Congenital Syphilis

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IDAHO DEPARTMENT OF HEALTH & WELFARE

Objectives

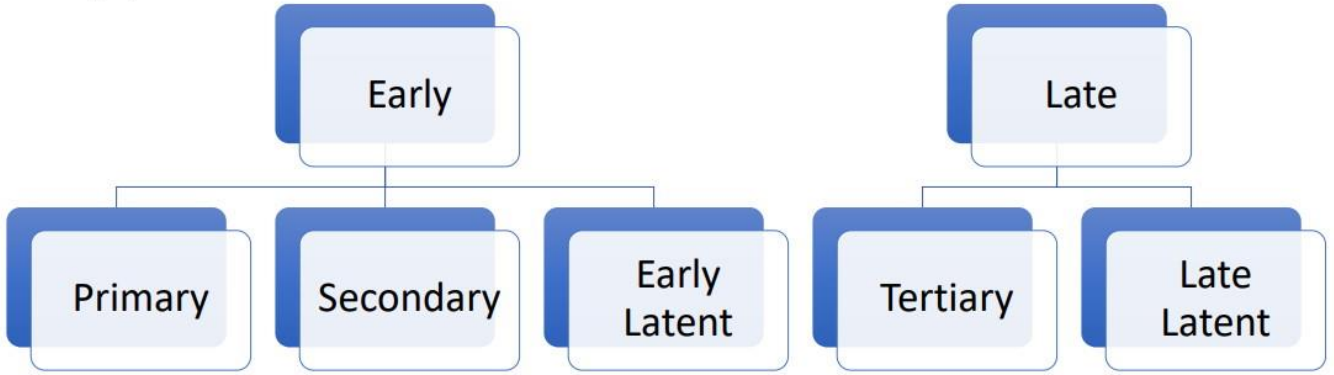
- Understand why Congenital Syphilis is a Hot Topic
- Understand the basics of Syphilis
- Review Idaho and national trends and recommendations
- Discuss prevention opportunities

Syphilis 101

- Sexually transmitted infection caused by bacteria (Treponema pallidum) that develops in stages.
- It is spread by direct contact with bacteria (commonly from a sore).
  - Spread by skin-to-skin contact, not casual contact or contact with an object.
  - Can be transmitted from mother to fetus(Congenital Syphilis)
- 2 Tier Testing
- The Great Imitator
- Elimination efforts and plans 20 years ago, but resurgence
- Treatable & Curable

Syphilis 101 Continued - Stages

Stages of Syphilis

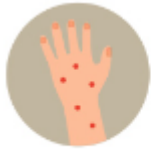


Primary	Secondary	Early Latent	Tertiary	Late Latent

• Painless chancre
• Regional lymphadenopathy
	• Fever, malaise
	• Rash (can include palms and soles)
	• Pharyngitis
	• Condyloma lata
	• Mucous patch
		• Positive serologic testing
		• No symptoms
		• Within first year of infection
			• Cardiovascular
			  • Aortitis, thoracic aortic aneurysm, arteritis
			• Gummatous
			  • Nodular lesions in bone, skin, etc.
				• Positive serologic testing
				• >1 year after serologic testing
				• Time of infection unknown

Neurosyphilis				
1 month	3 months	<1 year	1-30 years	>1 year or unknown


skin ulcer


rash

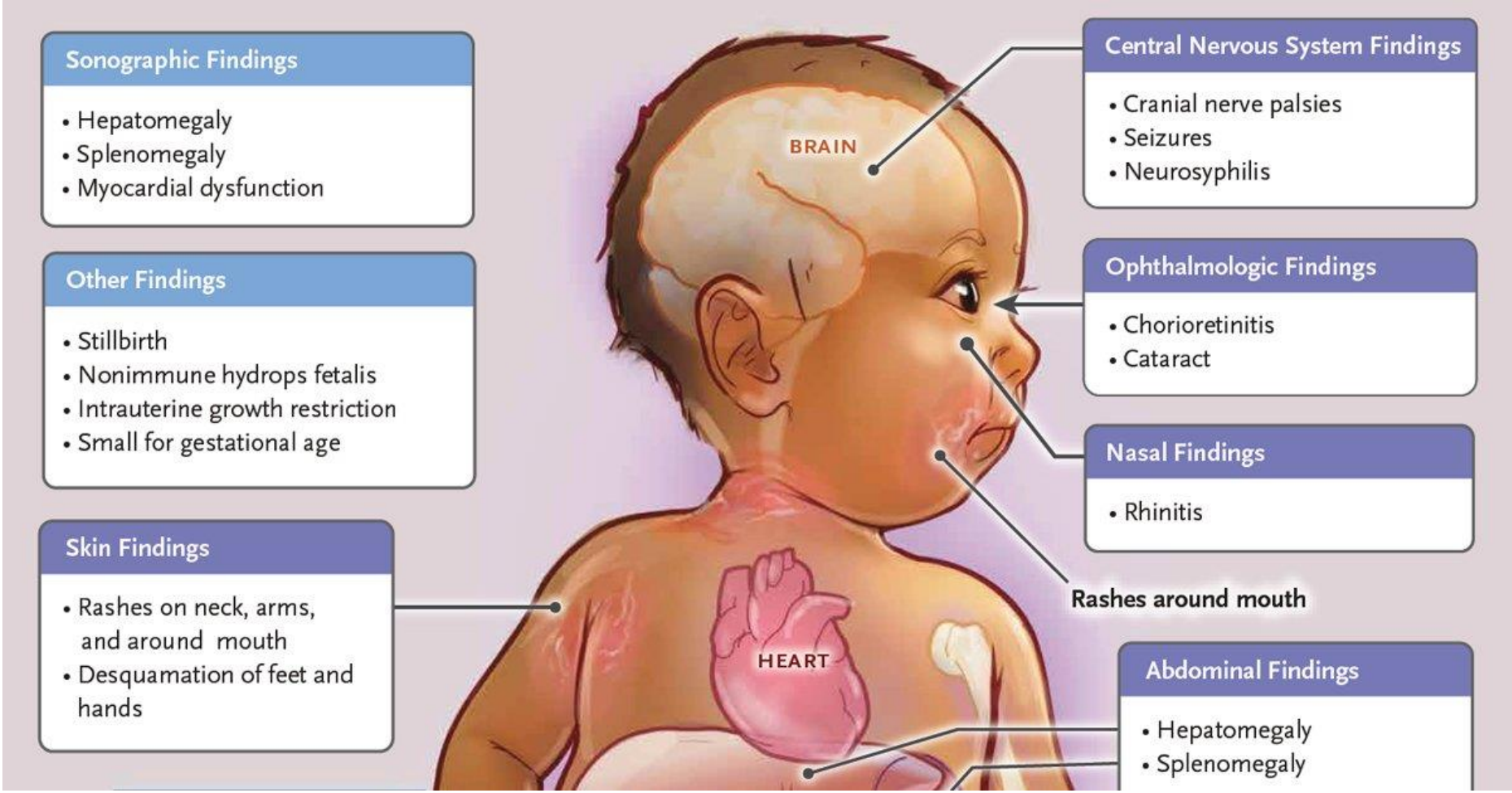

mucosal damage

Syphilis Stages - Congenital

Can occur at any stage of syphilis and during any time of pregnancy.

Can cause:

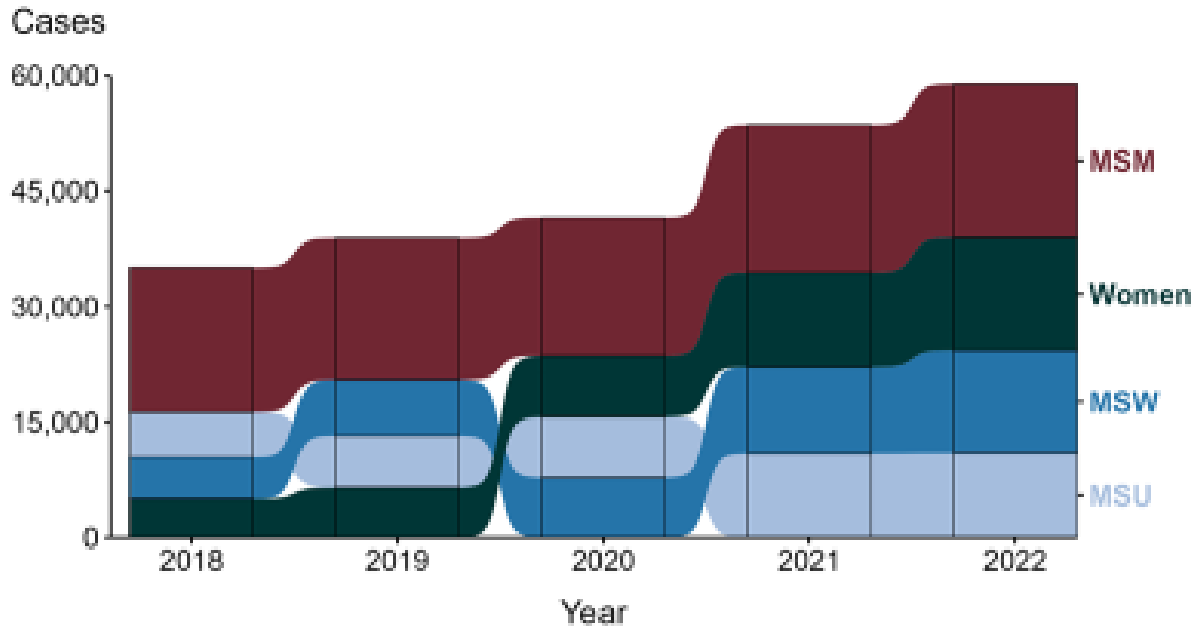
- Miscarriage
- Still Birth
- Prematurity
- Birth Defects



https://www.nejm.org/doi/full/10.1056/NEJMra2202762

National Picture

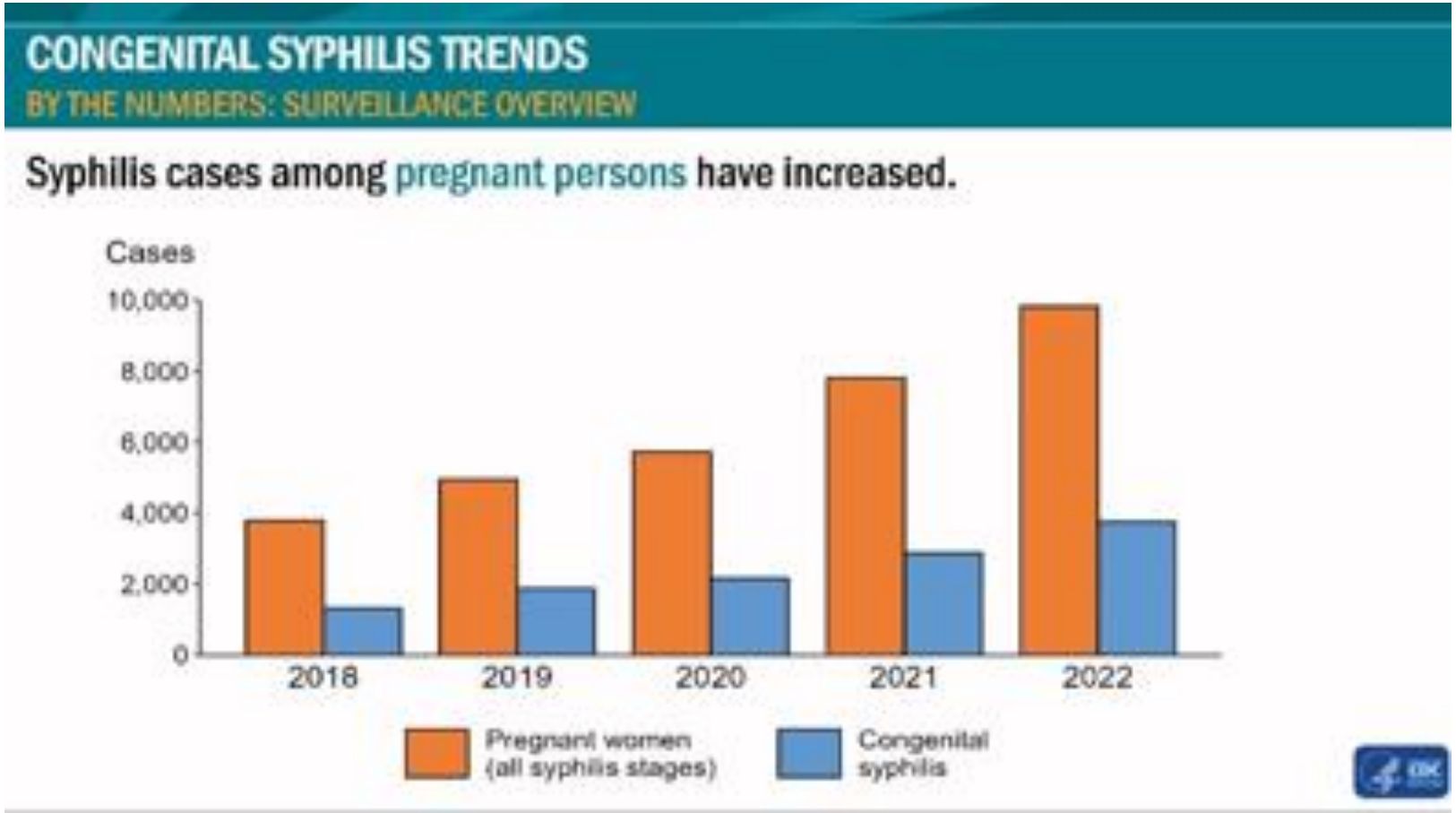
Primary and Secondary Syphilis — Reported Cases by Sex and Sex of Sex Partners, United States, 2018–2022



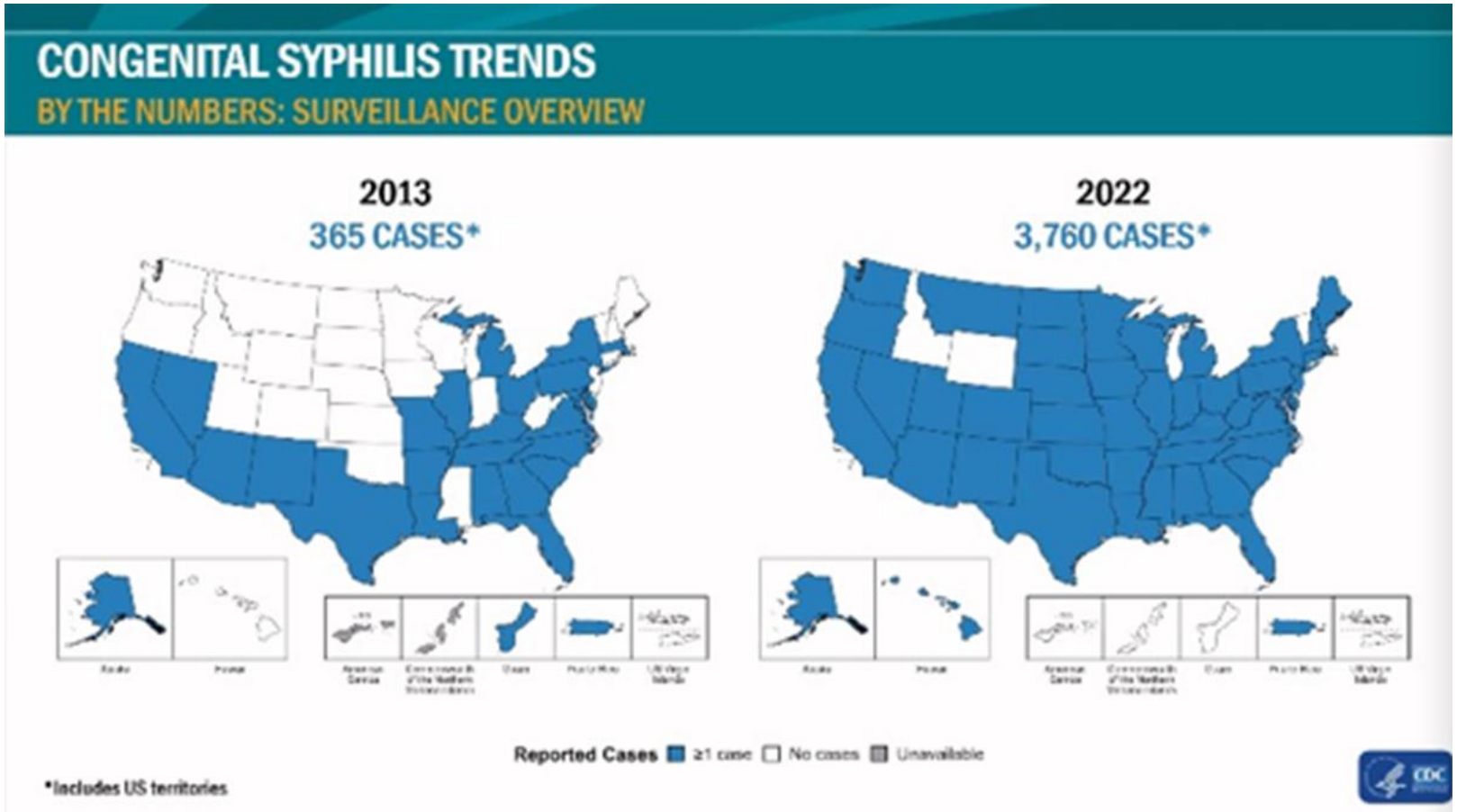
ACRONYMS: MSM = Men who have sex with men; MSU = Men with unknown sex of sex partners; MSW = Men who have sex with women only

NOTE: Over the five-year period, 0.2% of cases were missing sex and were not included.

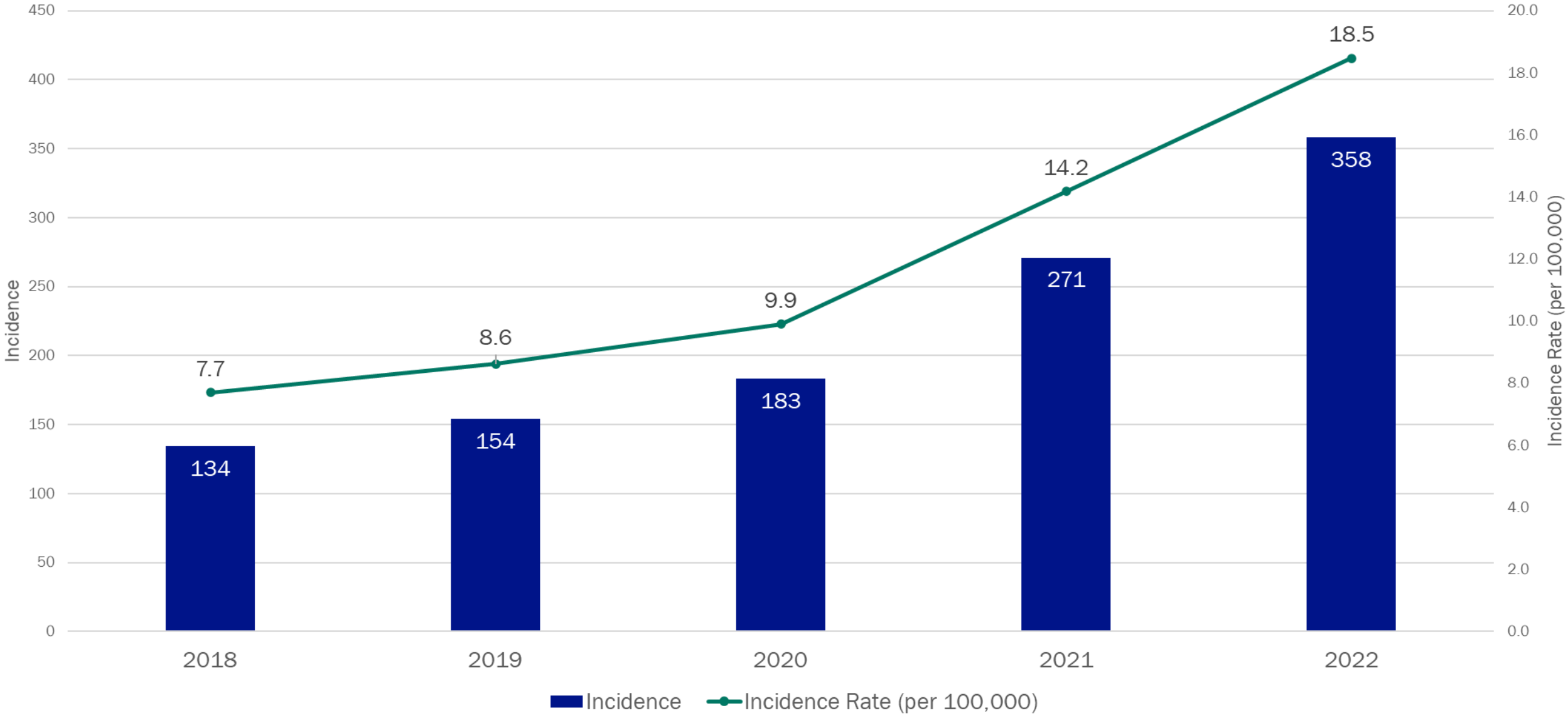
National Picture



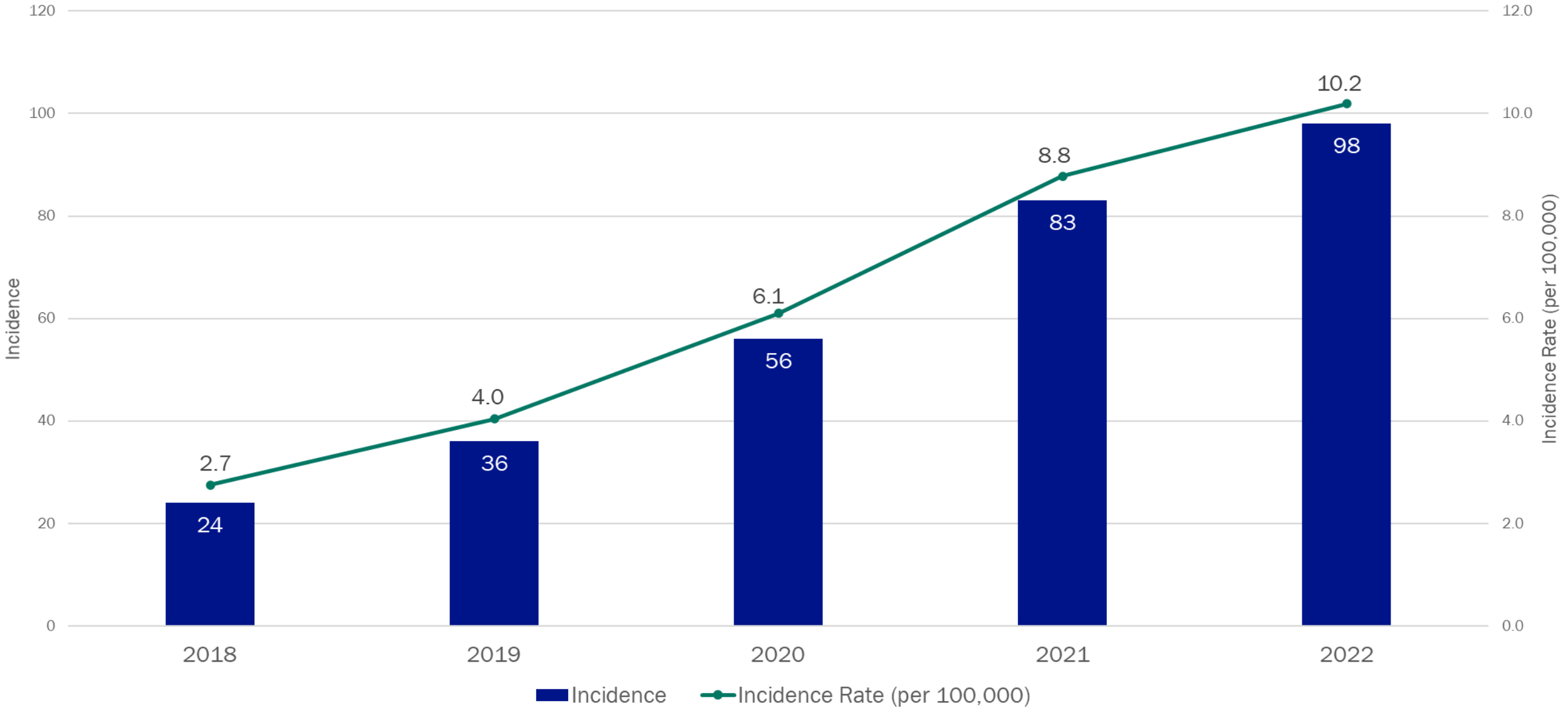
National Picture



Idaho syphilis incidence and incidence rate

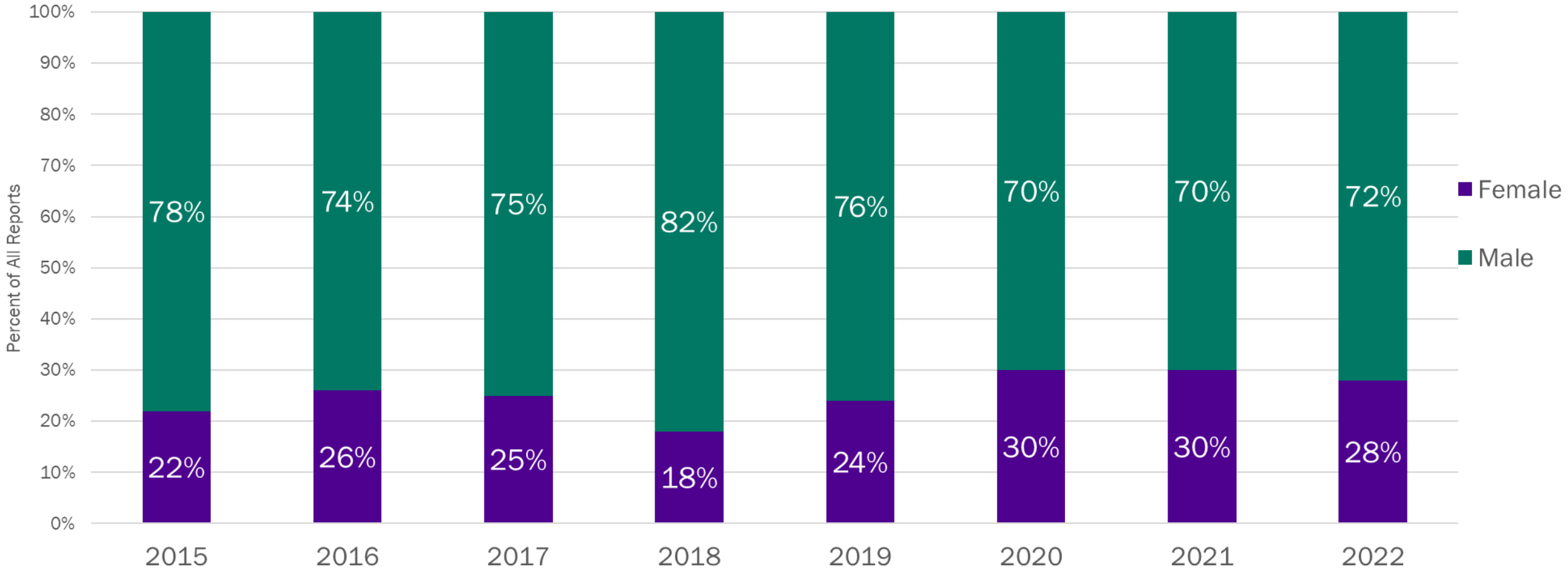


Female syphilis (all stages) incidence and incidence rate



Relative sex proportions of people with syphilis* by year**

Since 2020, almost one-third of syphilis diagnoses reported have been among females, increasing the risk of congenital syphilis*** for children of women of childbearing age.



*Syphilis stages include: primary syphilis, secondary syphilis, non-primary non secondary syphilis cases (diagnoses within a year of infection), unknown duration or late.
**Data used to compare years 2015 through 2022 use the number of reports received from January 1st – December 31st of the respective year. Data provisional and subject to change.
*** Congenital syphilis are diagnoses made in infants at birth.

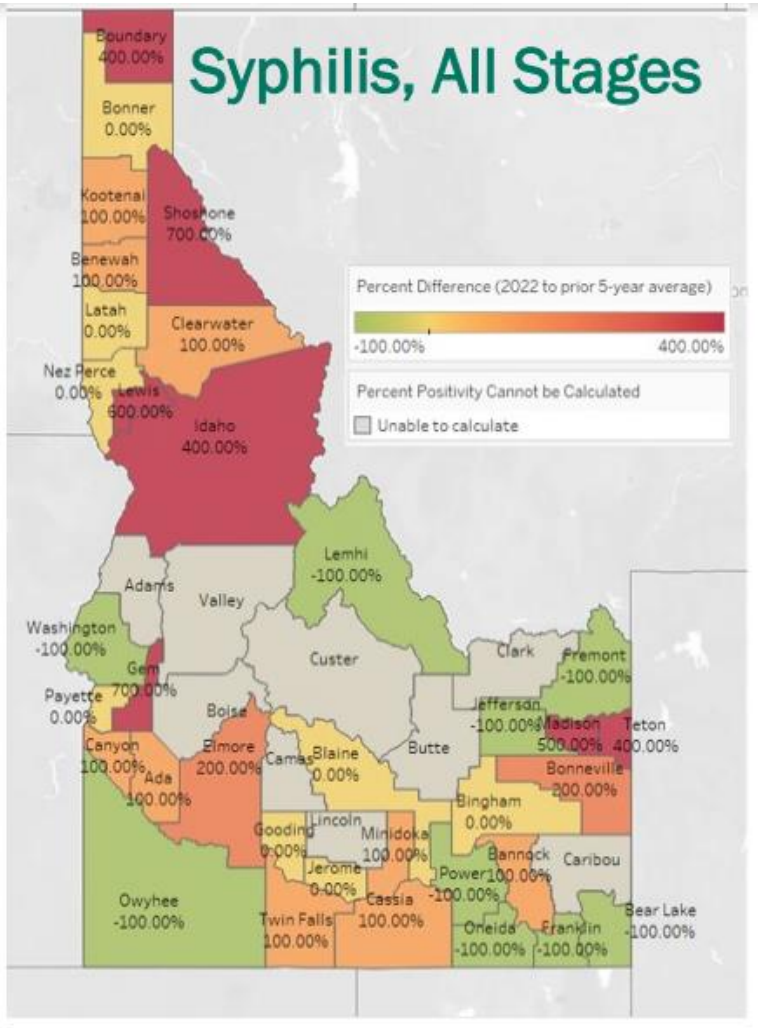
Percent change 2022 vs previous 5-year mean (2017-2021)

Incidence of syphilis, all stages increased in 52% (n=23) of Idaho counties *(2022 vs. 2017-2021 mean)*.

Incidence decreased in 27% (n=12) of counties.

Eight counties had no cases reported over the previous 5-year period (2017-2021).

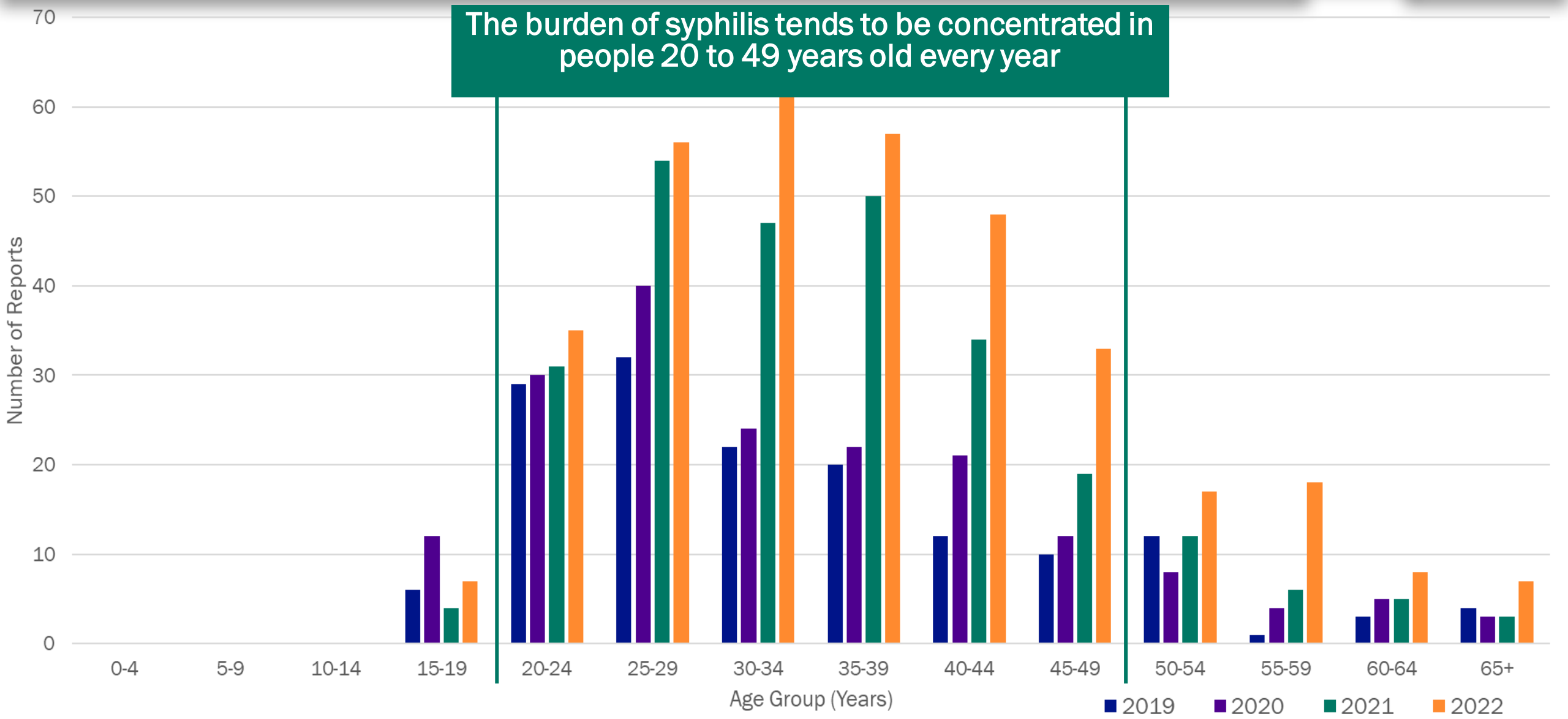
The regions with largest increases among multiple counties include northern and eastern Idaho as well as the Treasure Valley.



Counties with reports of early syphilis where percent change cannot be calculated include Adams (n=0), Boise (n=2), Butte (n=1), Camas (n=0), Caribou (n=0), Clark (n=0), Custer (n=0), Lincoln (n=0)

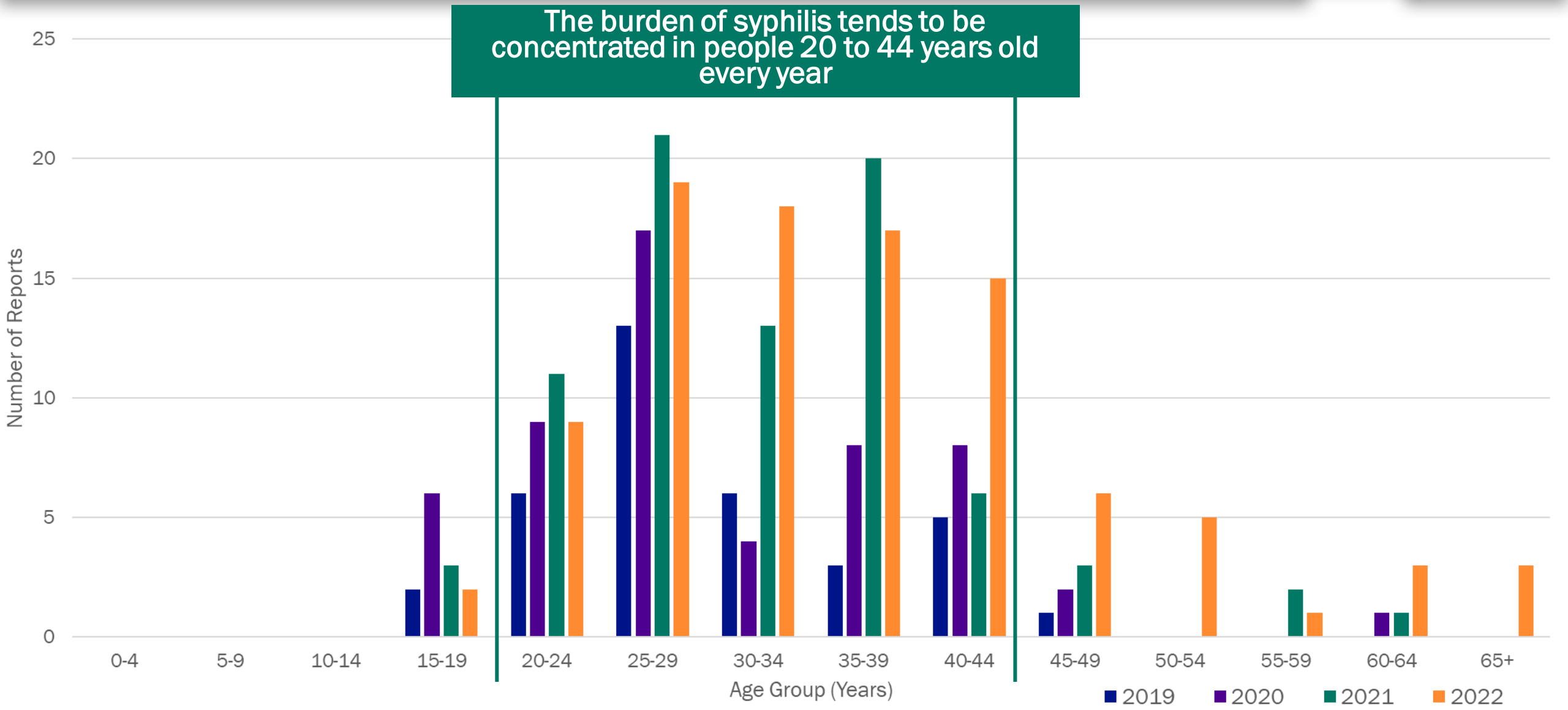
*Data are provisional and subject to change. Percent change was calculated by comparing 2022 incidence to the most recent 5-year average annual incidence.

Syphilis (all stages) incidence by age group*



*Data are provisional and subject to change.

Female syphilis (all stages) incidence by age group*



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Screening Recommendations

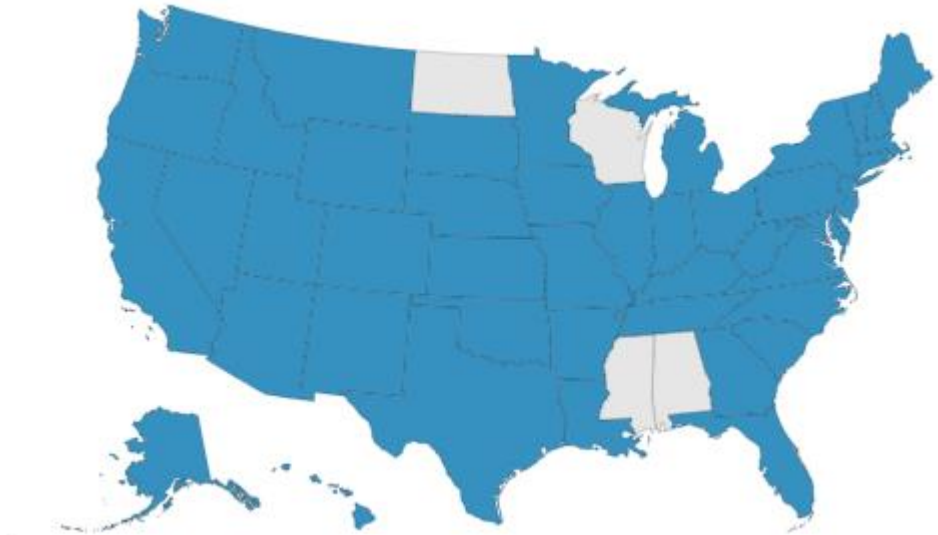
CDC

U.S. Preventive Services TASK FORCE

ACOG

U.S. Department of Health and Human Services

Enhancing the health and well-being of all Americans



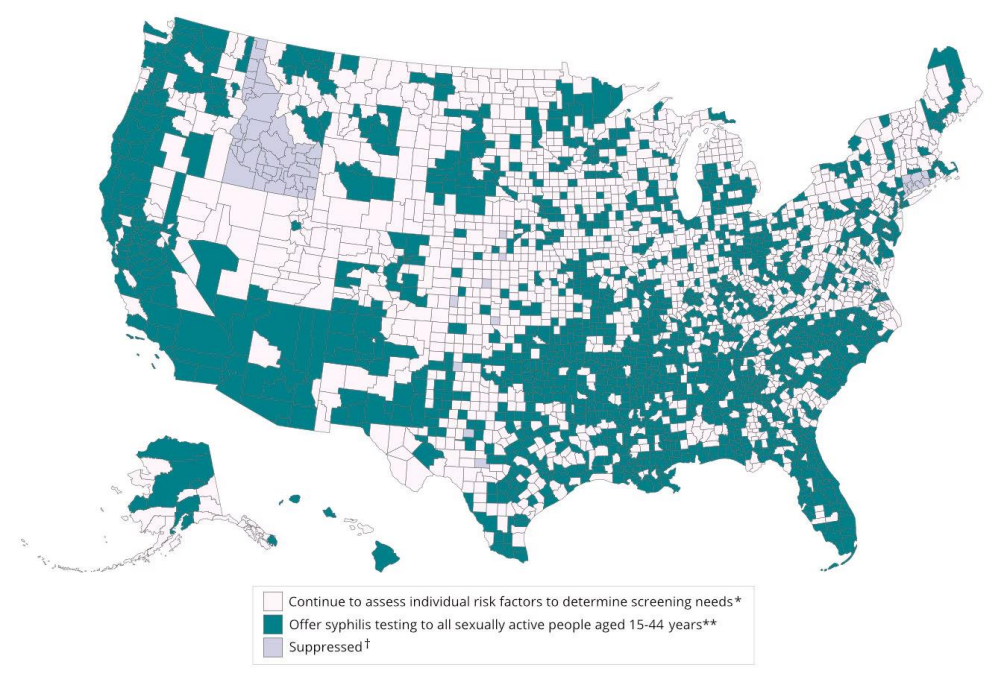
Individual State Regulations

CDC Screening Recommendations

CDC recommends screening all pregnant people at least once during their pregnancy and taking an individual, risk-based approach to syphilis screening for others. For many sexually active people, the most significant risk factor for syphilis is living in a county with high rates of syphilis. However, the threshold for high rates of syphilis is not currently defined. Healthcare providers can use primary & secondary syphilis rates in their counties to better direct their syphilis screening efforts.

The county-level map can be an important tool for providers as they consider their syphilis screening efforts.

Considering geographic risk can help reduce stigma and bias in syphilis screening.



https://www.cdc.gov/nchhstp/atlas/syphilis/index.html.

ACOG 2024 Update

The American College of Obstetricians and Gynecologists (ACOG) continues to endorse the Centers for Disease Control and Prevention (CDC) Sexually Transmitted Infection Treatment Guidelines, 2021. However, in the context of the rapidly increasing rates of congenital syphilis, obstetrician–gynecologists and other obstetric care professionals should screen all pregnant individuals serologically for syphilis at the first prenatal care visit, followed by universal rescreening during the third trimester and at birth, ***rather than use a risk-based approach to testing.***

https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2024/04/screening-for-syphilis-in-pregnancy

Idaho Screening Requirements

TITLE 39

HEALTH AND SAFETY

CHAPTER 10

PREVENTION OF CONGENITAL SYPHILIS

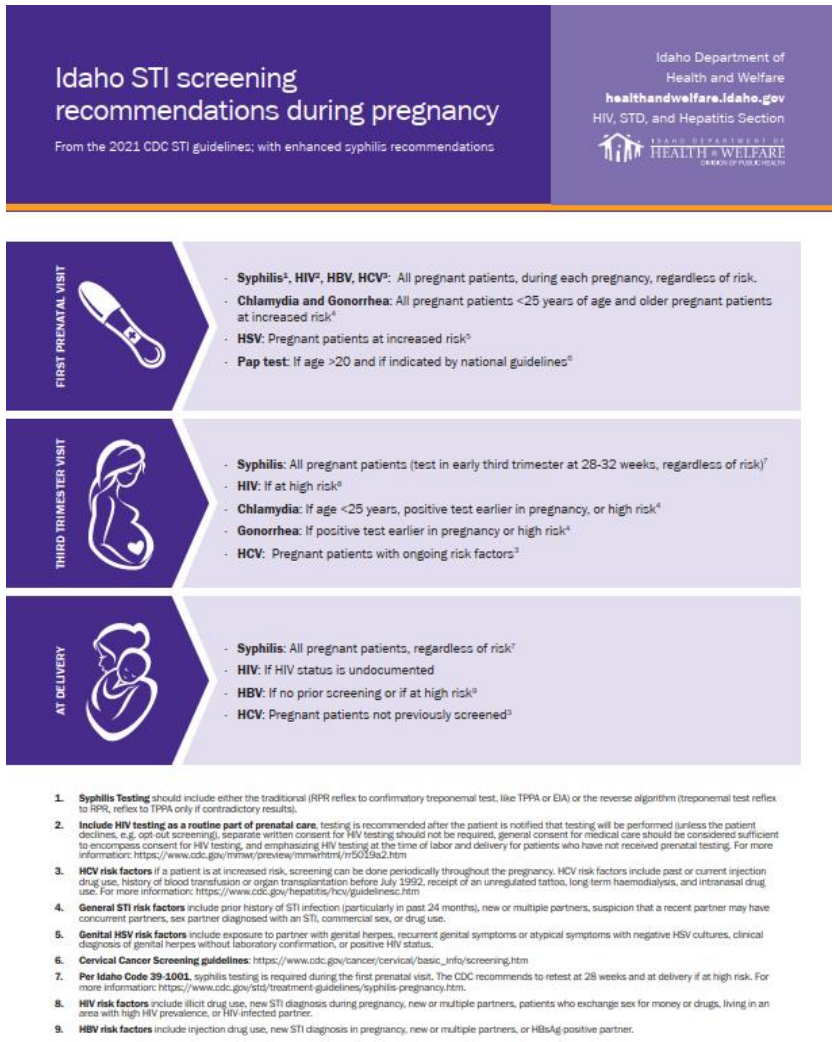
39-1001. SEROLOGICAL TEST OF PREGNANT OR RECENTLY-DELIVERED WOMEN. Every licensed physician attending a pregnant woman for a condition relating to her pregnancy, or at delivery, or after delivery for a condition relating to her pregnancy, shall in the case of every woman so attended, take or cause to be taken a sample of blood of such woman at the time of first examination or within fifteen (15) days thereafter, and shall submit such sample to the laboratory of the department of health and welfare or to a laboratory approved by the director of the department, for a standard serological test for syphilis. In submitting such sample to the laboratory, the physician shall specify whether it is for a prenatal test or a test following recent delivery. The laboratory of the department of health and welfare shall analyze such sample upon the request of any licensed physician and may collect a fee for the performance of such analyses.

History:

[39-1001, added 1943, ch. 26, sec. 1, p. 53; am. 1970, ch. 26, sec. 1, p. 52; am. 1974, ch. 23, sec. 109, p. 633.]

https://legislature.idaho.gov/statutesrules/idstat/title39/t39ch10/sect39-1001/

Idaho Resources



Idaho STI screening recommendations during pregnancy

From the 2021 CDC STI guidelines; with enhanced syphilis recommendations

Idaho Department of Health and Welfare
healthandwelfare.idaho.gov
HIV, STD, and Hepatitis Section

FIRST PRENATAL VISIT

- **Syphilis**[1], **HIV**[2], **HBV, HCV**[3]: All pregnant patients, during each pregnancy, regardless of risk.
- **Chlamydia and Gonorrhea**: All pregnant patients <25 years of age and older pregnant patients at increased risk[4]
- **HSV**: Pregnant patients at increased risk[5]
- **Pap test**: If age >20 and if indicated by national guidelines[6]

THIRD TRIMESTER VISIT

- **Syphilis**: All pregnant patients (test in early third trimester at 28-32 weeks, regardless of risk)[7]
- **HIV**: If at high risk[8]
- **Chlamydia**: If age <25 years, positive test earlier in pregnancy, or high risk[4]
- **Gonorrhea**: If positive test earlier in pregnancy or high risk[4]
- **HCV**: Pregnant patients with ongoing risk factors[3]

AT DELIVERY

- **Syphilis**: All pregnant patients, regardless of risk[7]
- **HIV**: If HIV status is undocumented
- **HBV**: If no prior screening or if at high risk[9]
- **HCV**: Pregnant patients not previously screened[3]

1. **Syphilis Testing** should include either the traditional (RPR reflex to confirmatory treponemal test, like TPPA or EIA) or the reverse algorithm (treponemal test reflex to RPR, reflex to TPPA only if contradictory results).
2. **Include HIV testing as a routine part of prenatal care**, testing is recommended after the patient is notified that testing will be performed (unless the patient declines, e.g. opt-out screening), separate written consent for HIV testing should not be required, general consent for medical care should be considered sufficient to encompass consent for HIV testing, and emphasizing HIV testing at the time of labor and delivery for patients who have not received prenatal testing. For more information: https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5019a2.htm
3. **HCV risk factors** if a patient is at increased risk, screening can be done periodically throughout the pregnancy. HCV risk factors include past or current injection drug use, history of blood transfusion or organ transplantation before July 1992, receipt of an unregulated tattoo, long-term haemodialysis, and intranasal drug use. For more information: https://www.cdc.gov/hepatitis/hcv/guidelinesc.htm
4. **General STI risk factors** include prior history of STI infection (particularly in past 24 months), new or multiple partners, suspicion that a recent partner may have concurrent partners, sex partner diagnosed with an STI, commercial sex, or drug use.
5. **Genital HSV risk factors** include exposure to partner with genital herpes, recurrent genital symptoms or atypical symptoms with negative HSV cultures, clinical diagnosis of genital herpes without laboratory confirmation, or positive HIV status.
6. **Cervical Cancer Screening guidelines**: https://www.cdc.gov/cancer/cervical/basic_info/screening.htm
7. **Per Idaho Code 39-1001**, syphilis testing is required during the first prenatal visit. The CDC recommends to retest at 28 weeks and at delivery if at high risk. For more information: https://www.cdc.gov/std/treatment-guidelines/syphilis-pregnancy.htm.
8. **HIV risk factors** include illicit drug use, new STI diagnosis during pregnancy, new or multiple partners, patients who exchange sex for money or drugs, living in an area with high HIV prevalence, or HIV-infected partner.
9. **HBV risk factors** include injection drug use, new STI diagnosis in pregnancy, new or multiple partners, or HBsAg-positive partner.

Idaho STI treatment recommendations during pregnancy

These treatment recommendations reflect the updates in the 2021 CDC STI Treatment Guidelines and are specific to pregnant patients. Non-pregnant patients may have different recommended regimens. See the 2021 CDC STI Treatment Guidelines for comprehensive recommendations. For STI clinical consultation, please submit your question online to the STD Clinical Consultation Network at www.stdccn.org.

INFECTION	RECOMMENDED REGIMEN	DOSE/ROUTE	ALTERNATIVE REGIMENS To be used if medical contraindication to recommended regimen
CHLAMYDIA (CT)	Azithromycin	1g po once	Amoxicillin 500mg po tid x 7 d
GONORRHEA (GC)[1]	Ceftriaxone	500mg IM once	None
PELVIC INFLAMATORY DISEASE[2]	Hospitalization and IV antimicrobials	Consult with an Infectious Disease specialist	Consult with an Infectious Disease specialist
SYPHILIS[3,4] Primary, Secondary, Early Latent[4]	Benzathine penicillin G (Bicillin L-A)	2.4 million units IM Certain populations could benefit from a second dose administered exactly 7-days later	NONE
Late Latent and Unknown Duration	Benzathine penicillin G (Bicillin L-A)	7.2 million units, administered as 3 doses of 2.4 million units IM each, at exactly 7-day intervals	NONE
Neurosyphilis and Ocular Syphilis (can occur regardless of stage)	Aqueous crystalline penicillin G	18-24 million units daily, administered as 3-4 million units IV q 4 hours or continuous infusion x 10-14 d	Procaine penicillin G 2.4 million units IM qd **PLUS** Probenecid 500mg po qid for 10-14 d
CHANCROID	Azithromycin **or** Ceftriaxone **or** Erythromycin	1g orally once 250mg IM once 500mg po tid x 7 d	None
LYMPHOGRANULOMA VENEREUM	Erythromycin base	500mg po qid x 21 d	None

1. Alternative therapies for uncomplicated gonococcal infections of the cervix, urethra, or rectum include either 800 mg cefixime po OR 240 mg gentamicin IM and 2 g azithromycin. Alternative treatment should ONLY be used if ceftriaxone is not available. There is no reliable alternative treatment for pharyngeal gonorrhea.
2. Pregnant patients suspected of having PID are at high risk for maternal morbidity and preterm delivery. Since current treatment regimens to fully treat PID include either doxycycline or gentamicin, both fetotoxic antimicrobials, treatment should be individualized and done in a hospital setting in consultation with an ID specialist to minimize complications as much as possible.
3. Benzathine penicillin G (generic name) is the recommended treatment for syphilis not involving the central nervous system and is available in only one long-acting formulation, which contains only benzathine penicillin G. Other combination products contain both long and short-acting penicillins and are not effective for treating syphilis.
4. Pregnant patients allergic to penicillin should be desensitized and treated with penicillin. There are no alternatives. **Pregnant patients who miss any dose of therapy (doses spaced more than 6-9 days) must repeat the full course of treatment.** For more information, see the 2021 CDC STI Treatment Guidelines for comprehensive recommendations. For STI clinical consultation, please submit your questions online to the STD Clinical Consultation Network at www.stdccn.org.

Revised by IDHW March 2023

GetHealthy IDAHO

www.gethealthy.dhw.idaho.gov/

Population Health Data

Prevention

Congenital syphilis is preventable through timely access to prenatal care, syphilis screening and treatment of pregnant women diagnosed as infected.

However, preventing syphilis in all populations reduces the risk of congenital syphilis. Reducing transmission and preventing syphilis infections lowers congenital syphilis risk.

Testing and screening are Prevention.

Common missed opportunities leading to Congenital Syphilis in our region (West) include:

- Missed testing (no testing or not tested in third trimester)
- Not receiving timely prenatal care (or no prenatal care)

Prevention

Everyone has a role in the prevention of syphilis.

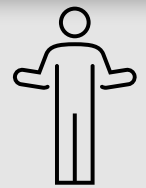
Prevention

Clinicians

- Collect a routine sexual history with all patients
- Reduce stigma and create a welcoming clinical environment.
- Test your patients for syphilis and other STIs and ensure appropriate treatment

Pregnant People

- Seek healthcare as soon as possible if you think you are pregnant.
- Ask about a syphilis test at your first visit, and get treatment as soon as possible if needed.
- Talk to your partner(s) about testing and treatment.



Individuals

- Have open and honest conversations with your clinician about sexual health.
- Find out if syphilis and other STI tests are for you.
- If you need treatment for an STI, work with your sex partners to make sure they receive treatment.

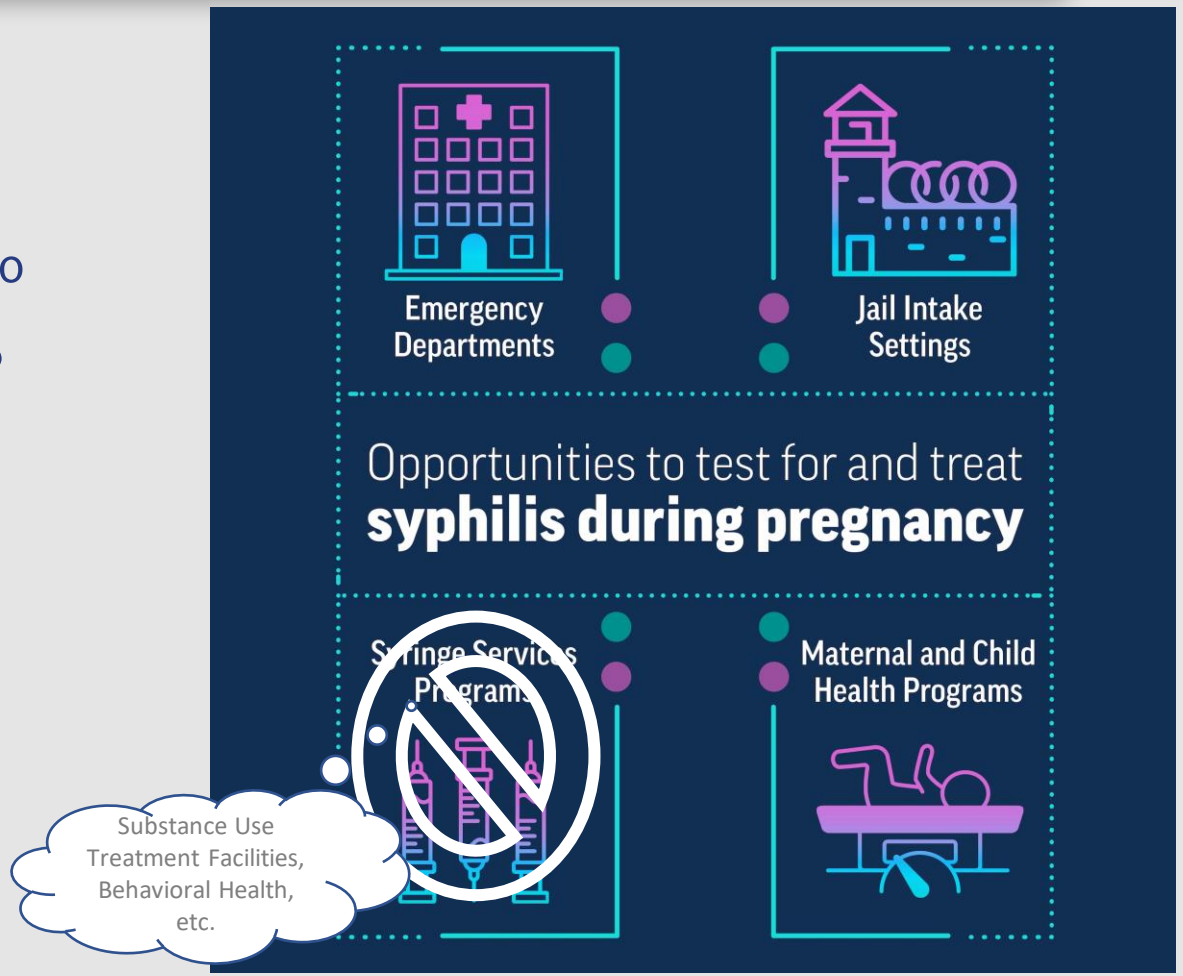
TALK. TEST. TREAT.

Prevention

All care is prenatal care.

About 38% of pregnant patients who gave birth to infants with syphilis received no prenatal care, and 37% either did not receive any testing or weren't tested early enough. Altogether, about 90% of cases of congenital syphilis could have been prevented by timely testing and adequate treatment during pregnancy, researchers reported in the CDC's *Vital Signs* report.

CDC recommends expanding rapid syphilis testing, follow-up, and treatment to help identify and treat pregnant people who might not be getting prenatal care.

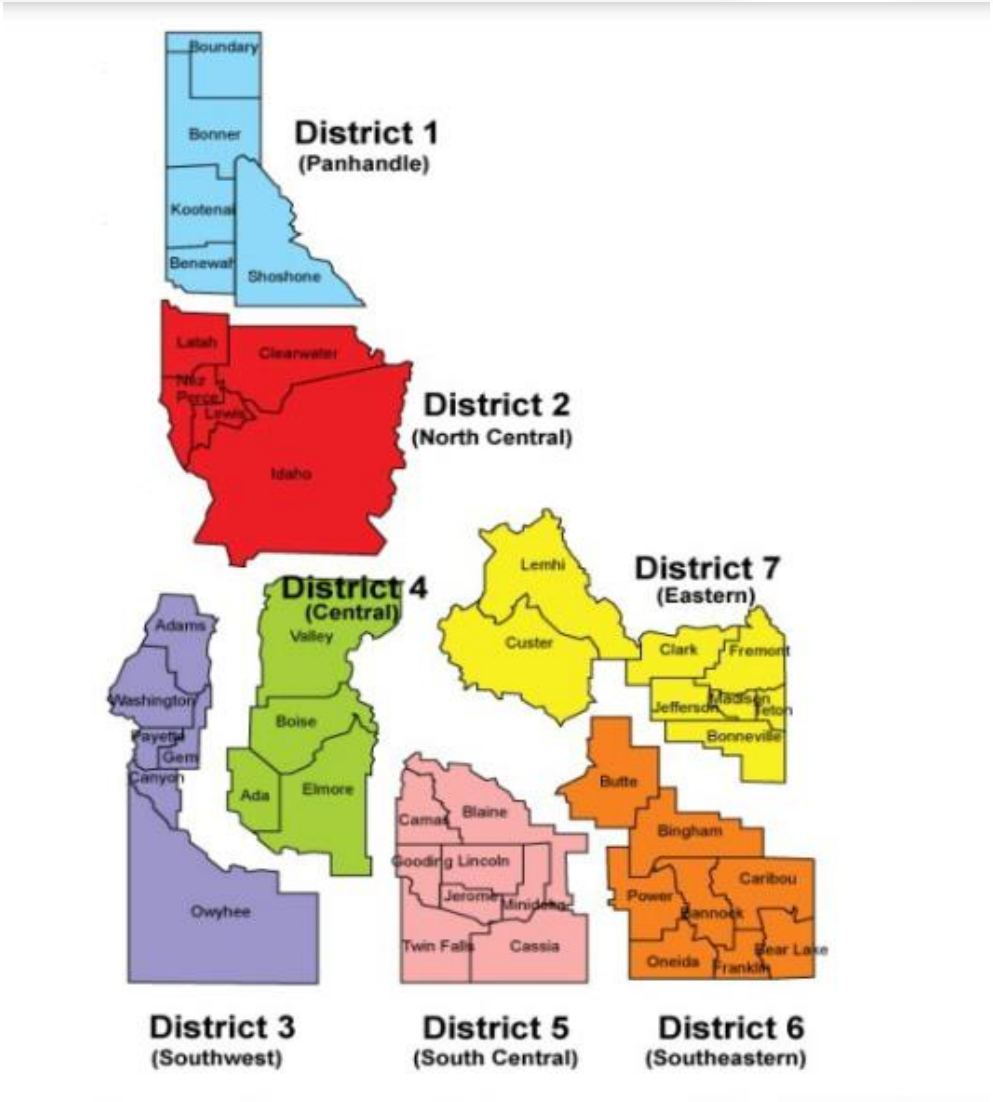


https://www.cdc.gov/vitalsigns/newborn-syphilis/index.html

Public Health Resources

Public Health is an ally.

- Reportable Disease Surveillance
- Disease Intervention & Partner Services
- Bicillin transfer (shortage)
- Community Advisory Board
- Education & Outreach
- Rapid Testing & Treatment
- Communication Resources



Thank you!

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