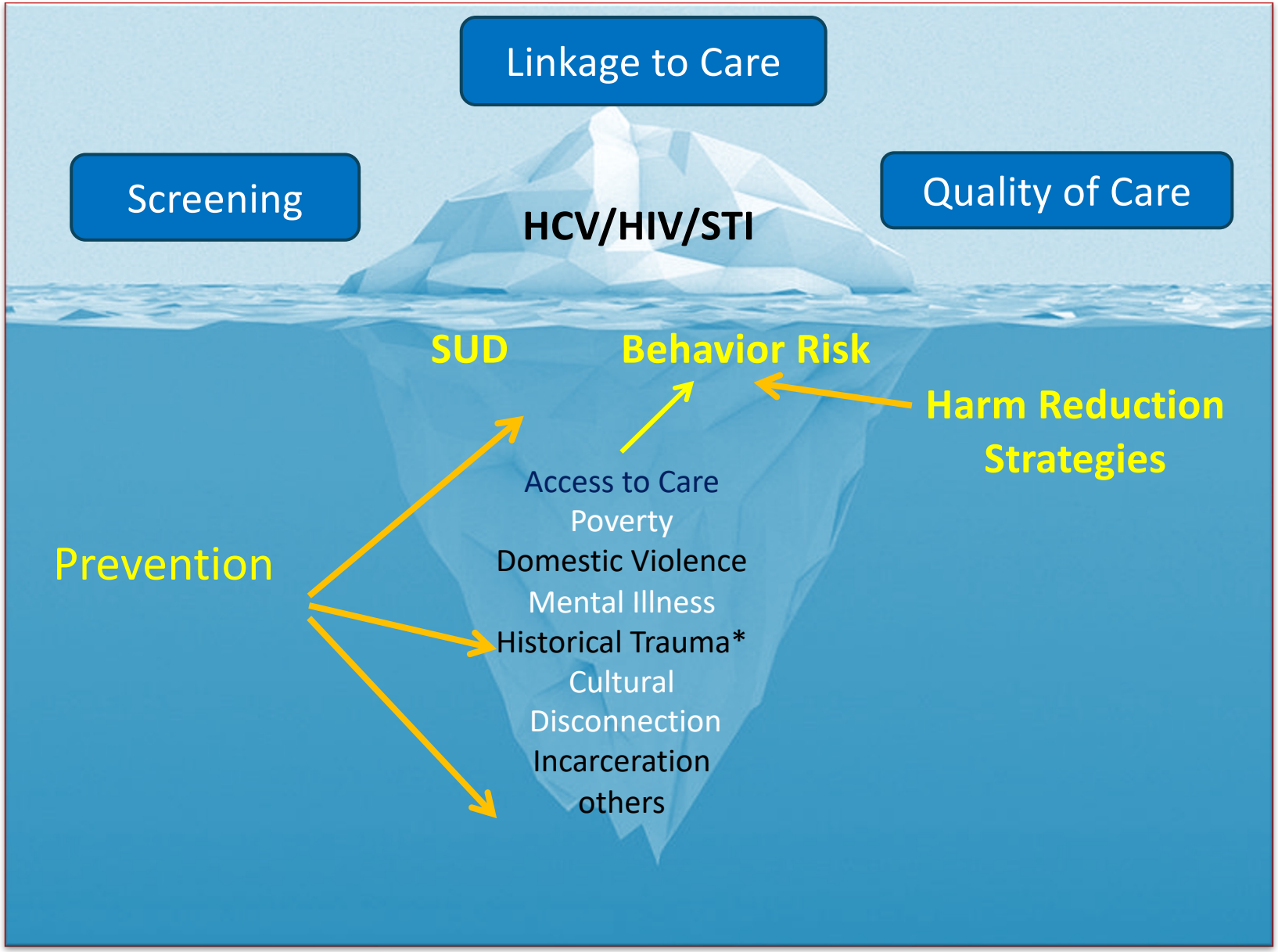
Syndemic



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

Outline

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- **Clinical case**
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Clinical Case: Mrs. S

Mrs. S is a 20 yo cis-gender female who has sex with cis-gender males, who presents for a pregnancy test only

- Reports having oral and vaginal sex without protective barrier **3 weeks ago**
- Reports sex with 2 partners over the **past 6 months**
- Denies recent drug use, but reports injecting heroin **3 months ago**
- Reports unstable housing and transportation and does not have regular access to phone

No current signs or symptoms, and doesn't recollect any in the past year

- Never tested for HIV
- Last gonorrhea/chlamydia (urine only) and RPR tests were all negative **11 months ago**

Clinical Case: Mrs. S

Office Tests

- Rapid pregnancy test: **Positive**
- Agrees to rapid HIV/Syphilis test in office when offered incentive
- HIV: **non-reactive**
- Syphilis (treponemal antibody): **reactive**

What are the recommended next steps? (Check all that apply)

A. No further testing necessary, as initial reason for the visit (pregnancy testing) already completed
B. Draw blood for HIV, obtain urine/anal/throat swab for G/C
C. Draw blood for RPR, wait for results to determine treatment
D. Draw RPR and immediately administer 2.4 MU IM injection of benzathine penicillin G (BPG) for early latent stage syphilis
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Outline

Syndemic concepts

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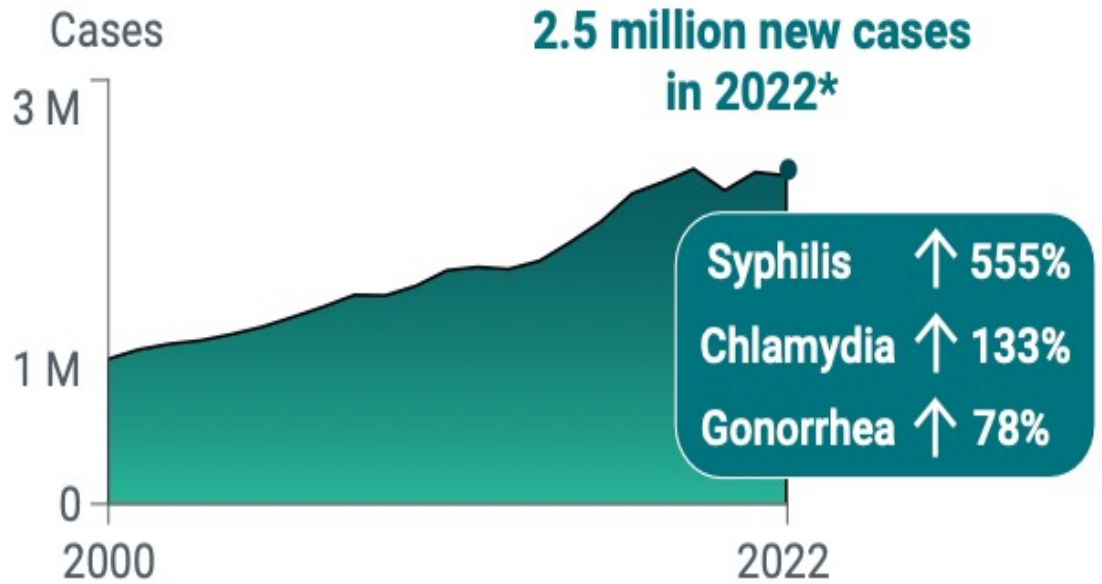
STI Overview

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

STIs & Substance Use

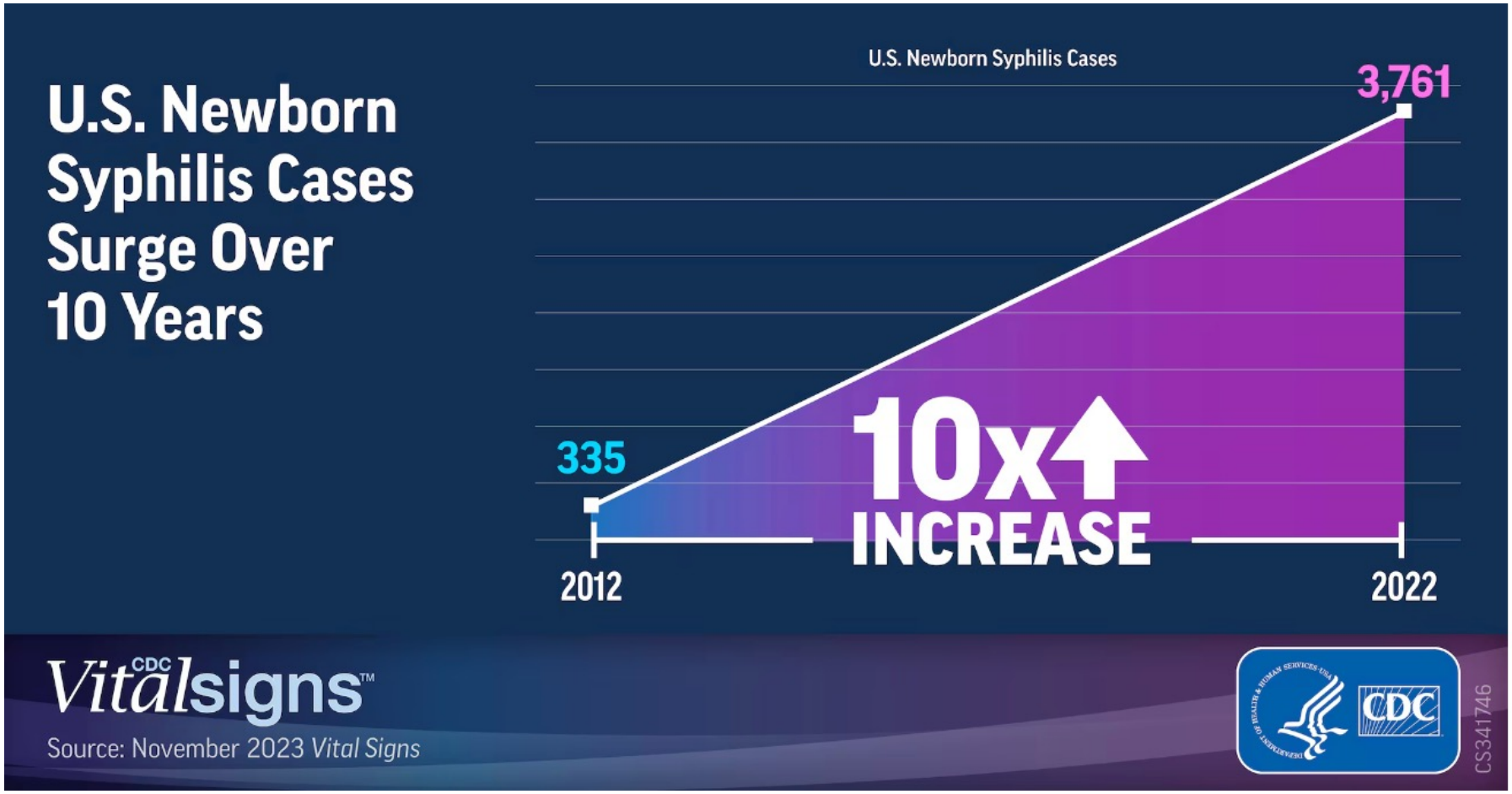
Use of opioids and other substances has been linked to increasing STIs and outbreaks of infectious diseases.

3x

More Likely

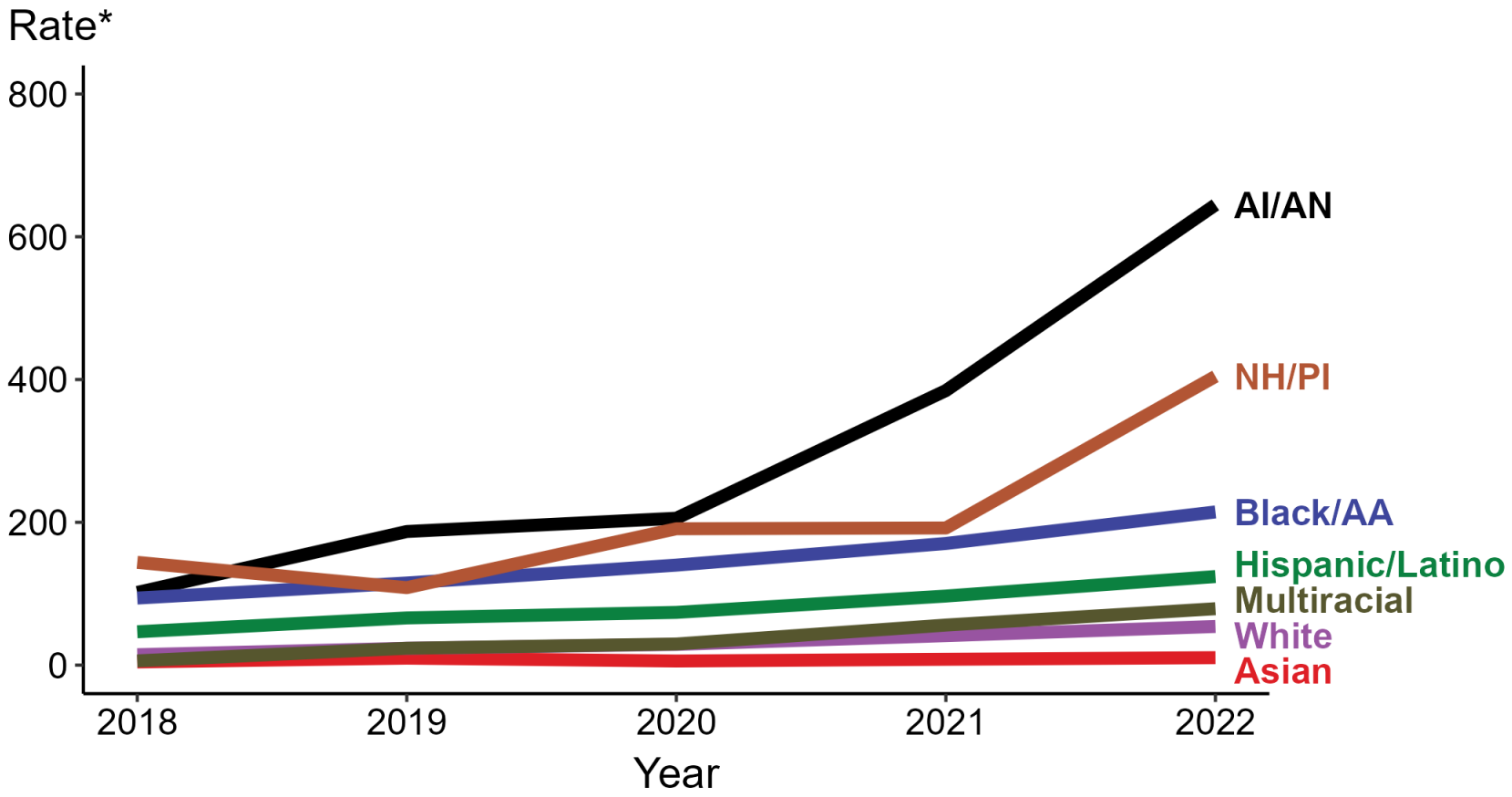
Young adults who used an illicit drug* in the past year were **3 times** more likely to get an STI.

U.S. Syphilis Cases in Newborns Continue to Increase: A 10-Times Increase Over a Decade



https://www.cdc.gov/media/releases/2023/s1107-newborn-syphilis.html

Congenital Syphilis — Rates of Reported Cases by Year of Birth, Race/Hispanic Ethnicity of Mother, United States, 2018–2022



* Per 100,000 live births

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

Increased Methamphetamine, Injection Drug, and Heroin Use Among Women and Heterosexual Men with Primary and Secondary Syphilis — United States, 2013–2017

Among women and MSW with P&S syphilis

- Reported use of methamphetamine, injection drugs, and heroin more than doubled during 2013–2017.

In 2017, women with P&S syphilis

- 16.6% used methamphetamine
- 10.5% used injection drugs
- 5.8% used heroin during the preceding 12 months.

MMWR / February 15, 2019 / 68(6);144–148

HHS Announces Department Actions to Slow Surging Syphilis Epidemic

Primary, secondary and congenital syphilis rates are highest in AI/AN

- Comparable to rates from the pre-penicillin era
- For every 155 AI/AN births in 2022, there was one congenital syphilis case.

Most syphilis cases were diagnosed outside of STD clinics in 2022

- Emphasizing the role of HCW in primary care, emergency departments, community health, correctional and drug treatment programs

HHS IMMEDIATE RELEASE REPORT. January 30, 2024

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

HCV disproportionately affects AI/AN[1,2]

The incidence rate of acute hepatitis C among AI/AN has remained substantially higher than other racial/ethnic populations

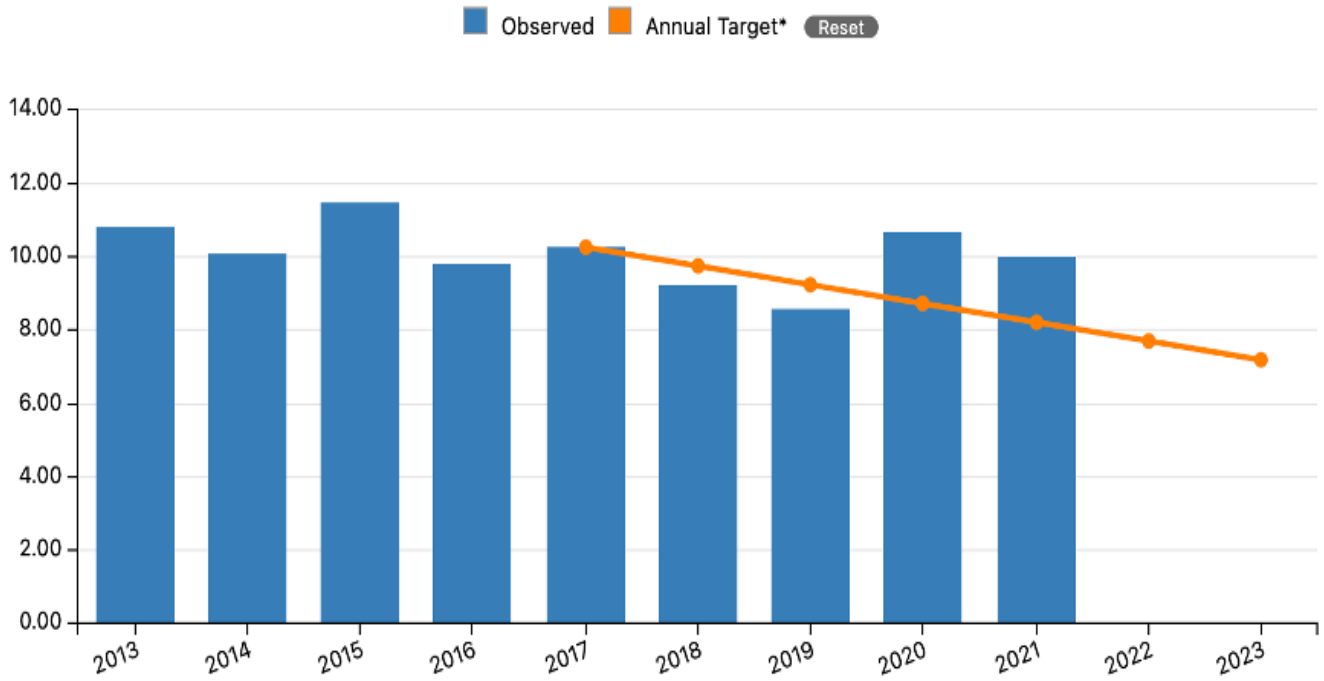
- From 2003 to 2018. In 2018, the rate of incident acute hepatitis C was higher among AI/AN (3.6 per 100,000) than among non-Hispanic whites (1.3 per 100,000)[3]

Compared to the overall population, non-Hispanic AI/AN persons had a much higher age-adjusted hepatitis C-related death rate

- In 2021 (3.18 vs. 9.99 per 100,000, respectively)

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. Office of Infectious Disease and HIV/AIDS Policy (OIDP)
Content last reviewed June 5, 2024US Census Bureau. https://www.census.gov/www. Accessed Nov 2, 2019

Age-adjusted rate* of hepatitis C-related deaths† among non-Hispanic American Indian/Alaska Native persons‡ and annual targets for the United States by year

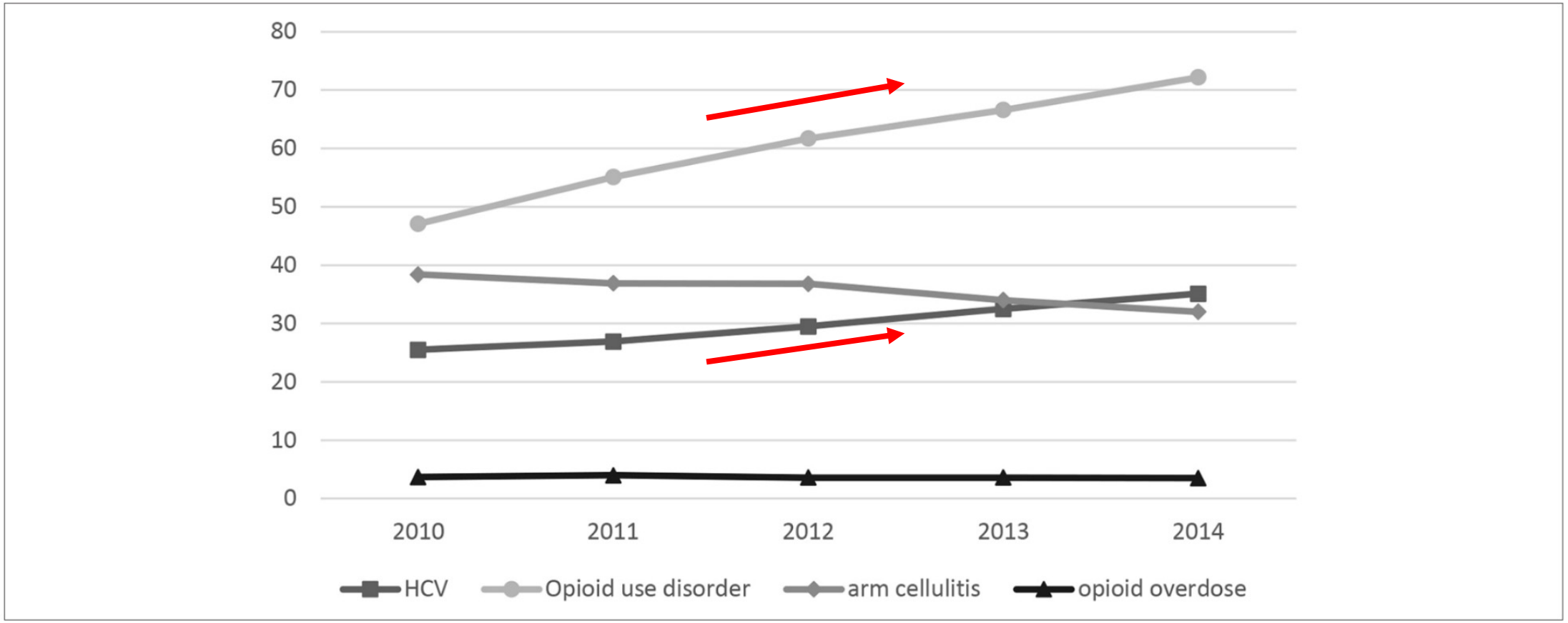


* Rates are per 100,000 population and age-adjusted to the 2000 US Standard Population.
† Cause of death is defined as the underlying cause of death or one of the multiple causes of death and is based on the International Classification of Disease, 10th Revision (ICD-10) codes B17.1 or B18.2.[2]
‡ Excludes those reporting Hispanic or Latino origin.

- Compared to the overall population, non-Hispanic AI/AN persons had a much higher age-adjusted hepatitis C-related death rate in 2021 (3.18 vs. 9.99 per 100,000, respectively).
- Although the death rate decreased slightly from 10.24 per 100,000 in the 2017 baseline year, the rate of 9.99 in 2021 remains above the target rate of 8.19.
- The overall increase in US deaths due to the COVID-19 pandemic during 2020 and 2021 may have affected the hepatitis C-related death rates in these two years; therefore, 2020 and 2021 data should be interpreted with caution

Division of Viral Hepatitis, National Center for HIV, Viral Hepatitis, STD, and TB Prevention. Last Reviewed: August 8, 2023

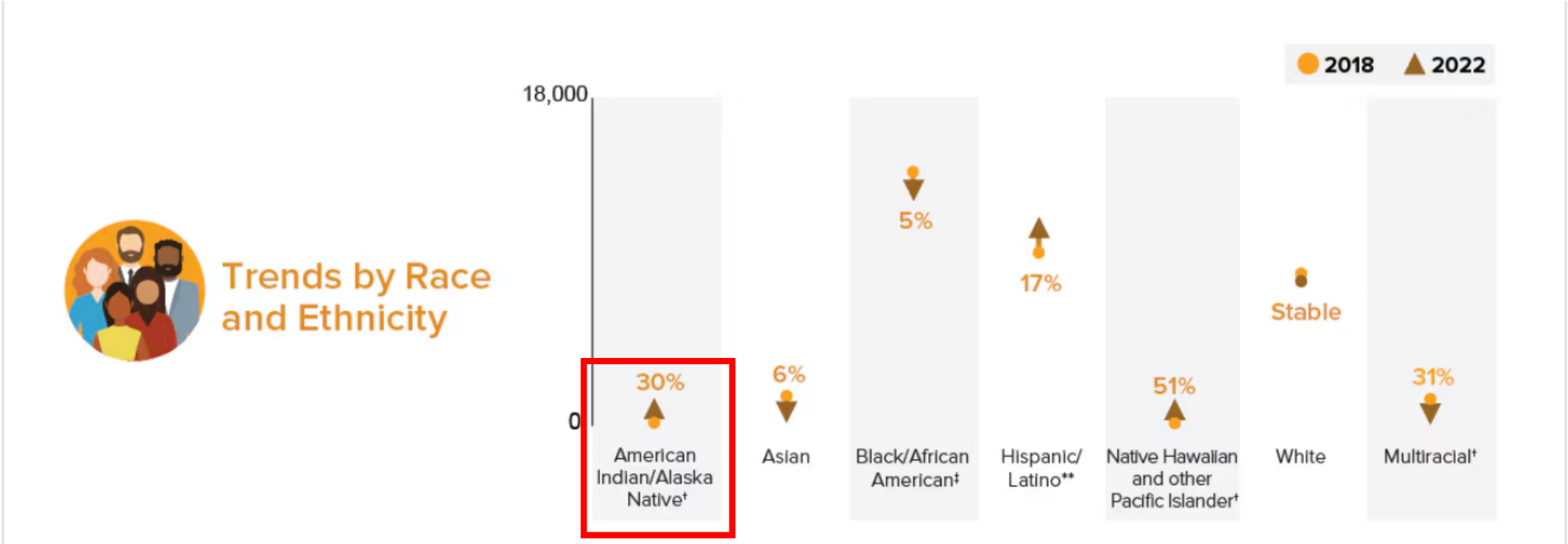
Trends in Indicators of Injection Drug Use, Indian Health Service, 2010-2014: A Study of Health Care Encounter Data



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.

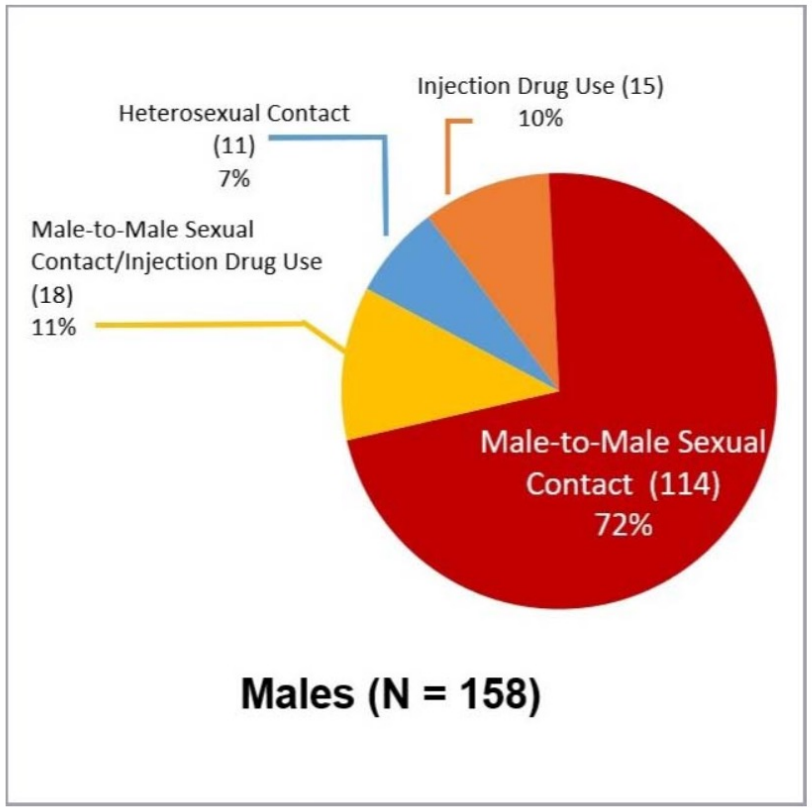
Trends in HIV diagnoses in the US and 6 territories and freely associated states by race and ethnicity, 2018-2022*

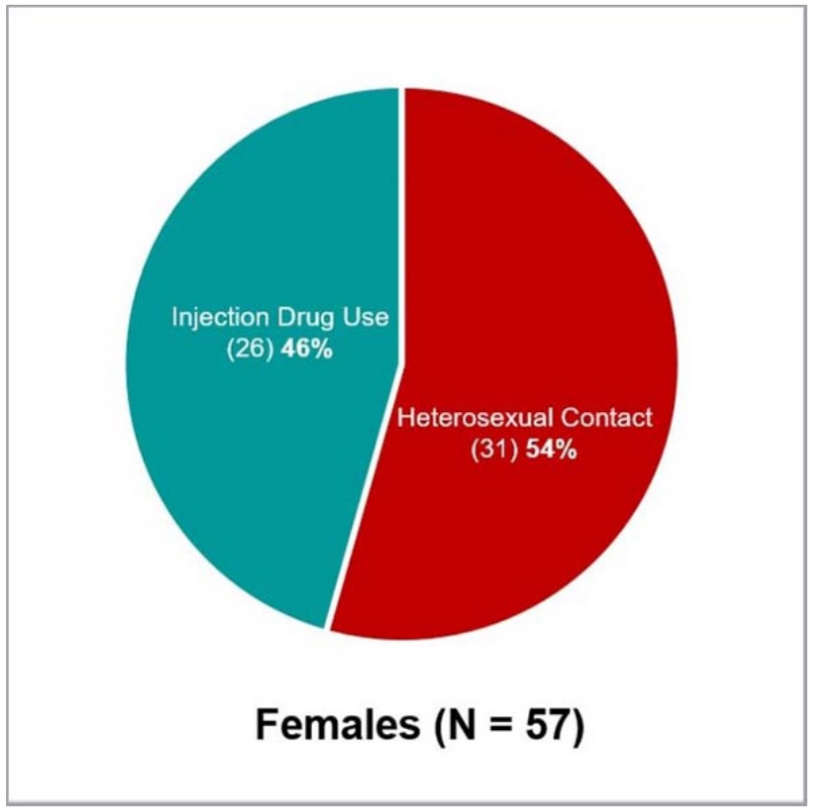


*Among people aged 13 and older.
+ Changes in subpopulations with fewer HIV diagnoses can lead to a large percentage increase or decrease.
* Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.
** Hispanic/Latino people can be of any race.
Source: CDC. Diagnoses, deaths, and prevalence of HV in the United States and 6 territories and freely associated states, 2022. HIV Surveillance Report, 2022;35.

https://www.cdc.gov/hiv/data-research/facts-stats/race

HIV Diagnoses Among American Indian/Alaska Native People by Transmission Category and Sex at Birth†, 2022 – United States





The terms male-to-male sexual contact (MSM) and male-to-male sexual contact and injection drug use (MSM/IDU) are used in CDC surveillance systems. They indicate the behaviors that transmit HIV infection, not how individuals self-identify in terms of their sexuality.

https://www.ihs.gov/hivaids/stats/

Disparities in HIV Experienced by American Indian/Alaska Native People in 2022

Between 2018 and 2022, new HIV diagnoses among AI/AN people increased by 30%	-From 166 new HIV diagnoses in 2018 to 215 new HIV diagnoses in 2022. -The rate of new HIV diagnoses among AI/AN people was 10.6/per 100,000 (Twice the rate of experienced by Whites)
AI/AN people had the lowest level of knowledge of HIV status	-(77.3%) than any other racial or ethnic group.
The rate of diagnosis of HIV infection among AI/AN women (5.5%)	-Is over twice as high as the rate of diagnosis among White women (1.9%). -Had the second highest percentage (46%) of HIV infections attributable to IDU compared to women in other racial or ethnic groups.

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 including congenital syphilis are 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

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What can we do to mitigate the syndemic?

AS A PRIMARY CARE HEALTH WORKER?

(INDIVIDUAL)

AS HEALTH SYSTEM LEADERSHIP?

(MICRO)

AS A SOCIETY

(MACRO)

Actions to Address the Syndemic 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 • Offering immediate treatment according to established guidelines

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

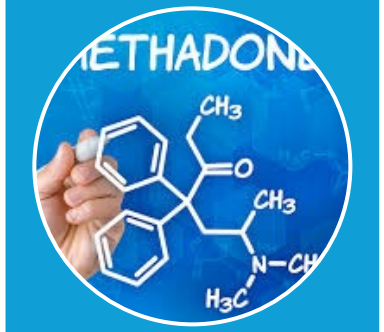
Providing	Acquiring	Supporting
Hep B vaccinations Naloxone to opioid users and their families/partners	Training to provide opioid agonist therapy	People who inject drugs by providing sterile syringes or referring them to syringe service programs

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**

What can the Healthcare Worker do for Mrs. S?

HCV/HIV Testing and Treatment

Mental Health Services

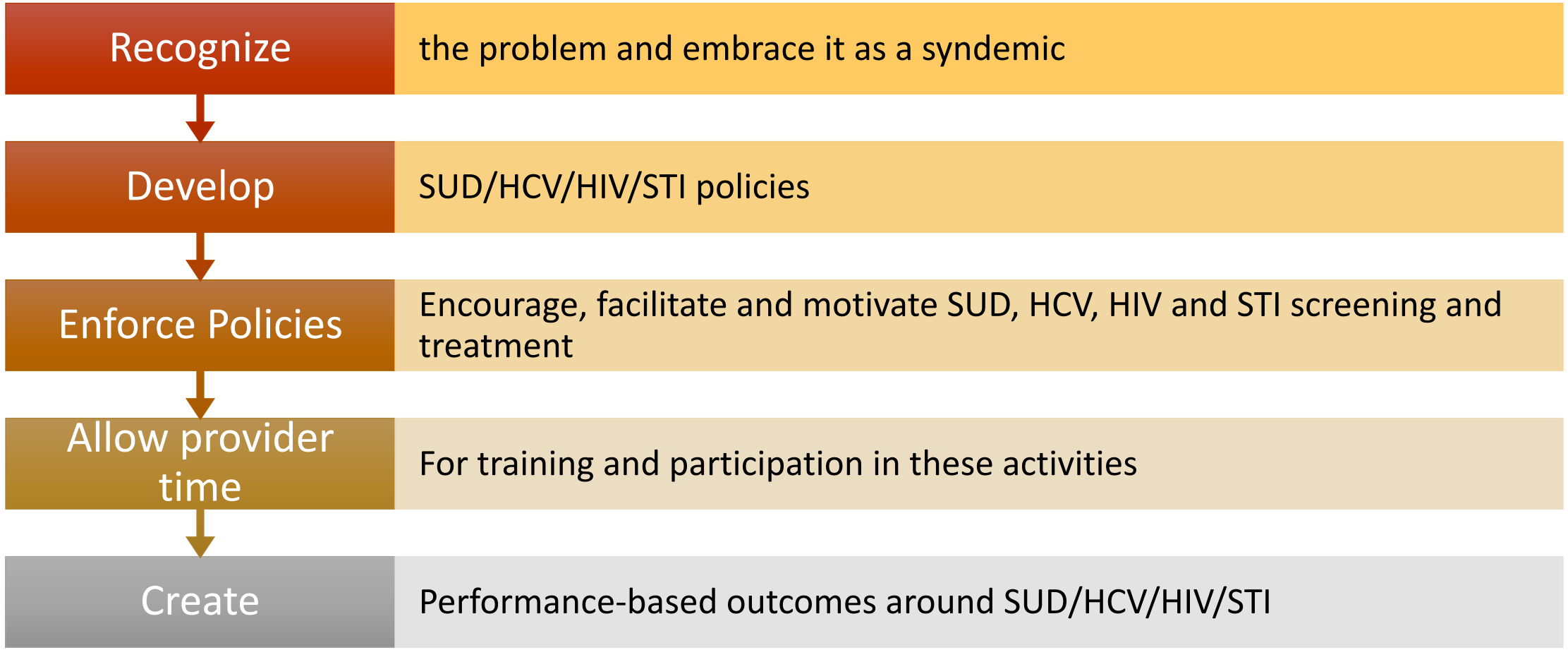


Medication Assisted Treatment

PREP for PWUDs

Naloxone, Syringe Service Programs, and Safer Injection Practices

What can the Health Care system (Leadership) do for to Mitigate the Syndemic (Micro level)



What Can Society Do To Mitigate the Syndemic (Macro level)?

- **Decrease Injection Drug Use a make it safer**
  - Make SSP available
  - Easy access to MAT
  - Easy access to behavioral health
- **Eliminate social and structural determinants of 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

”No-Wrong Door Approach”

Holistic, Coordinated Care Is Critical for Addressing These Overlapping Epidemics

A “no-wrong-door” approach – providing or connecting a person to all the services that meet their needs wherever they seek care – is crucial.

The first step in implementing this approach is **increasing access to quality healthcare settings.** STD clinics are important spaces for people who are uninsured, need flexible appointments, need low- or no-cost services, or are looking for expert and confidential services.

We must reduce the effect of social and economic conditions that can influence health outcomes - called social determinants of health - which have been documented as key contributors to negative health outcomes, including STI transmission. Strategies to reduce these conditions can include:

- ☑ **Promoting prevention and care in related systems,** including housing, education, and the justice system.
- ☑ **Providing patients with resources,** including housing, food, transportation, and employment.
- ☑ **Integrating existing programs,** such as syringe services, substance use disorder treatment programs, and HIV testing and pre-exposure prophylaxis programs in STD clinics.
- ☑ **Identifying “outside-the-box” opportunities for collaboration and integration.** New solutions could include developing partnerships with pharmacies and retail health clinics or modernizing and streamlining data systems.

https://www.cdc.gov/std/statistics/2019/syndemic-infographic.pdf

Clinical Case: Mrs. S

Mrs. S is a 20 yo cis-gender female who has sex with cis-gender males, who presents for a pregnancy test only

- Reports having oral and vaginal sex without protective barrier **3 wks ago**
- Reports sex with 2 partners over the **past 6 months**
- Denies recent drug use, but reports injecting heroin **3 months ago**
- Reports unstable housing and transportation and does not have regular access to phone

No current signs or symptoms, and doesn't recollect any in the past year

- Never tested for HIV
- Last gonorrhea/chlamydia (urine only) and RPR tests were all negative **11 months ago**

Office Tests

- Rapid pregnancy test: **Positive**
- Agrees to rapid HIV/Syphilis test in office when offered incentive
- HIV: **non-reactive**
- Syphilis (treponemal antibody): **reactive**

What are the recommended next steps? (Check all that apply)

A. No further testing necessary, as initial reason for the visit (pregnancy testing) already completed
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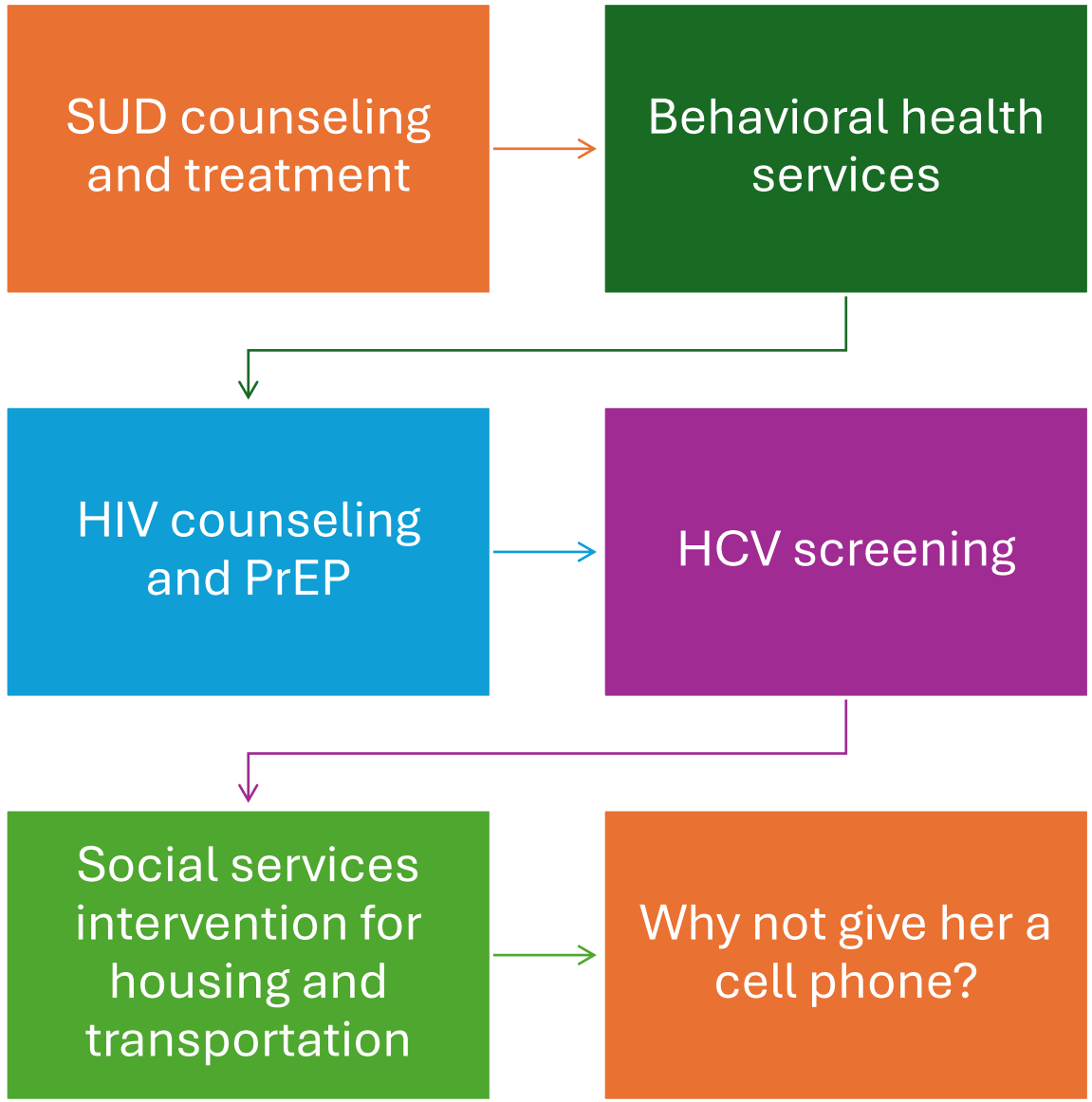
What else would you recommend for Mrs. S?



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?