Addressing the Syndemic: Comprehensive Syndemic Facility Assessments

(with a bonus syphilis overview)

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Northwest Portland Area Indian Health Board (NPAIHB)
Inter Tribal Council of Arizona (ITCA Inc.)

March 13, 2024

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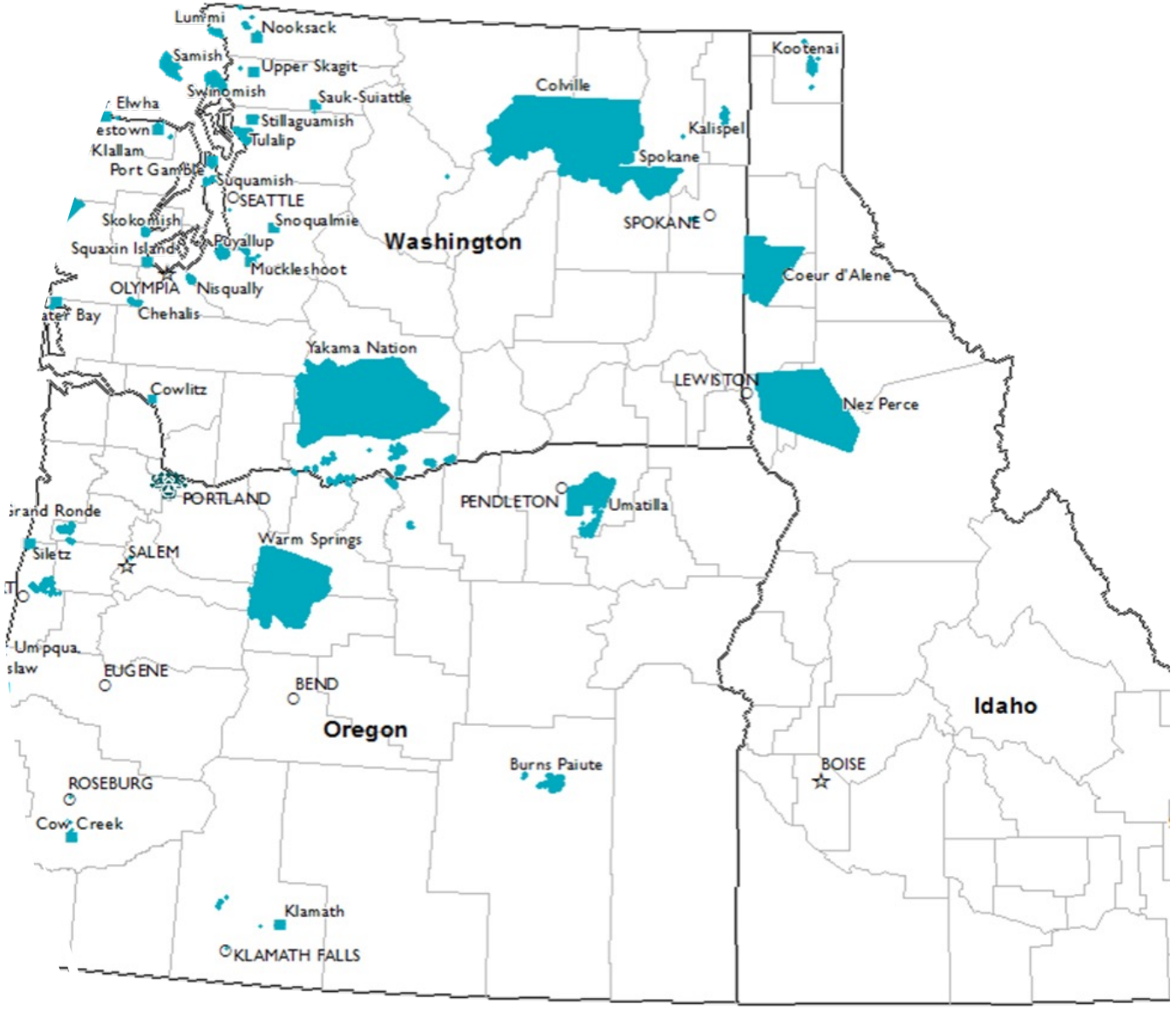
About the Northwest Portland Area Indian Health Board

- **43 Federally Recognized Tribes/ Tribal Confederations**
- **NW AI/AN Population: ~390,000**



Inter Tribal Council of Arizona, Inc.

- Established in 1952
  - Responding to threat of termination
  - One of the first regional inter tribal associations created in the United States
- Takes action on matters that affect them collectively and individually
- Promotes tribal sovereignty
- Strengthens tribal governments
- Highest elected officials of 21 member Tribes serve on the ITCA Council
- Houses over 60 programs

Background

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Provider Training

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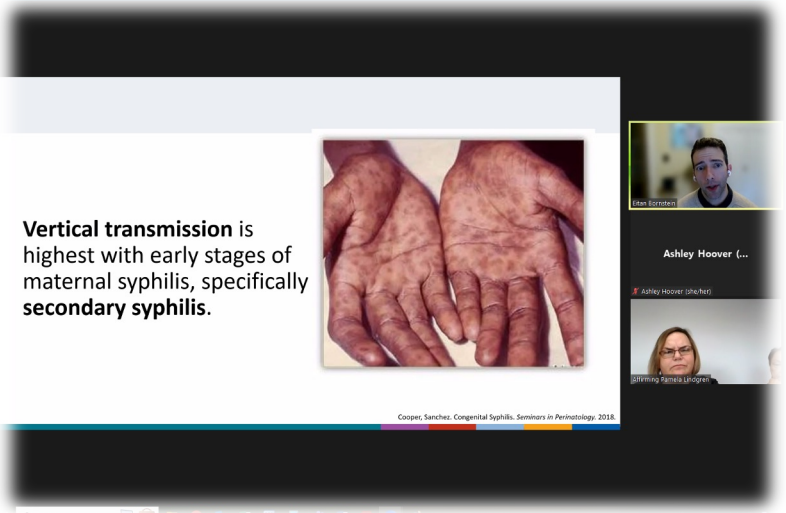

Goals

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- Provider training to support care and treatment
- Assess clinic capacity to provide STI/HIV/HCV clinical care, surveillance, and partner services
- Provide site specific recommendations for syphilis (and other STIs) control and prevention
- Share aggregate findings to support guidance for other clinics locally/nationally

Provider Training Objectives

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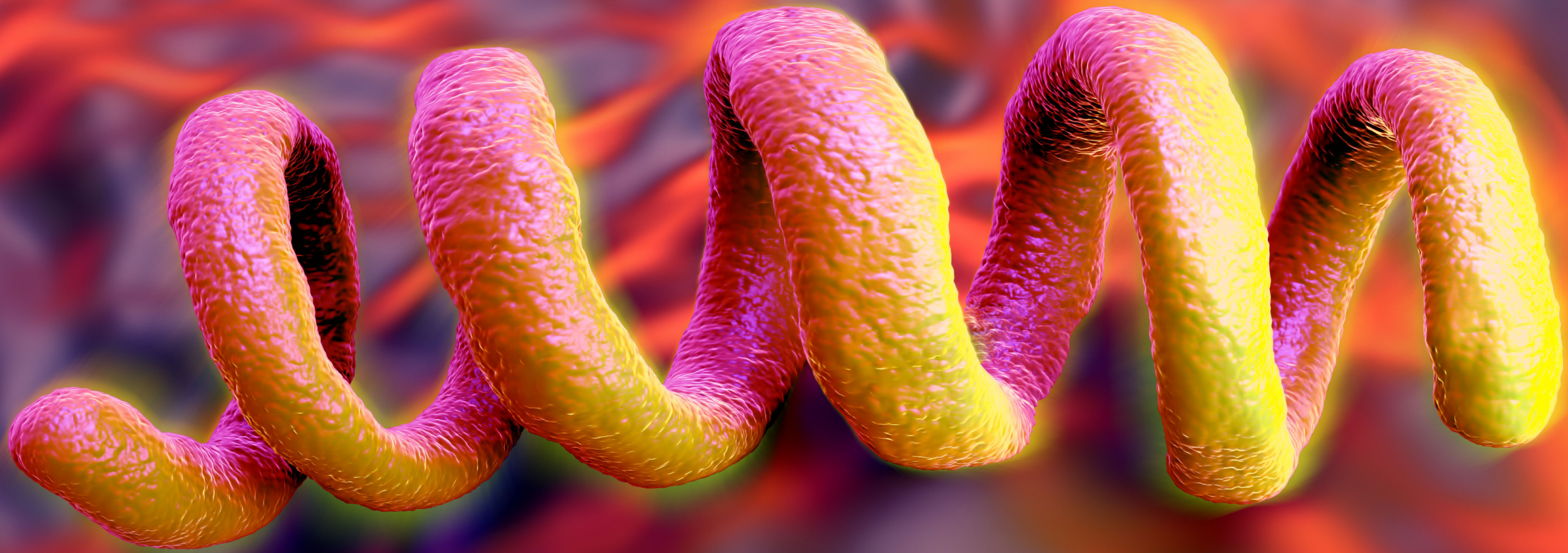
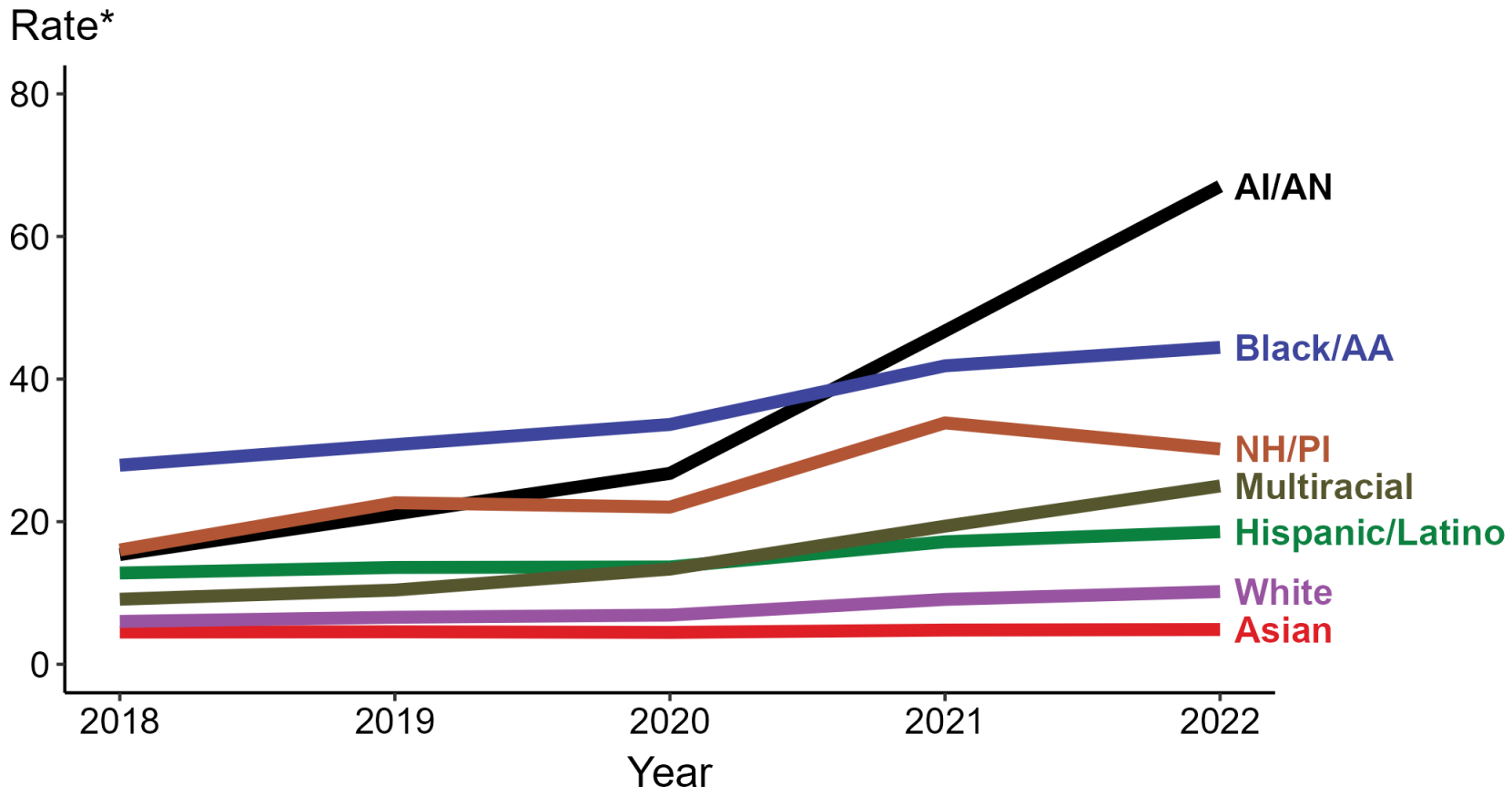
- Provide an overview of syphilis
- Review changes in syphilis epidemiology
- Discuss diagnostic screening and testing challenges
- Review recommendations for treating syphilis and follow-up
- Discuss outbreak responses and next steps

Syphilis epidemiology is changing



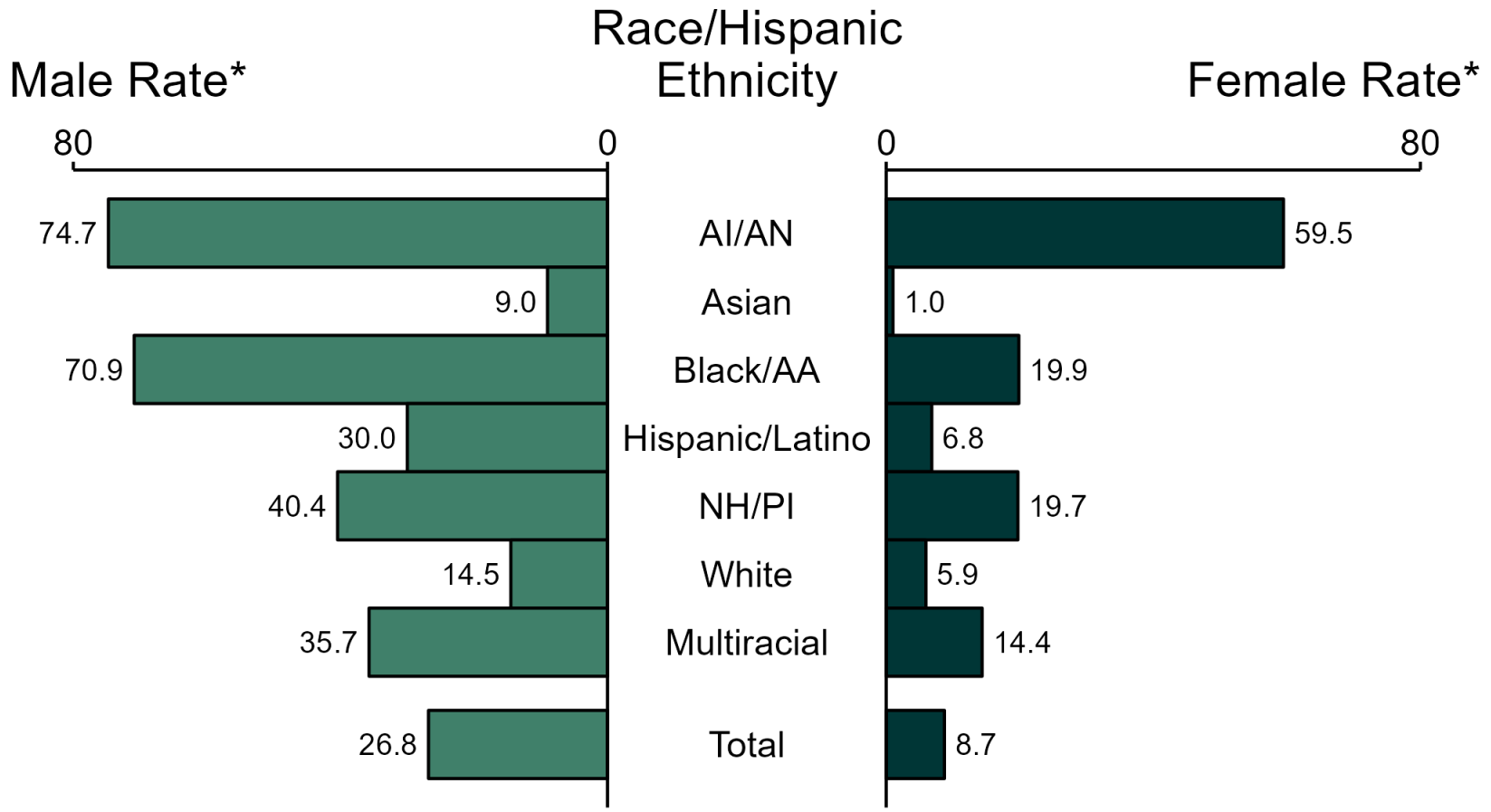
Primary and Secondary Syphilis — Rates of Reported Cases by Race/Hispanic Ethnicity, United States, 2018–2022



* 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

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

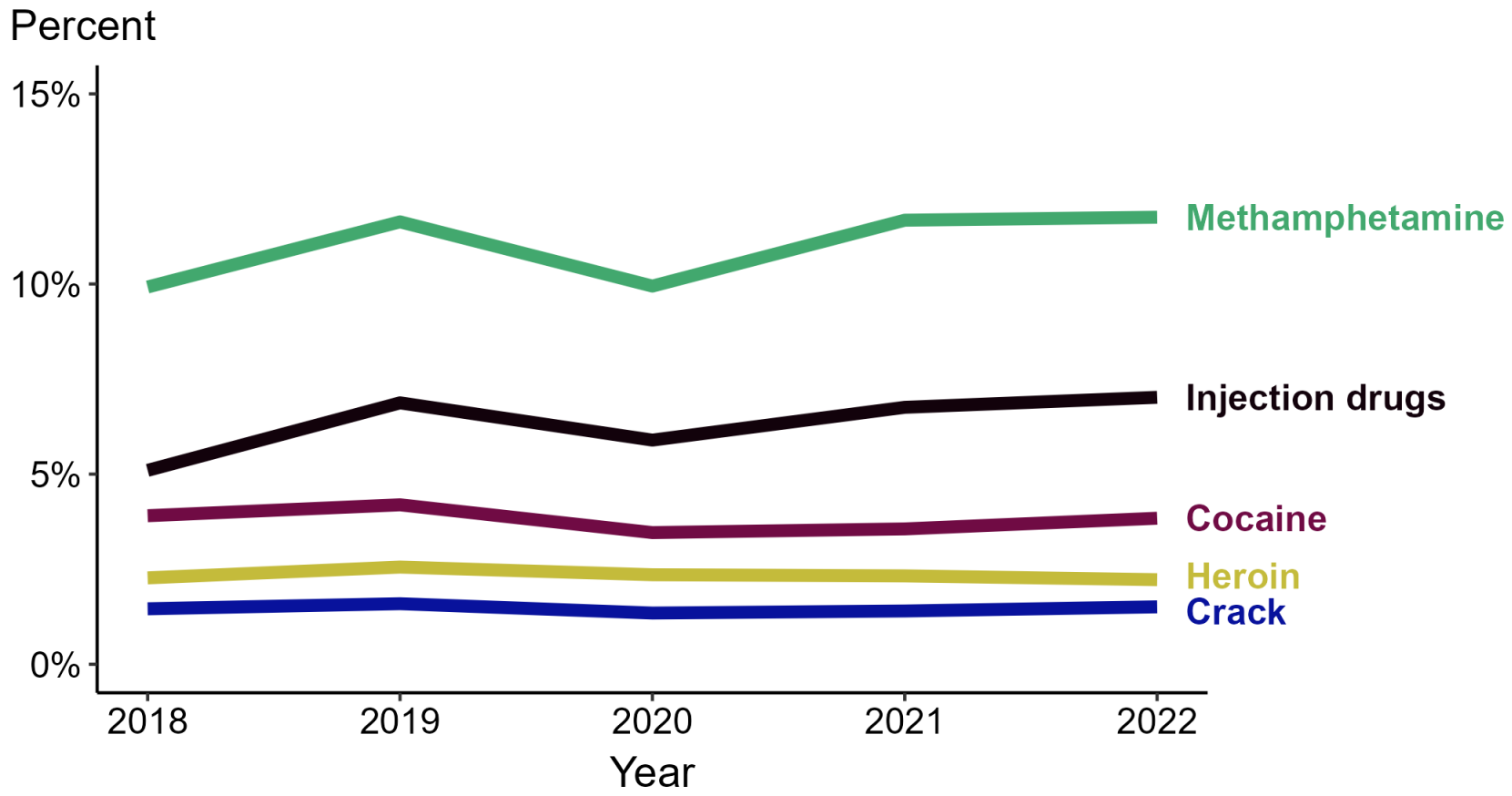


* Per 100,000

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

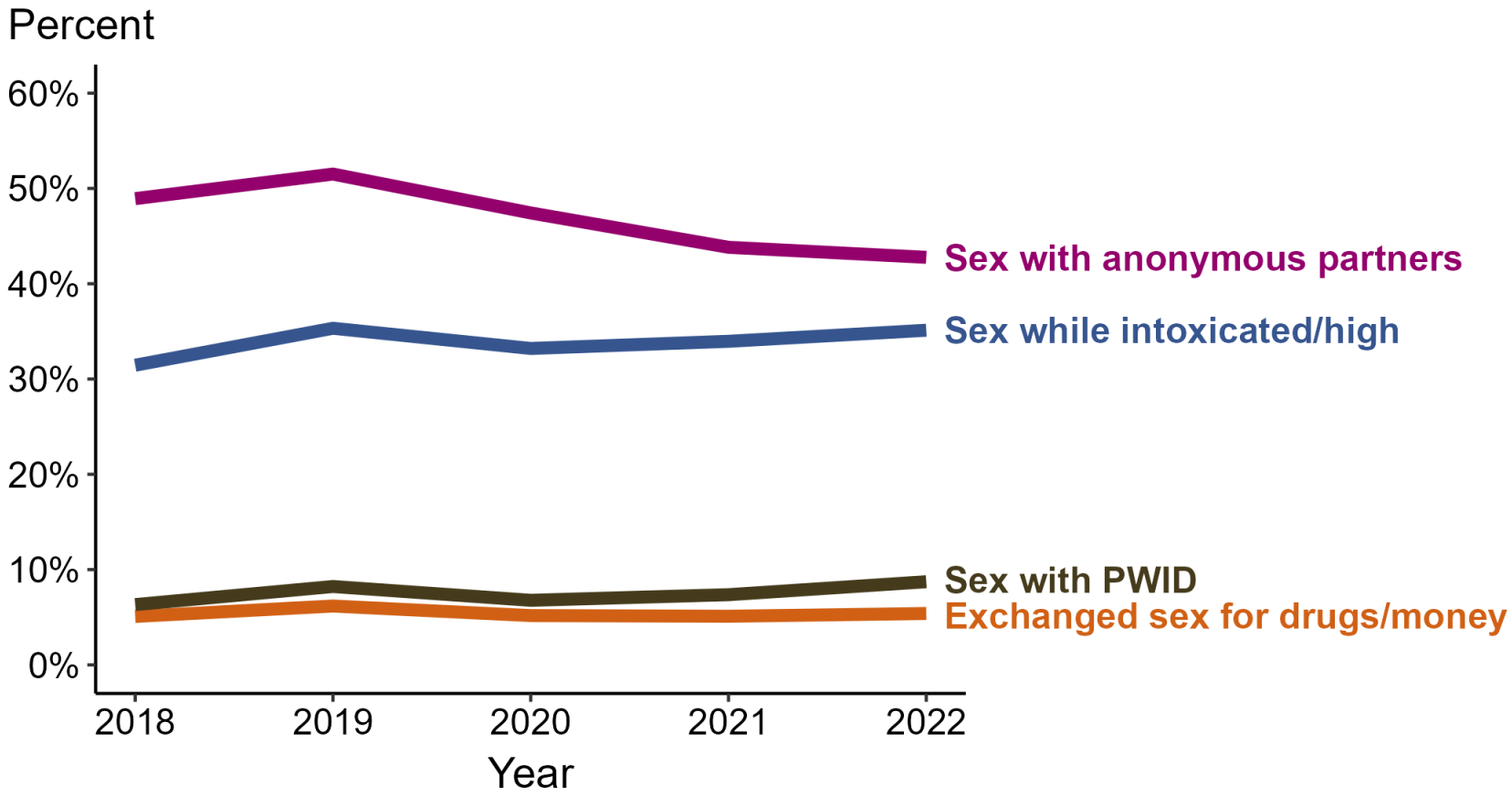
NOTE: Total includes all cases including those with unknown race/Hispanic ethnicity.

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).

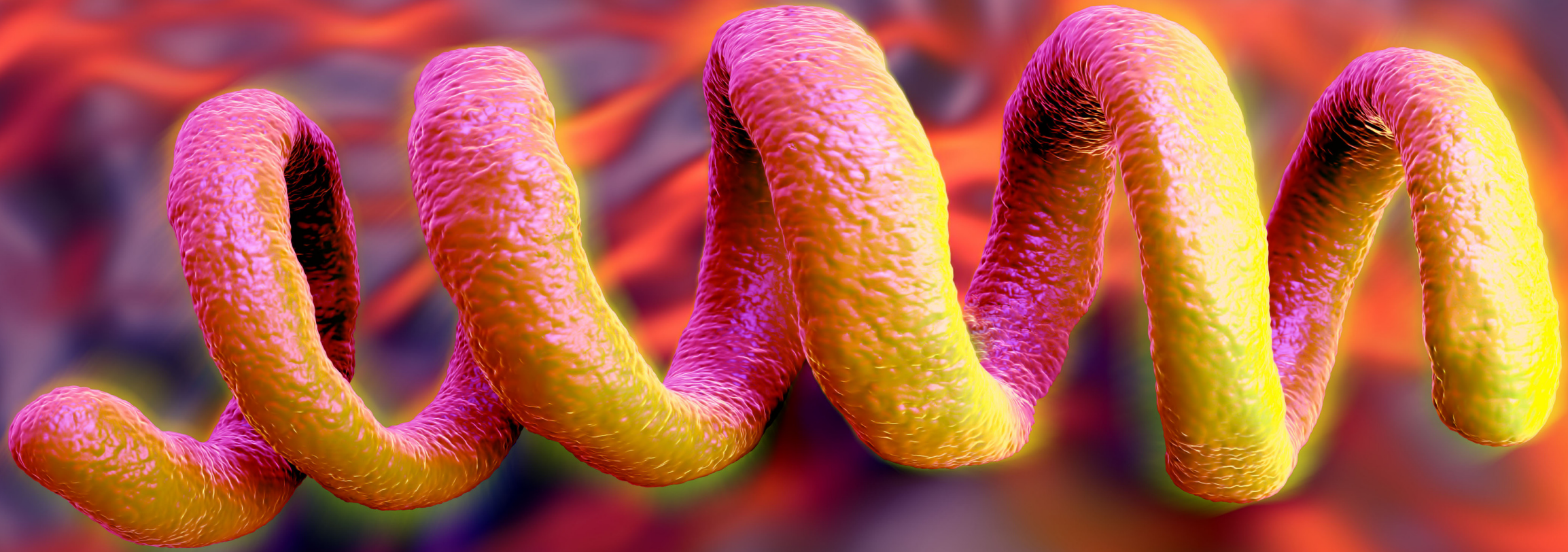
Primary and Secondary Syphilis — Percentage of Cases Reporting Selected Sexual Behaviors*, United States, 2018–2022



* 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

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Symptoms go away even if untreated!

Primary	Secondary	Latent	Tertiary
Painless ulcer or chancre	**Rash** **Mucocutaneous lesions** **Lymphadenopathy**	**NO SYMPTOMS**	**Cardiovascular** **Gumma lesions (skeletal, mucosal, ophthalmic)**
• 10-90 days after infection • Patient may never be aware	• Usually occurs 3 to 6 weeks after primary syphilis • Patients may only have one subtle skin change		

Neurosyphilis can occur at <u>any</u> stage.

Clinical Stages

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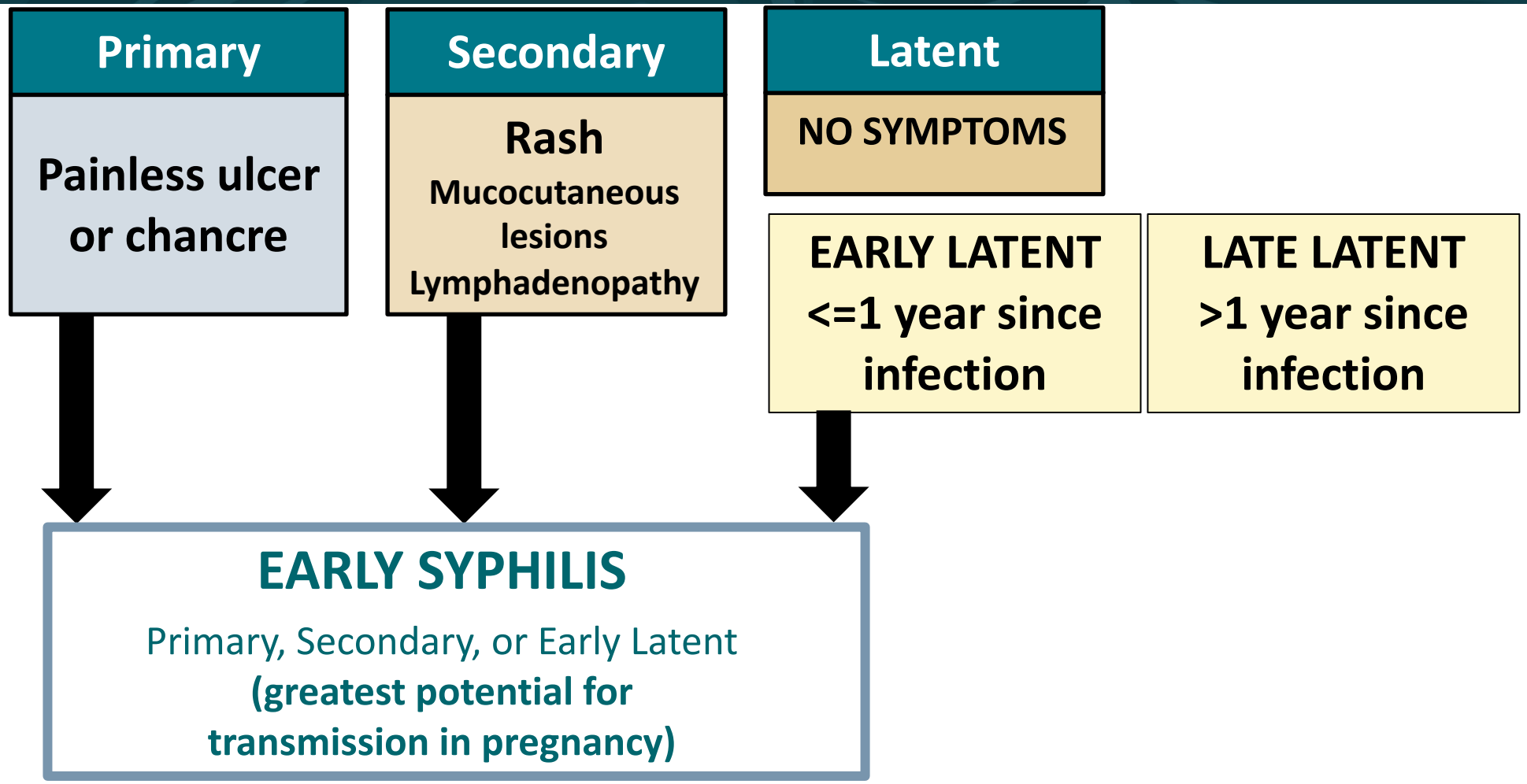

Congenital syphilis (CS)

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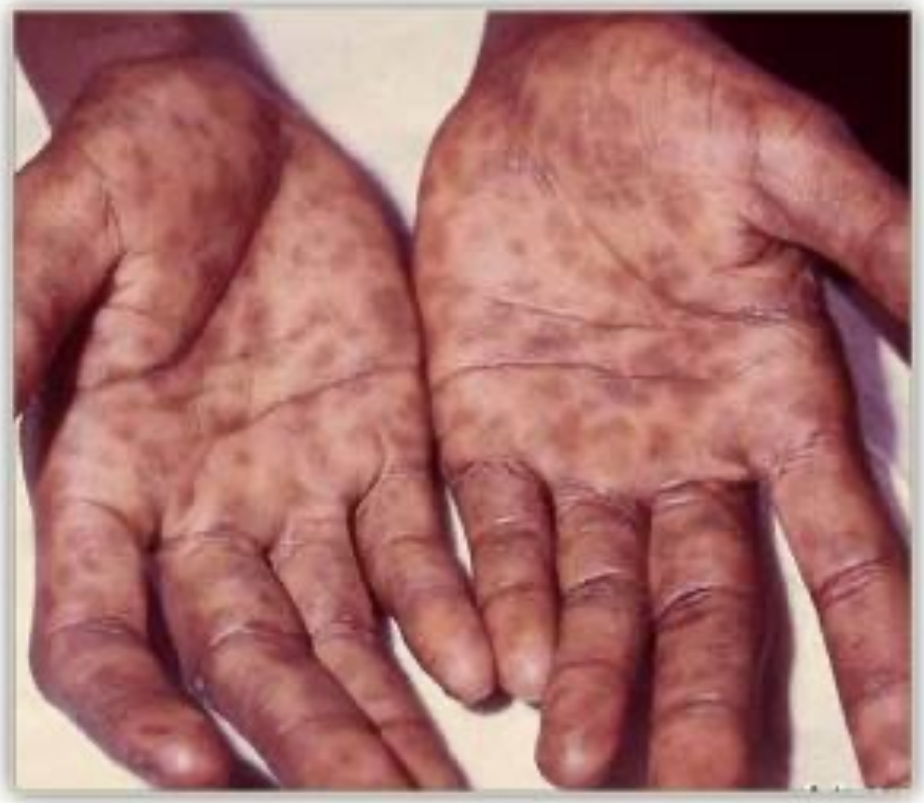
Vertical transmission is highest with early stages of maternal syphilis, specifically secondary syphilis.



Cooper, Sanchez. Congenital Syphilis. *Seminars in Perinatology.* 2018.

Syphilis during pregnancy is associated with

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

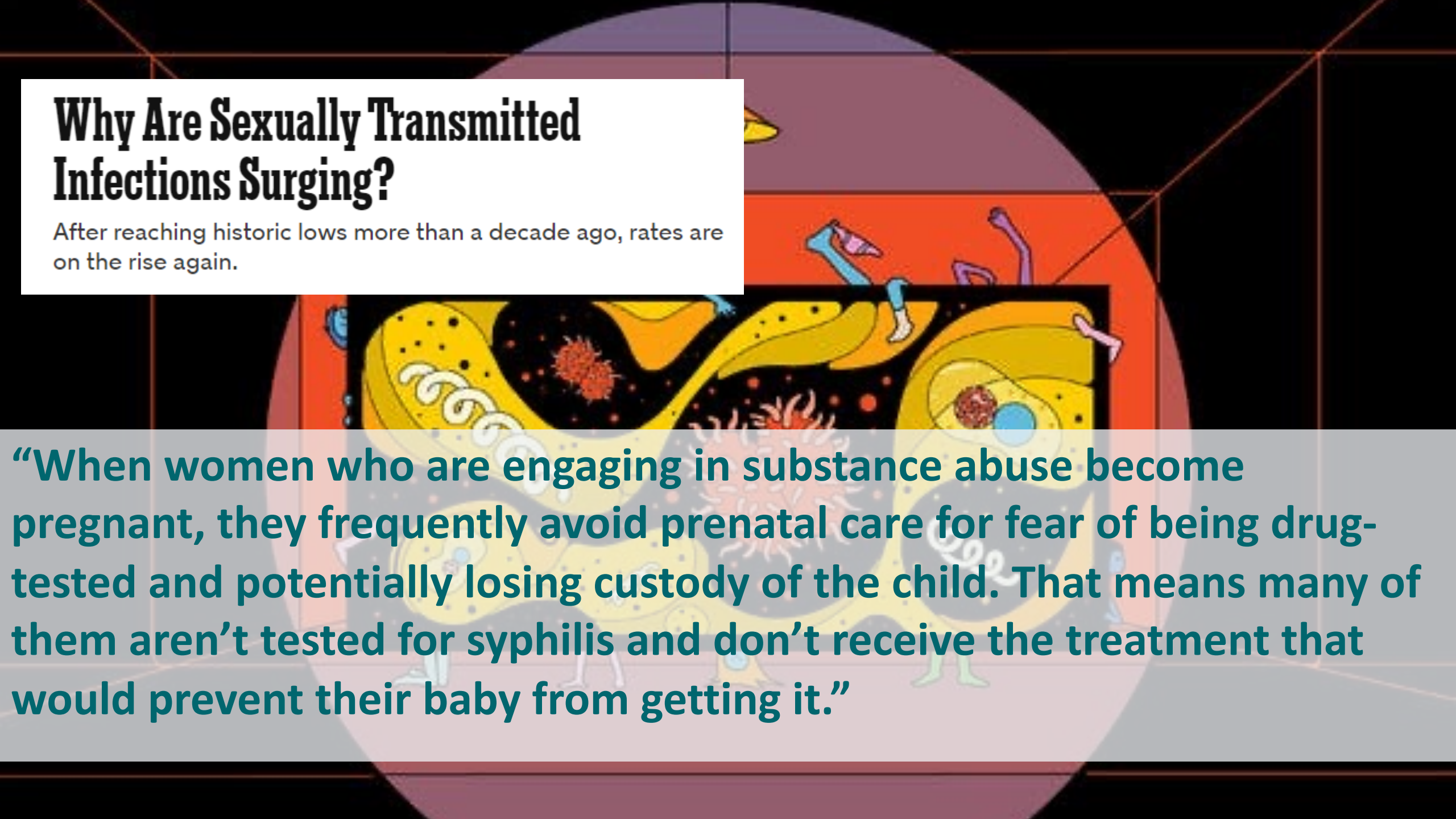
Gomez et al. Untreated Maternal Syphilis and Adverse Outcomes of Pregnancy. Bulletin of the WHO. 2013.

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

Timely = initiated at least 30 days before delivery

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 drug-tested 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

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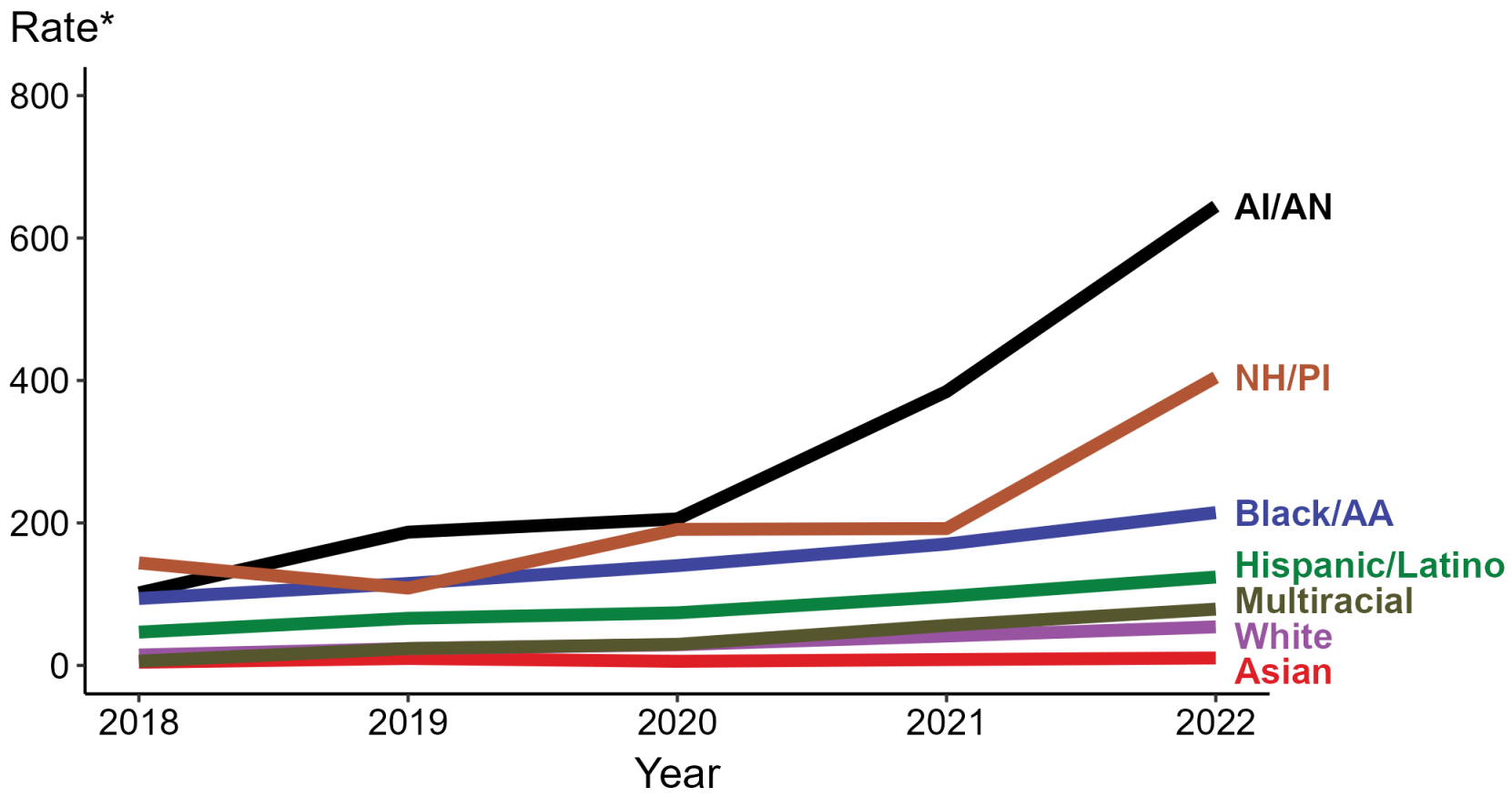
Substance Use Among Persons with Syphilis During Pregnancy — Arizona and Georgia, 2018–2021

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)

Carlson JM, Tannis A, Woodworth KR, et al. Substance Use Among Persons with Syphilis During Pregnancy — Arizona and Georgia, 2018–2021. MMWR Morb Mortal Wkly Rep 2023;72:63–67. DOI: http://dx.doi.org/10.15585/mmwr.mm7203a3

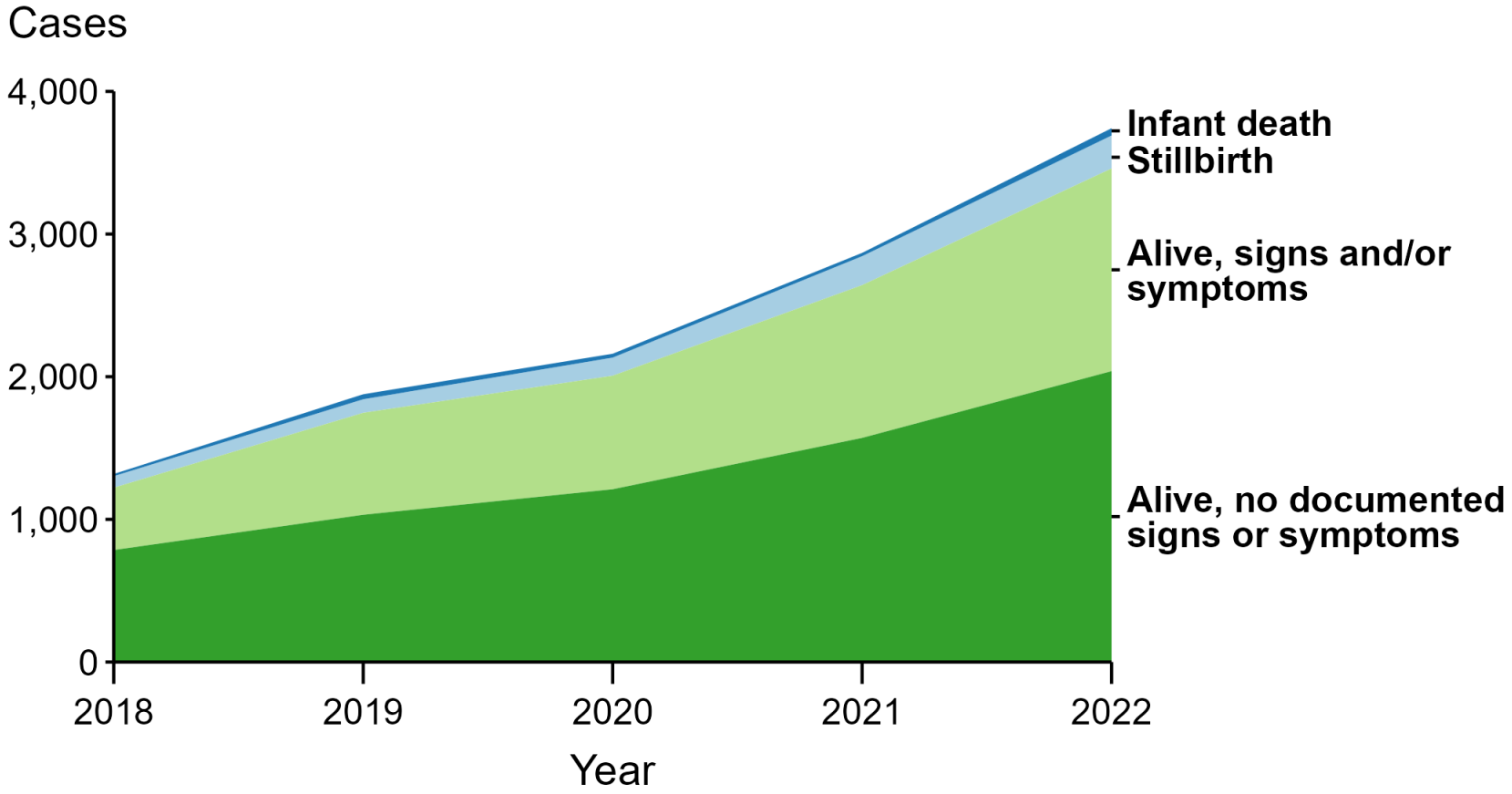
Congenital Syphilis — Rates of Reported Cases by Year of Birth, Race/Hispanic Ethnicity of Mother, United States, 2018–2022



* 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

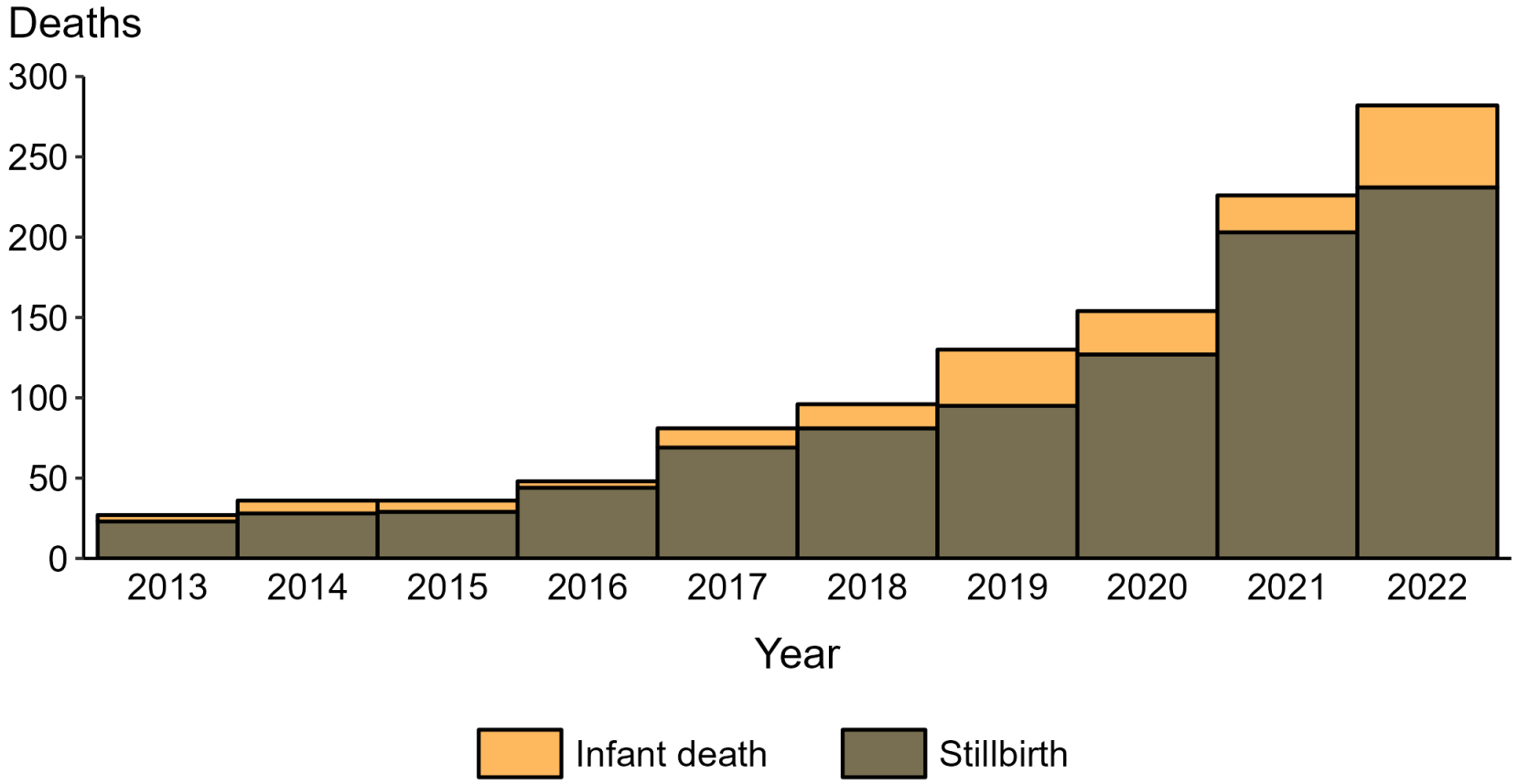
Congenital Syphilis — Reported Cases by Vital Status and Clinical Signs and Symptoms* of Infection, United States, 2018–2022



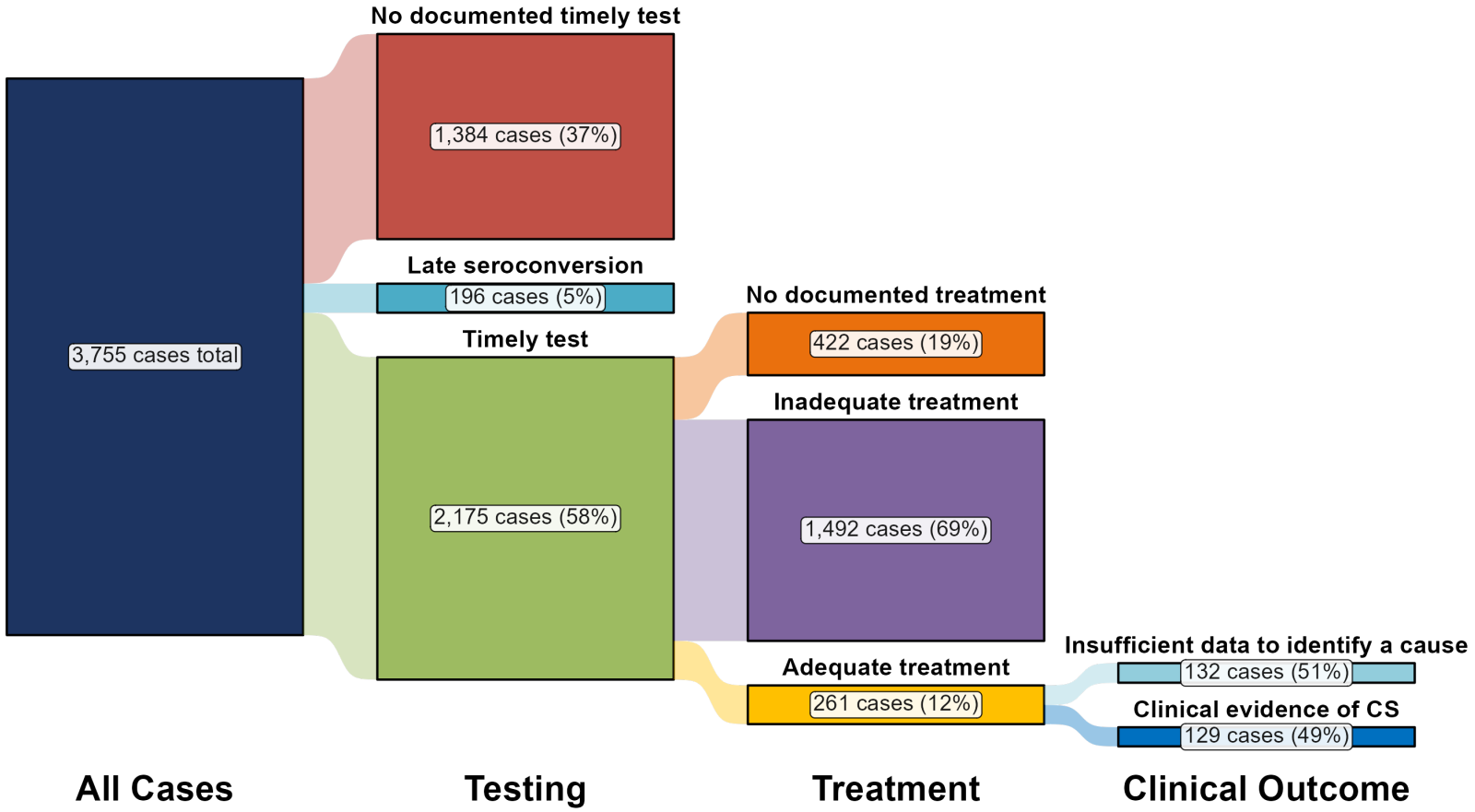
* Infants with signs and/or symptoms of congenital syphilis have documentation of at least one of the following: long bone changes consistent with congenital syphilis, snuffles, condylomata lata, syphilitic skin rash, pseudoparalysis, hepatosplenomegaly, edema, jaundice due to syphilitic hepatitis, reactive 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

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

2021 STI Treatment Guidelines

Serologic Diagnosis of Syphilis

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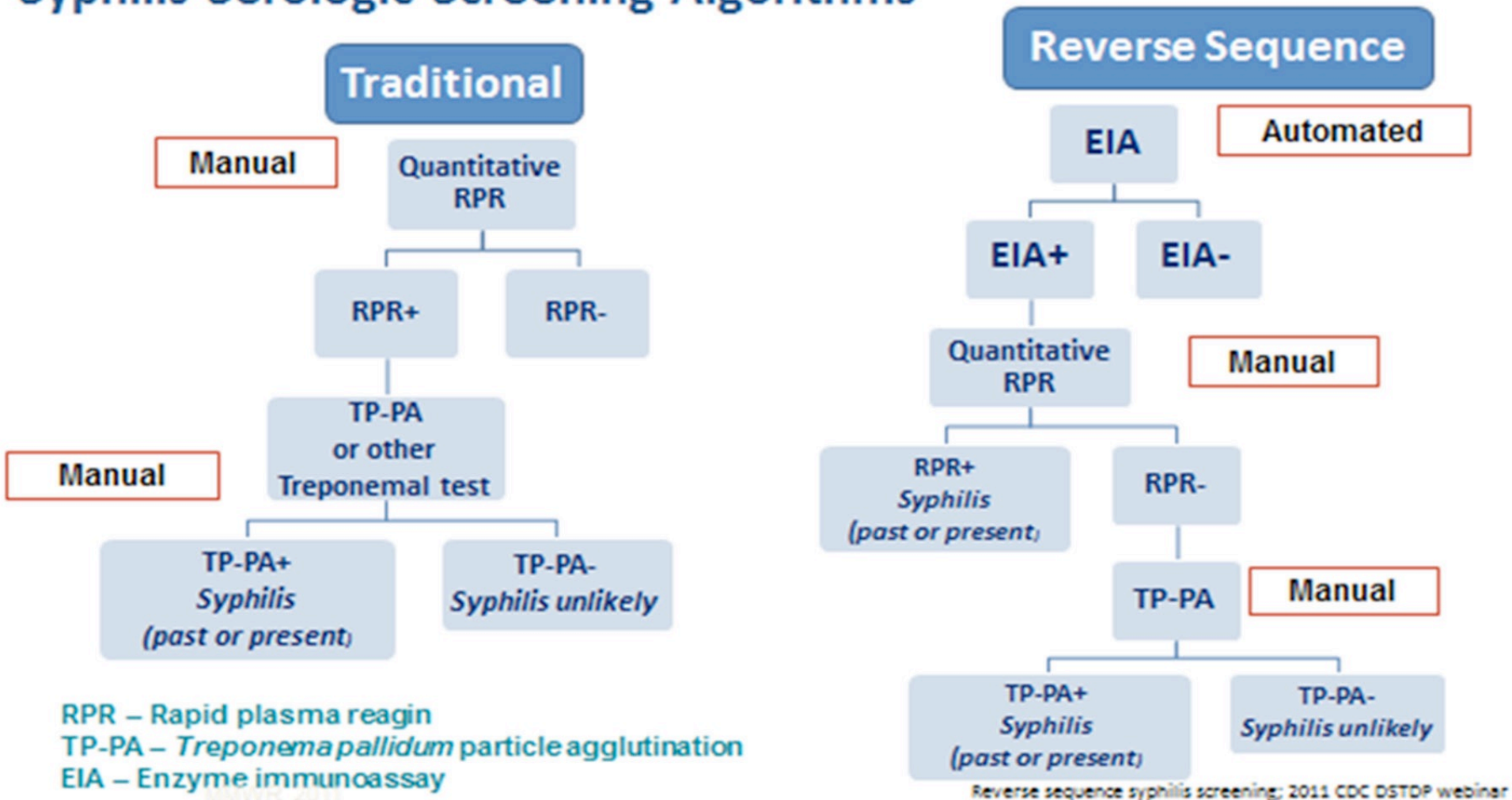
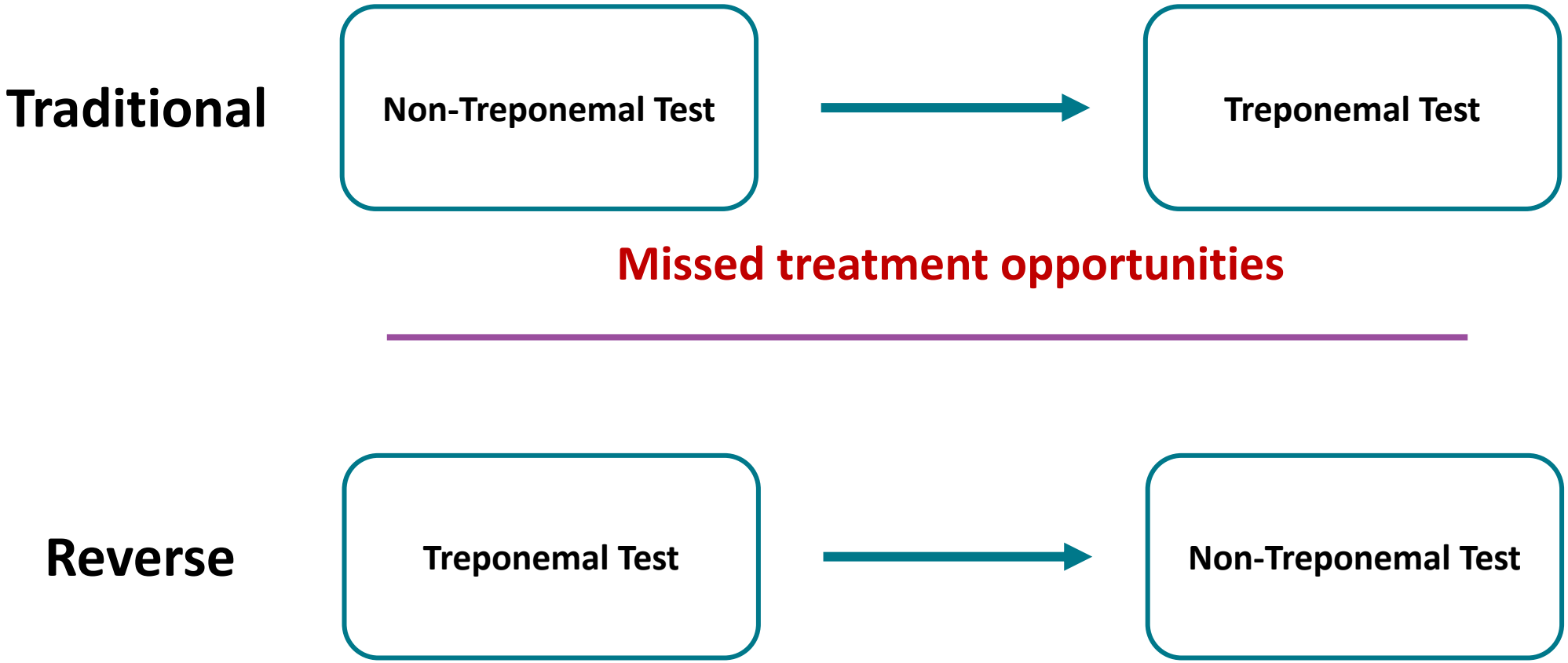
Syphilis Serologic Screening Algorithms



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

Reverse sequence syphilis screening; 2011 CDC DSTDP webinar


Traditional
Non-Treponemal Test
Treponemal Test
Missed treatment opportunities
Reverse
Treponemal Test
Non-Treponemal Test
Overtreatment

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 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

Case Question

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D. This is a problem for the ID docs and OBs

Treatment


BENZATHINE
PENIZILLIN
FOR INJECTION
10 ml
for intramuscular injection

In Summary

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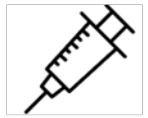
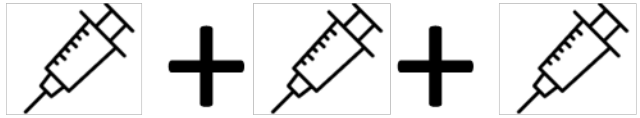
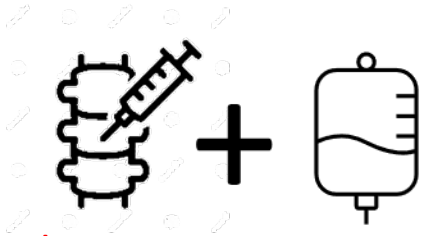
- **Early syphilis = 1 dose IM** 

  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

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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 CMO Tribal Leader Letter on Syphilis

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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.

IHS CMO Tribal Leader Letter on Syphilis

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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.

IHS CMO Tribal Leader Letter on Syphilis

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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.

IHS CMO Tribal Leader Letter on Syphilis

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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, **including non-beneficiaries**.

10. **Offer and provide DoxyPEP** to appropriate populations indicated in the interim IHS guidelines to prevent bacterial STIs, including syphilis.

IHS STI Toolkit

Indian Country ECHO Resource Hub

DoxyPEP and DoxyPrEP

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DoxyPEP (post-exposure)

- 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

DoxyPrEP (pre-exposure)

- Take Doxycycline 100mg daily prior to having condomless sex

In pilot study with 30 MSM living with HIV, 73% reduction in any bacterial STI at any site for the intervention group, without substantial differences in sexual behavior

*Doxycycline is contraindicated for pregnant people.

Facility Assessments

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Facility Assessments:
Who we Interviewed

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Acting Medical Director

Primary Care Physicians/Providers

Facility Assessments:
Who we Interviewed

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Acting Medical Director

Primary Care Physicians/Providers

Clinical Pharmacist

Pharmacy Director

Facility Assessments:
Who we Interviewed

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Acting Medical Director

Primary Care Physicians/Providers

Public Health Nurse

Infection Control Nurse

Public Health Director

Clinical Pharmacist

Pharmacy Director

Facility Assessments:
Who we Interviewed

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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—Lab

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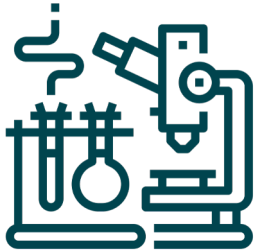

Testing algorithm?

Reporting Process?

Result turnaround time?

Facility Assessments:
Data Collected—Pharmacy

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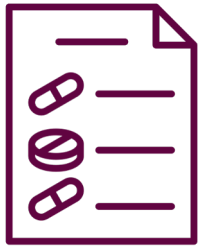

Treatment availability?

Treatment order sets and reminders?

Costs?

Facility Assessments:
Data Collected—Public Health

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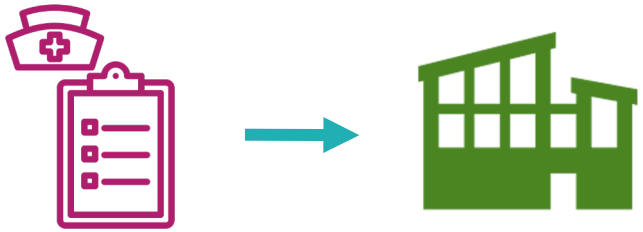
Case Management and Linkage to Care?



Case Reporting?

Field-based testing and treatment?

Facility Assessments:
Data Collected—Physicians

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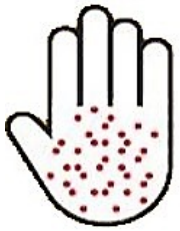
Obtaining sexual histories?

Assessing community risk?

Screening practices?

Availability of order sets, reminders and templates?



Staging?

Initial Findings

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Best Practices: Strengths

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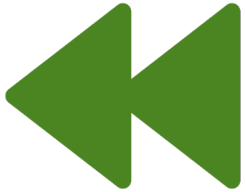
Intergovernmental collaboration

Bicillin availability



Reverse Algorithm

PrEP & MAT availability

Areas of Growth

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- **Standardized STI screening order sets/EHR notifications**
- **Screening in all 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**


Inter Tribal Council of Arizona, Inc.
21 TRIBAL NATIONS

Background

In August and September of 2022, the ITCA HHS held three virtual roundtable meetings with tribal health staff with Tribes in Arizona, Nevada, and Utah. The purpose of the meetings were:

- To provide Tribes tools and resources to address STI/HIV prevention.
- To assess current STI/HIV training and technical assistance needs.
- To identify challenges and barriers in accessing STI/HIV testing, treatment, and care.

Facility Assessment Project

The overall purpose of the project is to increase diagnosis, treatment, and prevention of STI/HIV/HCV among Tribes in the Phoenix-Tucson IHS Areas through conducting “facility assessments” with twelve (12) Tribes in AZ-9, NV-2, and UT-1.

Outcomes:

- Site-specific reports
- Capacity building/Implementation plans
- Connect clinicians and staff to resources
- Share aggregate findings
- Develop strategic plan inclusive of all Tribes in the Phoenix and Tucson IHS Areas

Inter Tribal Council of Arizona, Inc
21 TRIBAL NATIONS

Best Practices: Strengths

- Good partnership with county health department
- Stock almost syndemic-related medications
  - PrEP
  - Doxy
  - Bicillin
  - GC/CT treatment (with Expedited Partner Therapy)
- Bringing Providers and Specialists to facility to see patients
  - Planning to increase women's health care and include STI testing

Challenges/Areas of Growth

- Electronic Medical Records (EMR)
- Limited on-site STI Screening and no extra-genital testing for GC/CT
- State Data Access and Coordination of Care and Case Investigation
- Screening in all clinical services
- Training for syphilis diagnosis and treatment
- Long lab turnaround times and lack reverse algorithm testing

Follow-up & Key Takeaways

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How to Get Involved

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If you and/or your clinic would like to work with ITCA on these efforts, please scan the QR code and fill out the Request for Information online form. ITCA will contact you to discuss additional details and potential scheduling!

(Alternatively, you can click the link below from the slide deck)
Facility Assessment Project Request for Information

Outbreak Response: Express STI Testing

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

Outbreak Response: Plans of Safe Care

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Services for Pregnant People Experiencing Substance Use Disorder

- Makes it less likely that PPP experiencing SUDs will be lost to follow-up
- Provides the opportunity for medical, social, cultural, spiritual, and other service providers to collaborate across disciplines
- Aids providers in quickly identifying PPP, their partners, and families who are struggling and provide timely corrective action
- Makes it more likely that PPP experiencing SUDs will successfully participate in treatment and recovery, and
- Increases the chance that families can be cared for and remain together.

Outbreak Response: Rapid Testing & Self-collection Kits

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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!

INDIGI iwtk™ I WANT THE KIT

Take Control. Know Your Status.

In-home specimen collection/lab-based testing:

Currently only CT/GC/Trich; will include HIV/HCV/HBV/syphilis blood tests by early 2024.

Outbreak Response: Street Medicine

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- Shiprock, Farmington, Cortez, CO
- Communicates with PHD in NM and CO
- Does partner services
- Does rapid testing and draws confirmation
- Has IM PCN 2.4 million units
- Vivitrol injections for AUD, oral naltrexone, hand out Narcan and the harm reduction kits
- Works with NNMC to help keep pregnant people in care
- Referred pregnant people with syphilis for treatment
- On average, during a clinic they will find 2-6 new cases of syphilis each time
- Communicate with jails and county for follow-up
  - PCN injections or wound care, or meds to be delivered

Native Health Resources

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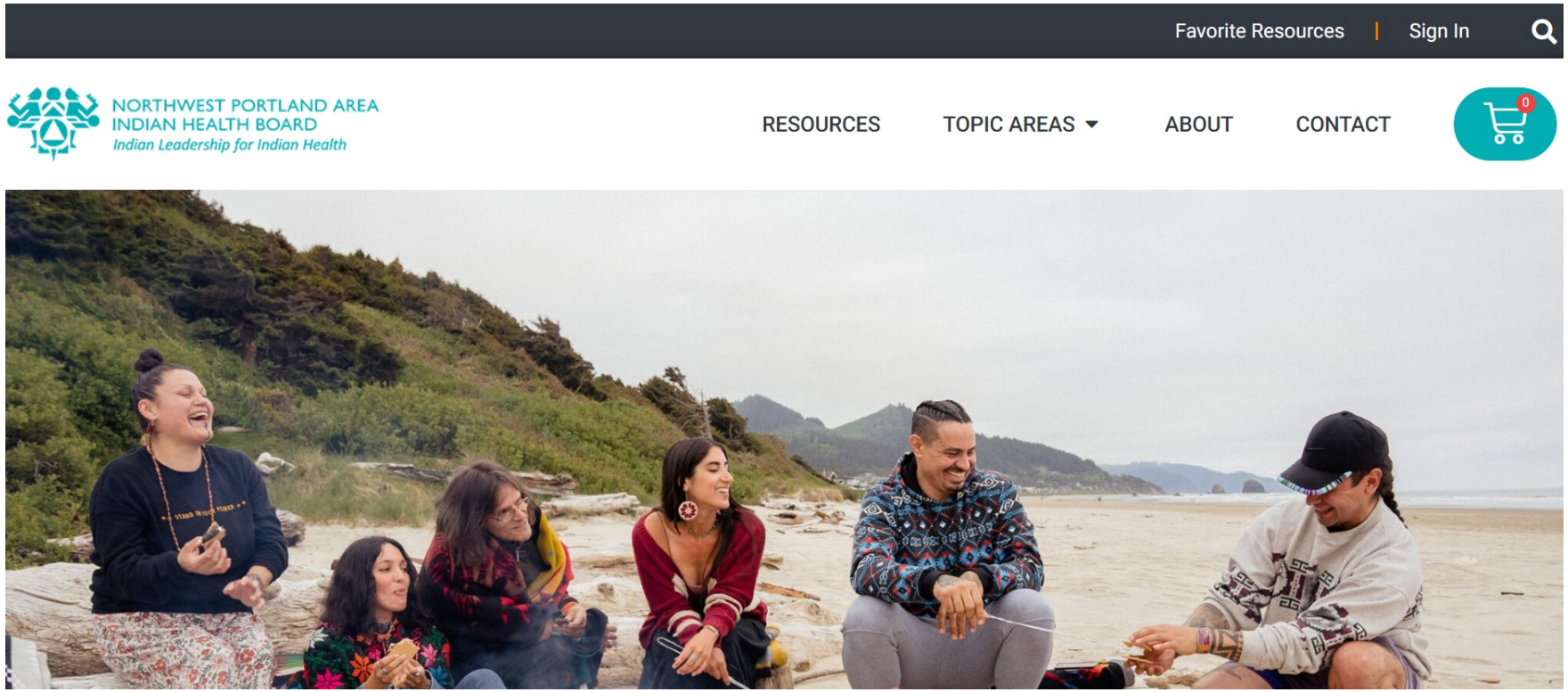

Key Takeaways

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- **Increased collaboration/partnership between Health Boards and Partner Tribes**
- **Assessment can be a helpful Quality Improvement (QI) tool to support improved processes for syndemic-related activities**
- **Opportunity to share best practices**
- **Supports Indigi-HAS initiatives**

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Thank you!

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Initial Findings

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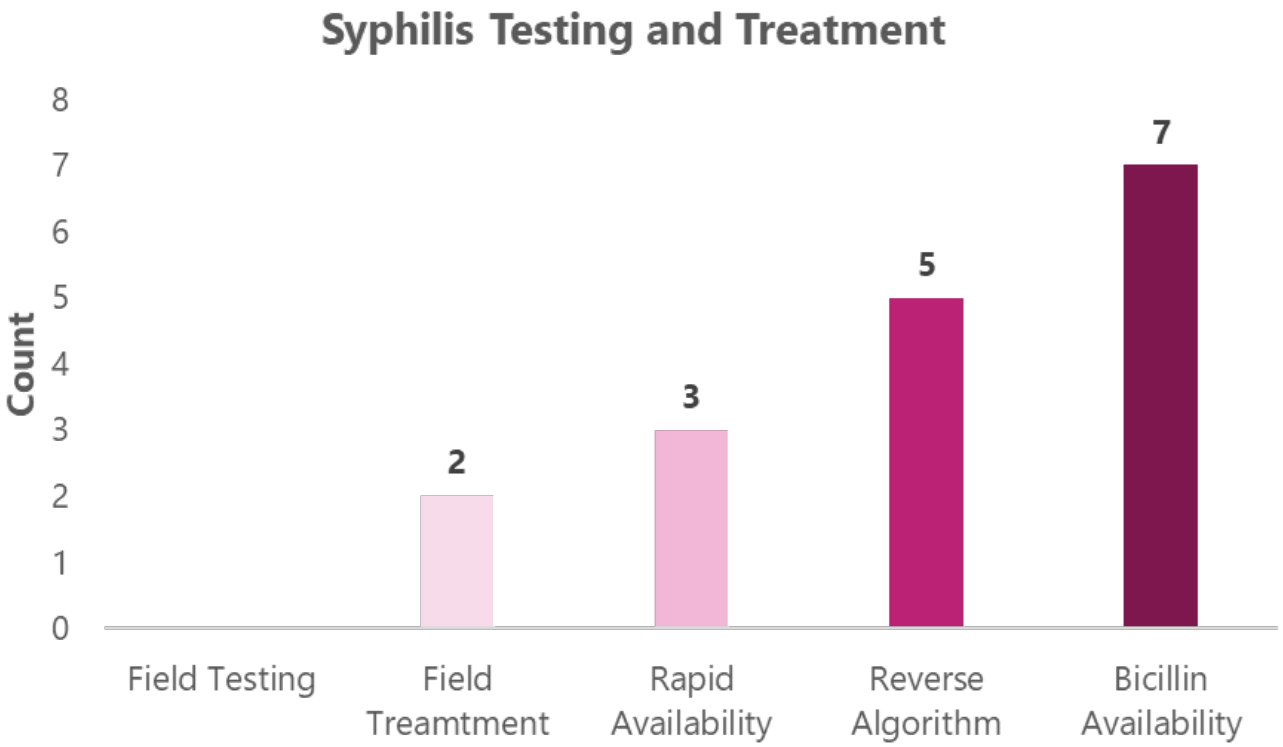

Turnaround time for test results varied between two days and ten days. Nearly half reported results took about a week (n=4).

Initial Findings

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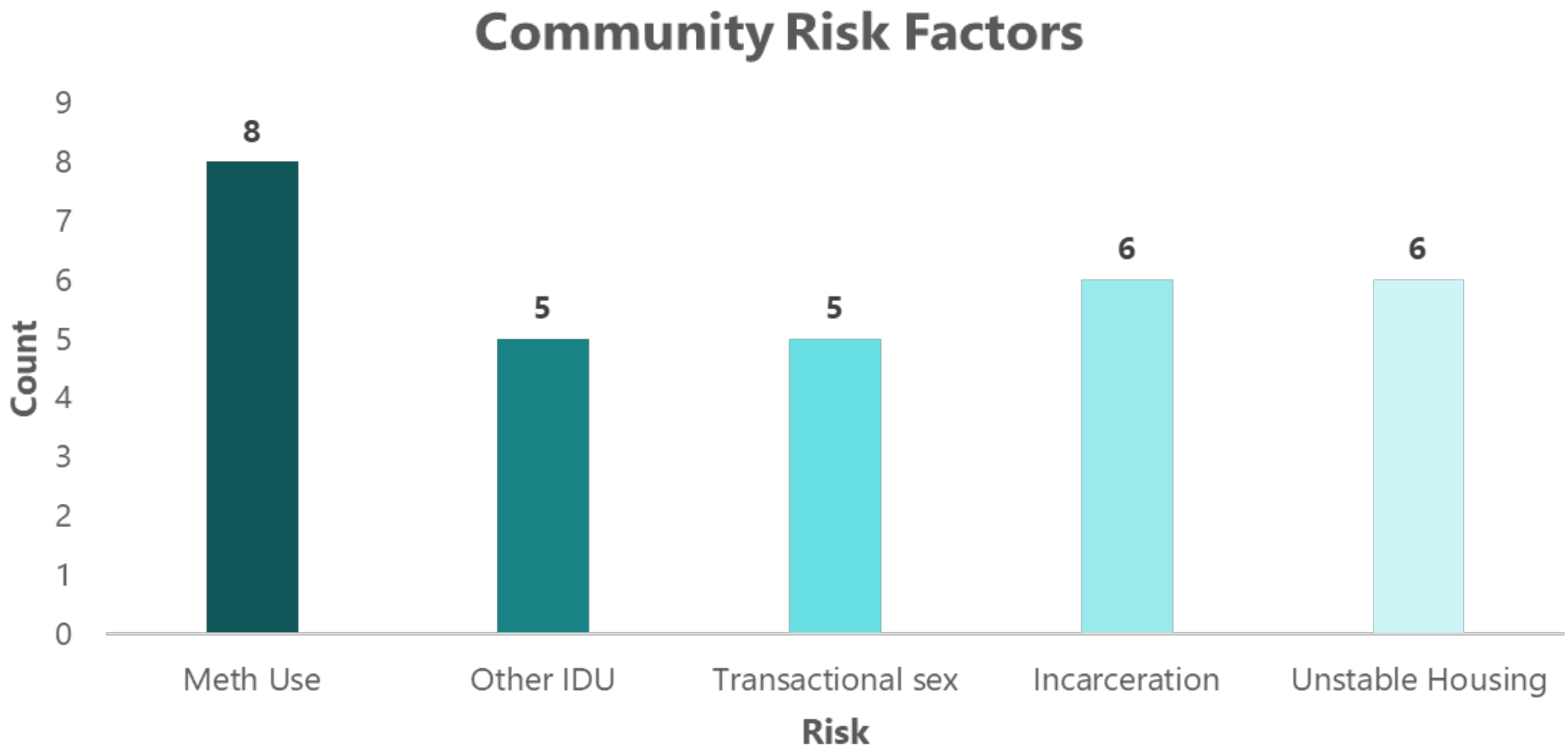

Initial Findings

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Where do pregnant persons from your site receive prenatal care?

At the clinic until 30 weeks and then referred out [to the two nearest towns/cities]

At a separate Tribal HRSA clinic

All pregnant patients are referred out to local OB/GYN practices

Initial Findings

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What barriers exist to treating syphilis in pregnancy?

Lack of communication and coordination with outside OB prenatal providers

No in-house treatment

Do not perform routine prenatal screening

If a syphilis diagnosis during pregnancy is made, **the patient is managed elsewhere**

Initial Findings

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Describe any challenges to communication/data sharing related to syphilis and EMRs:

IHS uses RPMS and iCare, but Tribal Public Health uses Greenway; **No current data sharing and EMR access agreements exist**

No EMR alerts for PHNs and lack of access across systems

RPMS **templates for syphilis do not match** or meet the requirements for state reporting databases

***Most sites interviewed used either RPMS or NextGen (n=4, n =4, respectively)**

Initial Findings

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Barriers to screening, treatment, and taking a sexual history

Geographic factors

Social factors

Admin factors

Training Needs

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