Addressing the Syndemic: Syphilis and Substance Use Disorder

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Northwest Portland Area Indian Health Board (NPAIHB)
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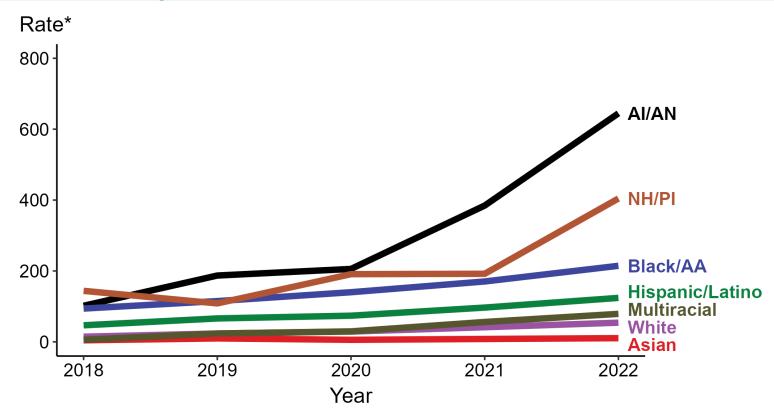




Syphilis epidemiology is changing



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

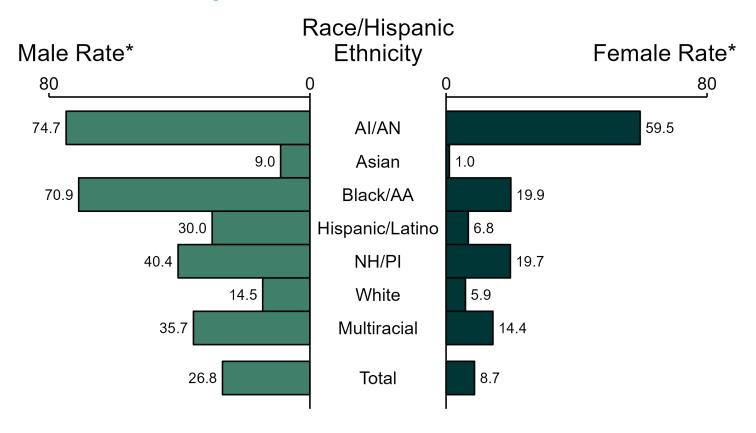


^{*} Per 100,000 live births

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



Primary and Secondary Syphilis — Rates of Reported Cases by Race/Hispanic Ethnicity and Sex, United States, 2022



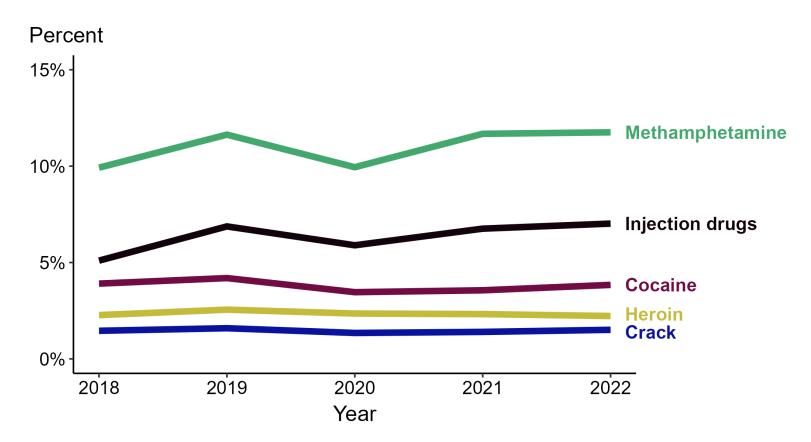
^{*} Per 100,000

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NOTE: Total includes all cases including those with unknown race/Hispanic ethnicity.



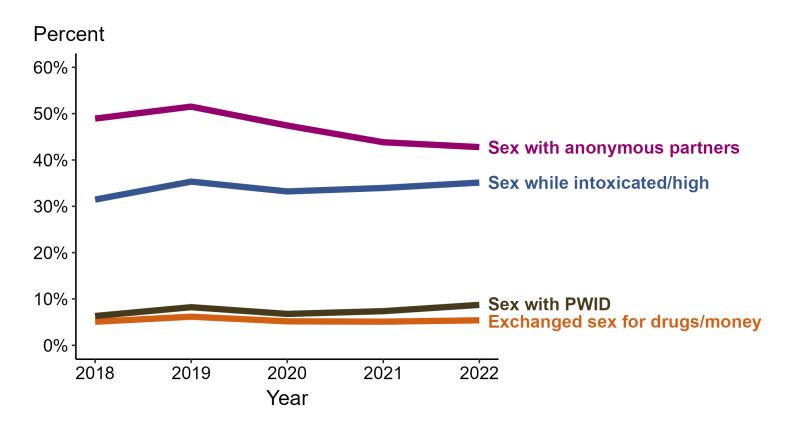
Primary and Secondary Syphilis — Percentage of Cases Reporting Selected Substance Use Behaviors*, United States, 2018–2022



^{*} Proportion reporting injection drug use, methamphetamine use, heroin use, crack use, or cocaine use within the last 12 months calculated among cases with known data (cases with missing or unknown responses were excluded from the denominator).



Primary and Secondary Syphilis — Percentage of Cases Reporting Selected Sexual Behaviors*, United States, 2018–2022



^{*} Proportion reporting sex with PWID, sex with anonymous partners, sex while intoxicated/high on drugs, or exchanging drugs or money for sex within the last 12 months calculated among cases with known data (cases with missing or unknown responses were excluded from the denominator).

ACRONYMS: PWID = Person who injects drugs



"The Great Pretender"



Clinical stages

- 1. Syphilis goes through several stages.
- 2. Stages start with primary, then may not progress linearly.
- 3. Characterized by episodes of active disease interrupted by periods of latency.
- 4. Signs/symptoms and transmission risks vary by stage.

Clinical Stages



Symptoms go away even if untreated!

Primary

Painless ulcer or chancre

- 10-90 days after infection
- Patient may never be aware

Secondary

Rash Mucocutaneous lesions Lymphadenopathy

- Usually occurs 3 to 6 weeks after primary syphilis
- Patients may only have one subtle skin change

Latent

NO SYMPTOMS

Tertiary

Cardiovascular
Gumma lesions
(skeletal, mucosal,
ophthalmic)

Neurosyphilis can occur at any stage.

Clinical Stages



Primary

Painless ulcer or chancre

Secondary

Rash

Mucocutaneous lesions
Lymphadenopathy

Latent

NO SYMPTOMS

EARLY LATENT

<=1 year since infection

LATE LATENT >1 year since

infection

EARLY SYPHILIS

Primary, Secondary, or Early Latent
(greatest potential for
transmission in pregnancy)



Why Are Sexually Transmitted Infections Surging?

After reaching historic lows more than a decade ago, rates are on the rise again.

"When women who are engaging in substance abuse become pregnant, they frequently avoid prenatal care for fear of being drugtested and potentially losing custody of the child. That means many of them aren't tested for syphilis and don't receive the treatment that would prevent their baby from getting it."

Intersecting epidemics: substance use and syphilis



Substance Use Among Persons with Syphilis During Pregnancy — Arizona and Georgia, 2018–2021

TABLE 2. Reported substance use*,† among pregnant persons with syphilis, by congenital syphilis pregnancy outcome§ — Surveillance for Emerging Threats to Pregnant People and Infants Network, Arizona and Georgia, 2018–2021

	No. (%)		
Substance used	Congenital syphilis (n = 360)	Noncongenital syphilis (n = 410)	Prevalence ratio [¶] (95% CI)
Any substance*	173 (48.1)	101 (24.6)	1.95 (1.60-2.38)
Tobacco	99 (27.5)	46 (11.2)**	2.45 (1.78-3.37)
Alcohol	29 (8.1)	20 (4.9)**	1.65 (0.95-2.86)
Cannabis	69 (19.2)	56 (13.7) ^{††}	1.40 (1.01-1.93)
Illicit use of opioids ^{§§}	75 (20.8)	14 (3.4)**	6.09 (3.50-10.58)
Illicit, nonprescription substance ^{¶¶}	101 (28.1)	26 (6.4)**	4.41 (2.94-6.63)



Vertical transmission is highest with early stages of maternal syphilis, specifically secondary syphilis.



Syphilis during pregnancy is associated with



- Miscarriage
- Stillbirth
- Preterm delivery
- Perinatal death
- Congenital infection



Gomez et al. Untreated Maternal Syphilis and Adverse Outcomes of Pregnancy. Bulletin of the WHO. 2013.

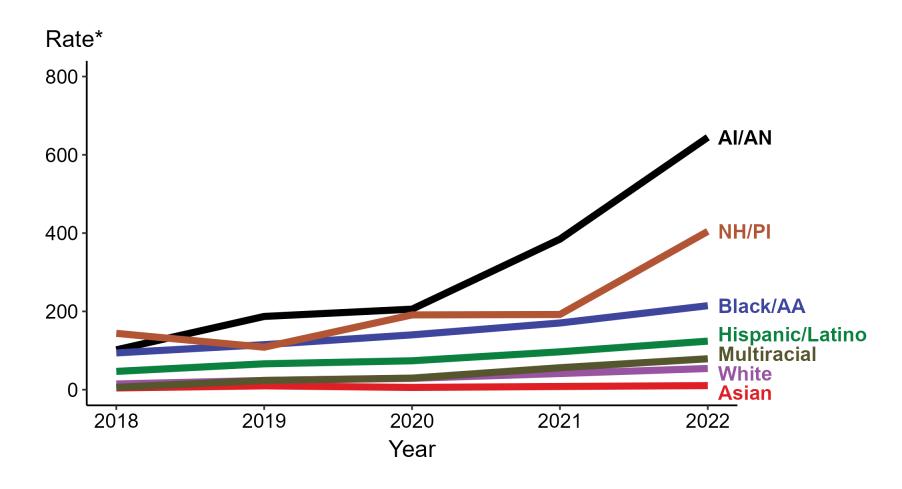


Timely* diagnosis and treatment of maternal syphilis can prevent congenital syphilis.

*Timely = initiated at least 30 days before delivery



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

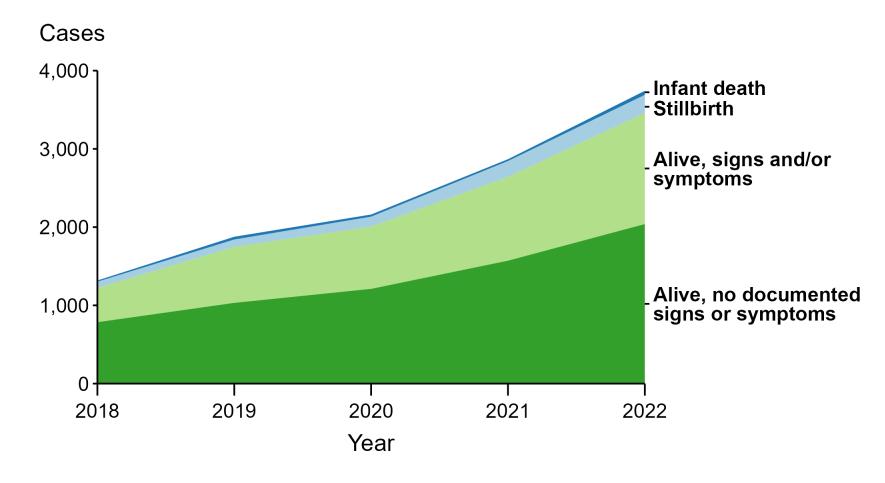






ACRONYMS: AI/AN = American Indian or Alaska Native; Black/AA = Black or African American; NH/PI = Native Hawaiian or other Pacific Islander

Congenital Syphilis — Reported Cases by Vital Status and Clinical Signs and Symptoms* of Infection, United States, 2018–2022

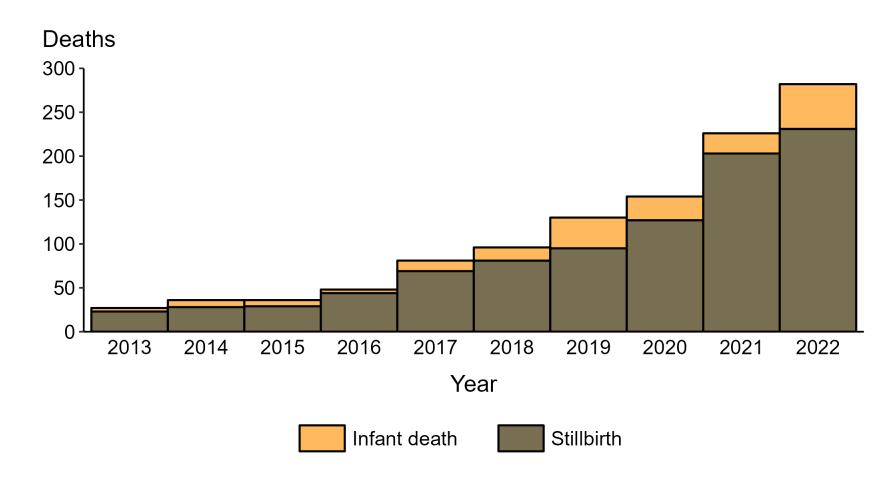


^{*} Infants with signs and/or symptoms of congenital syphilis have documentation of at least one of the following: long bone changes consistent with congenital syphilis, snuffles, condylomata lata, syphilitic skin rash, pseudoparalysis, hepatosplenomegaly, edema, jaundice due to syphilitic hepatitis, reactive CSF-VDRL, elevated CSF WBC or protein values, or evidence of direct detection of *T. pallidum*.

NOTE: Of the 11,999 congenital syphilis cases reported during 2018 to 2022, 33 (0.3%) did not have sufficient information to be categorized.

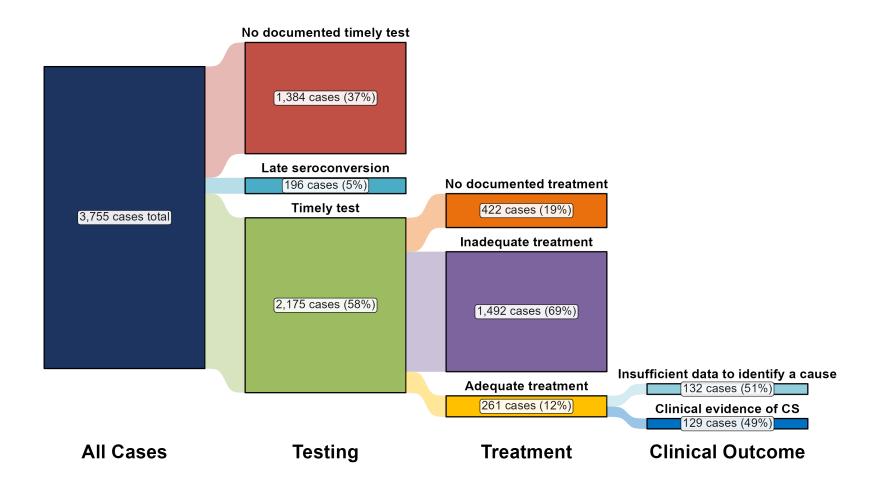


Congenital Syphilis — Reported Stillbirths and Infant Deaths, United States, 2013–2022





Congenital Syphilis — Distribution of Receipt of Testing and Treatment by Pregnant Persons with a Congenital Syphilis Outcome, United States, 2022







Who should you test/screen?

- Patients with classic symptoms
- Patients with symptoms without an alternative diagnosis
- Patients in a high prevalence setting

Two Types of serologic tests for syphilis

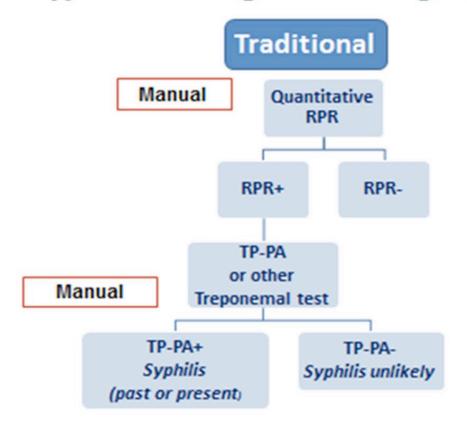


Tests	Non-Treponemal	Treponemal
Examples	RPR, VDRL	FTA-ABS, TPPA, EIA, CIA
Method	Detects <u>NON-specific</u> antibodies caused by inflammation	Detects <u>specific antibodies</u> against <i>T. pallidum</i>
Results	Quantitative	Qualitative
Positivity	Positive in active disease	Remains positive forever (85%)

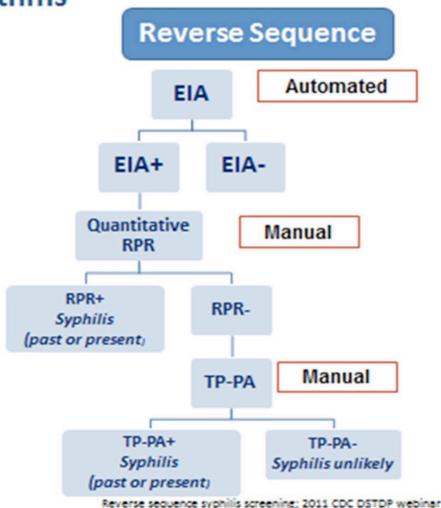
Serologic Diagnosis of Syphilis

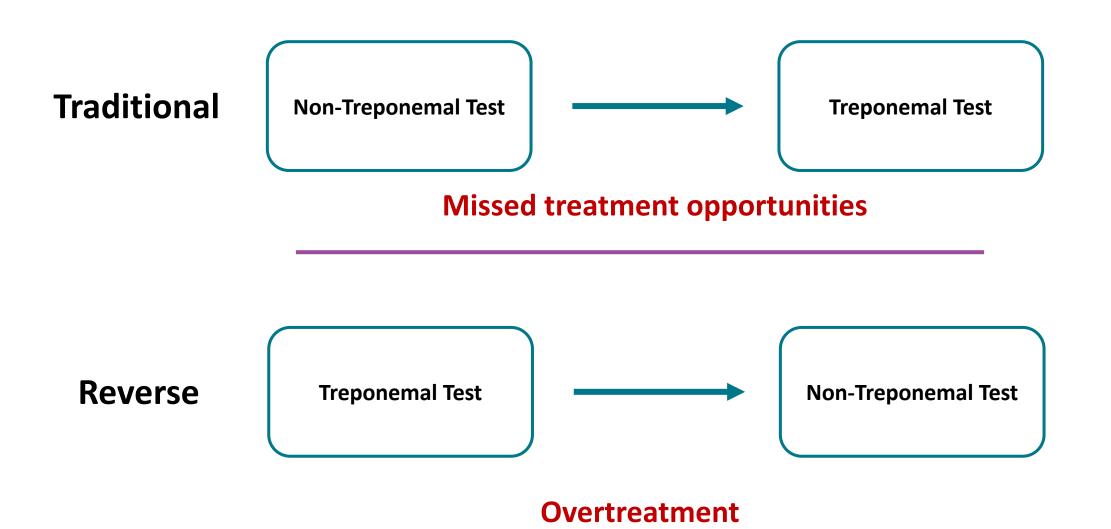


Syphilis Serologic Screening Algorithms



RPR – Rapid plasma reagin
TP-PA – *Treponema pallidum* particle agglutination
EIA – Enzyme immunoassay





Case Question

28-year-old pregnant female presents to clinic with complaints of abnormal vaginal discharge. She has not been linked to prenatal care, so you decide to add a syphilis screening to your work-up. Three days later, results come back with an RPR (non-treponemal) value of 1:16. How do you interpret these results?

- A. This patient has syphilis and should receive treatment
- B. This patient has a biologic false positive and nothing more is needed
- c. More information is needed to interpret these results
- D. This is a problem for the ID docs and OBs

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In Summary



Early syphilis = 1 dose IM



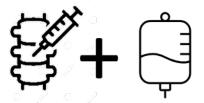
Single dose 2.4 MU Benzathine Penicillin G

Late syphilis = 3 doses IM a week apart 🔑 🕂 🖒



3 doses 2.4 MU Benzathine Penicillin G

Neurosyphilis = LP + IV therapy



IV Aqueous crystalline penicillin G 18 – 24 million units/day x 10-14 days

Pregnant People



Treatment According to Stage

Management of Sex Partners



Treat presumptively if:

- Exposure to primary, secondary, early latent ≤ 90 days
- Exposure to primary, secondary, early latent
 > 90 days and no serology is available
- Exposure to unknown latent syphilis*

Treatment for Syphilis Contact

Benzathine Penicillin G, 2.4 million units IM x 1

* If exposed to unknown latent syphilis > 90d , treat according to serologic evaluation



IHS Recommended Guidelines for Syphilis Testing, Treatment and Prevention 2/15/2024

- 1. Offer annual syphilis testing for persons ages 13 and older to eliminate syphilis transmission by early case recognition.
- 2. Prescribe and administer Penicillin G Benzathine for every age and every stage of syphilis infection in the absence of contraindications to therapy.
 - The IHS National Supply Service Center (NSSC) and IHS Pharmaceutical Prime Vendor report that all reasonable orders for Bicillin are currently being fulfilled. For questions about how to order this medication, please get in touch with Weston. Thompson@ihs.gov at NSSC.



- 3. Turn on the annual Electronic Health Record reminder at all sites to facilitate testing for two years or until incidence rates decrease locally to baseline.
- 4. Provide three-point syphilis testing for all pregnant people at the first prenatal visit, the beginning of the third trimester, and delivery.
- 5. Adoption of an HIV/Viral Hepatitis/STI testing bundle (plus pregnancy test when appropriate) at all sites to screen broadly:
 - -Syphilis screening test with reflex RPR + titer.
 - -HIV serology (with documentation of consent if required in the local state jurisdiction.)
 - -Screening for gonorrhea and chlamydia at three sites: Urine, Pharynx, Rectum.
 - -Screening for hepatitis B and C.
 - -Pregnancy test.



- **6.Adopt and provide Express STI testing services at all sites.**
 - -Provide universal screening and treatment for syphilis in Urgent Care and Emergency Department settings, as many individuals utilize Urgent Care and Emergency Departments as their primary access to care.
- 7. Provide field testing outside hospitals and clinics to increase screening rates.
 - -Utilize point-of-care, rapid syphilis, or dual HIV/syphilis antibody tests.
- 8. Provide field treatment for syphilis whenever necessary for adults diagnosed with syphilis and their partners.
 - -Note: When field testing, provide immediate treatment following a reactive syphilis antibody result if there is uncertainty that the individual may not follow up appropriately.



- 9. Provide presumptive treatment of syphilis for anyone having signs or symptoms of syphilis or with known exposure to syphilis.
 - -Provide testing and treatment with Penicillin G Benzathine for all contacts and partners, <u>including non-beneficiaries</u>.
- 10. Offer and provide DoxyPEP to appropriate populations indicated in the <u>updated IHS guidelines</u> to prevent bacterial STIs, including syphilis.

IHS STI Toolkit



Indian Country ECHO Resource Hub



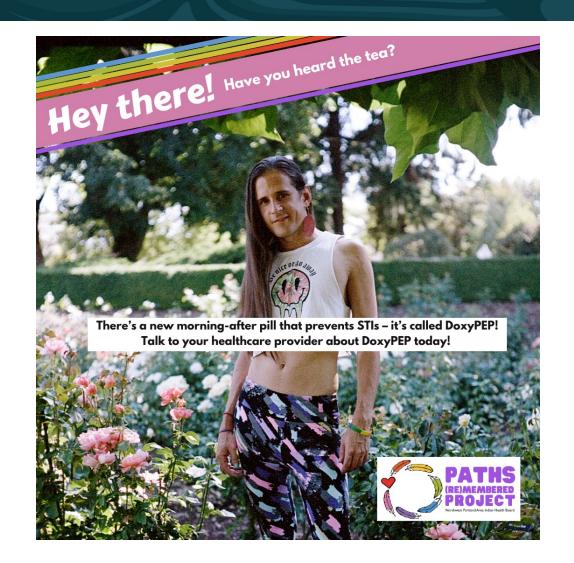
DoxyPEP



DoxyPEP (post-exposure prophylaxis)

- Take 1 dose of Doxycycline 200mg 24-72hrs after condomless sex
- Who should receive DoxyPEP?
 - MSM/Trans Women (TGW) on HIV PrEP or living with HIV.
 - If not on HIV PrEP, MSM/TGW with history of STIs within the past 12 months, sex work

In study, found a 65% reduction in chlamydia, gonorrhea, and syphilis among men who have sex with men (MSM) and transgender women

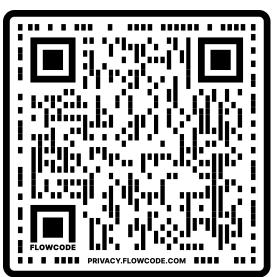


HHS Tribal Leader Consultation on Syphilis & Congenital Syphilis



The U.S. Department of Health and Human Services (HHS) Office of the Assistant Secretary for Health (OASH) will hold a Tribal consultation on August 5, 2024, to discuss the syphilis and congenital syphilis outbreak in Tribal Communities.

- Innovative and new ways are needed to ensure timely screening and treatment for all AI/AN people
- Invest in maternal child health and reproductive healthcare for AI/AN people
- Increase care for the syndemic issue of syphilis and substance use disorder in AI/AN communities
- Invest in comprehensive culturally-specific sexual health education is urgently needed



Facility Assessments







Acting Medical Director

Primary Care Physicians/Providers





Acting Medical Director

Primary Care Physicians/Providers



Clinical Pharmacist

Pharmacy Director





Acting Medical Director

Primary Care Physicians/Providers



Public Health Nurse

Infection Control Nurse

Public Health Director



Clinical Pharmacist

Pharmacy Director





Acting Medical Director

Primary Care Physicians/Providers



Public Health Nurse

Infection Control Nurse

Public Health Director



Clinical Pharmacist

Pharmacy Director



Lab Director/Manager

Lab Tech

Facility Assessments: Data Collected





Testing algorithm?



Costs?



Staging?



Treatment availability?



Obtaining sexual histories?



Field-based testing and treatment?



Screening practices?

Initial Findings



Feedback from Clinics



Barriers to screening, treatment, and taking a sexual history







Training Needs/Requests





Interpreting Lab Results



Best Practices: Strengths





Intergovernmental collaboration



Bicillin availability



Reverse Algorithm



Syndemic-related medication availability

Areas of Growth





Standardized STI screening order sets/EHR notifications



Screening in <u>all</u> clinical services



Trainings for sexual health history taking, interpreting syphilis lab results, and treatment recommendations



Presumptive treatment of symptomatic persons and partners



In Field Testing/Treatment

Follow-Up & Key Takeaways



- Helpful Quality Improvement (QI) tool to support improved epidemiologic and clinical processes for syndemic-related activities and integrated, holistic care
- Increased collaboration/partnership between Health Boards and Partner Tribes
- Opportunity to share best practices

Outbreak Response and Best Practices



Family Care Plans



A Toolkit for Pregnant People and Families Experiencing Substance Use Disorder

This toolkit is culturally specific and designed to:

- Help clinicians care for AI/AN pregnant and parenting people and their infants impacted by SUDs
- Support pregnant and parenting people transitioning into and remain in active recovery
- Assist affected partners and families in growing stronger







Creating Family Care Plans

for American Indian & Alaska Native Pregnant & Parenting People Experiencing Substance Use Disorders

A Guide for Healthcare Providers



Family Care Plans



Key Values

- 1. Having SUD in pregnancy is not, by itself, child abuse or neglect.
- 1. Criminalizing SUD in pregnancy is ineffective and harmful.
- 1. Everyone has the right to effective treatment.
- 2. Encourage prenatal care, treatment, and recovery support.
 - Barriers to access should be addressed, mitigated, and eliminated where possible.
- 3. Improving effective communication and coordination of public health, criminal justice systems, treatment and early childhood systems can optimize outcomes and reduce disparities.



Rapid Testing & **Self-collection Kits**



Rapid, Point-of-Care tests can be performed outside of traditional clinic settings

- Health Check (10 min result)
- Chembio Dual rapid HIV-syphilis test (15 min result)

Can treat immediately after rapid test results (for syphilis)

Even if test results are not available, but syphilis is indicated: TREAT!





Take Control. Know Your Status.

In-home specimen collection/lab-based testing:

- Swab/Urine: trichomonas, gonorrhea/chlamydia (x3)
- Blood: HIV (confirmatory), syphilis (RPR+TPPA), HCV, **HBV**

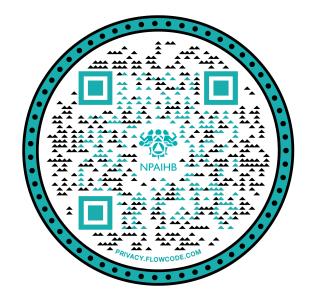
Express STI Testing

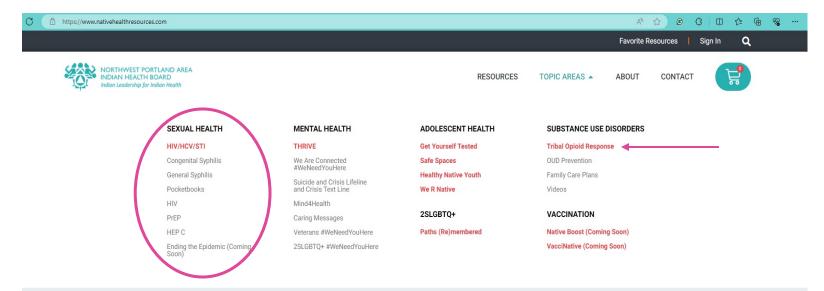


- Increasing STI and congenital syphilis rates among AI/AN
- 2. Patient-initiated care (on demand)
- 3. Reduce demand for clinical provider visit
- Prioritize provider visits for patients who need STI treatment
- Reduce wait time for patients (no appointment needed)
- 6. Streamline process for collection of specimens for rapid turnaround of results and treatment
- Maximize limited resources
- 8. COVID-19 demonstrated need for innovative approaches to continue sexual health services





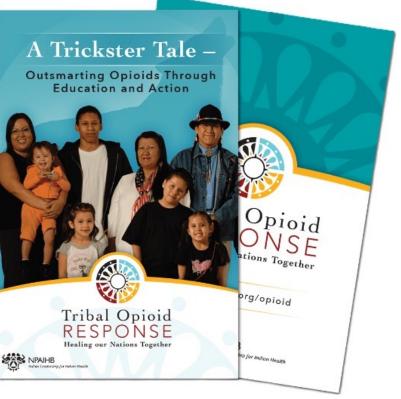
























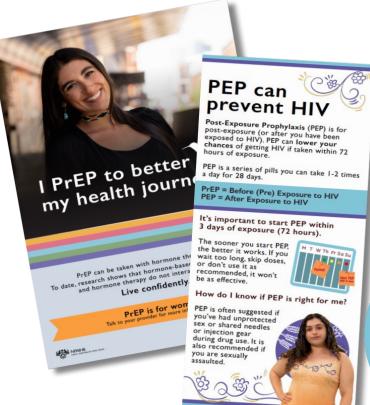




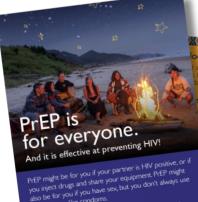
eople who take their HIV medications as prescribed can achieve undetectable viral load. People who have an undetectable viral oad, for at least 6 months, cannot transmit HIV through sex.











also be for you if you have sex, but you don't always use protection - like condoms

Feel more confident and in control. PREP does not prevent other STIs like gonorrhea or chlamydia, so it's best to use protection like condoms or dental dams alongside PrEP.

There are three different options for taking PrEP:

St Get one shot every two months ☆ Take a daily pill 주 Take PrEP 2-1-1

PrEP 2-1-1 a.k.a on-demand PrEP includes taking 2 pills 2-24 hours before sex, I pill 24 hours after sex. and I more pill 24 hours after that.

Take PrEP as prescribed.

If you don't have enough PrEP in your system. you might get HIV.





not prevent other STIs.

be taken as directed.

care facilities have

ough PrEP in your system sk of getting HIV.

ou can get Tylenol, insulin, or any











In Summary



Syphilis is on the rise

- 1. Annual, universal screening for **all** patients 13 years of age and older
- Use the reverse algorithm for syphilis screening to detect and treat on spot for syphilis (treponemal test → non-treponemal test)
- 3. Screen pregnant people 3x during pregnancy: 1st PNC visit, 3rd trimester, delivery

Support families experiencing substance use by offering compassionate, responsive, trauma-informed care.

- Criminalizing SUD in pregnancy is ineffective and harmful. Having SUD in pregnancy is not, by itself, child abuse or neglect.
- 2. Everyone has the right to effective treatment.
- 3. Encourage prenatal care, treatment, and recovery support.
 - Barriers to access should be addressed, mitigated, and eliminated where possible.

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Thank you!



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