

Emerging Practices for Responding to the Congenital Syphilis Emergency in Oregon: Recommendations for Health Care Providers

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Adapted from the California Department of Public Health and Essential Access Health report Emerging Practices for Responding to the Congenital Syphilis Crisis in California: Findings from 2021 Strategy Sessions.



Background

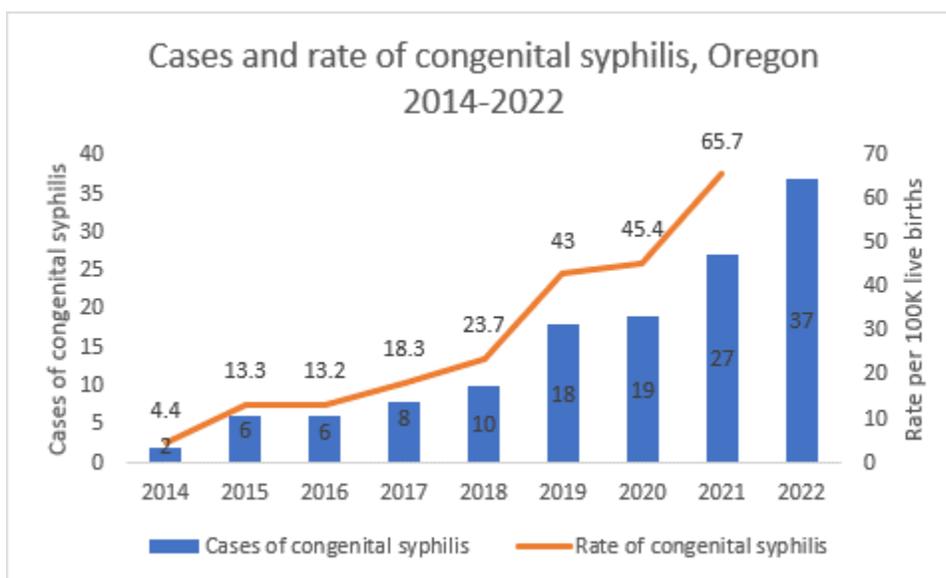
[Congenital syphilis](#) (CS) occurs when a pregnant person with untreated syphilis passes the infection to their baby during pregnancy. CS can cause miscarriage, stillbirth, prematurity, low birth weight, infant death. CS can also cause early and late clinical manifestations, including bone deformities, severe anemia, enlarged liver and spleen, jaundice, neurologic effects, meningitis, and skin rashes.

CS can be prevented if a pregnant person is appropriately treated for syphilis in time before their baby is born. Yet CS cases continue to increase in Oregon, rising 1,750 percent from two cases in 2014 to 37 cases in 2022 (Figure 1). Between 2014-2022, there were a total of 422 cases of syphilis among pregnant people in 26 Oregon counties; 133 were associated with a case of CS. In 2021, Oregon had the 9th highest rate of early syphilis (22.3 cases per 100,000 population) and the 17th highest rate of CS (66 per 100,000 live births) in the U.S.

In Oregon, 45% of pregnant people associated with a CS case between 2014-2022 received no prenatal care or no timely prenatal care (timely=at least 45 days before delivery). Less than 50% received a timely syphilis diagnosis, and only 26% initiated timely treatment. Stillbirths and infant deaths comprise 10% of Oregon's CS cases.

CS disproportionately affects pregnant people of color and pregnant people who experience housing instability, have criminal justice involvement, use drugs, and/or have a history of sexually transmitted infections. Black/African American, American Indian/Alaska Native, Native Hawaiian and Pacific Islander, and Hispanic/Latina/o/x pregnant people in Oregon are disproportionately associated with CS cases. Between 2014-2022, American Indian/Alaska Native and Native Hawaiian/Pacific Islander pregnant people had the highest rates of CS in Oregon. It is critical to understand that higher CS rates are not caused by race or ethnicity, but by intersecting impacts of systemic racism, poverty, houselessness, incarceration, substance use, and stigma. These forces reduce access to and quality of health care, including prenatal care, and other basic needs.

Figure 1.



Best Practices for Congenital Syphilis Prevention in Oregon

- Conduct universal screening for syphilis at 3 time points in pregnancy:
 1. Screen at first presentation to care
 2. Screen again at 28 weeks (early third trimester)
 - i. Bundles easily with an oral glucose tolerance test
 - ii. Leaves enough time to complete treatment before delivery
 - iii. Enables detection of initial infection or reinfection in pregnancy
 3. Screen at delivery
- Screen pregnant individuals with limited or no prenatal care for syphilis at any presentation to care, especially in emergency department/urgent care, drug treatment, or carceral settings. Treat empirically if positive or if the individual has symptoms of primary or secondary syphilis.
- Verify pregnancy status of all pregnancy-capable individuals with syphilis and initiate treatment without delay if pregnant.
- Follow the recommendations in the [2021 CDC STI Treatment Guidelines](#) for evaluation and treatment of syphilis among adults and infants/children.

Additional Recommendations

1. Increase Access to Care

Reducing Barriers

- Educate patients on syphilis and congenital syphilis prevention and make related health education materials available to patients. Find examples of health education materials created by the [CDC](#), [March of Dimes](#), and the [Northwest Portland Area Indian Health Board](#). In addition, the [National Coalition of STD Directors](#) has compiled examples of patient education materials from across the U.S.
- Ensure all materials on syphilis and congenital syphilis are written at or below 5th grade reading level and are culturally and linguistically relevant to patient population.
- Create a non-judgmental care environment that reflects the communities you serve and meets patients where they are regardless of racial or ethnic background, substance use, housing status, number of partners, or any other factor.
- Evaluate clinic forms for address and identification requirements that may be a barrier to undocumented patients or patients experiencing houselessness.
- Become familiar with [Citizenship Waived Medical Plus \(CWM Plus\) \(Spanish\)](#) availability for pregnant adults who do not meet citizenship requirements.
- Consider increasing access to care through mobile testing units, special clinic times for people experiencing houselessness, same-day and low barrier appointments, and telehealth options.
- Implement equitable drug testing policies for patients in prenatal care or for pregnant patients seen outside of the prenatal care setting.
- Treat every health care visit with a pregnant person as a prenatal visit, regardless of the location.
- Consider offering incentives for accessing care, providing transportation stipends (e.g., transit passes, gas cards, transportation services), and partnering with community-based organizations

(e.g., harm reduction, peer navigators, services for people experiencing houselessness) to accompany patients to appointments.

- Conduct active follow up with pregnant patients who miss appointments and consider placing a notice in the electronic health record to flag patients who may have challenges returning to the clinic.

Screening

- Normalize and implement opt-out testing for syphilis.
- When a patient is receiving a blood draw in primary care, emergency care, or street medicine, run a routine HIV, hepatitis C, and syphilis test.

Treatment

- Stock, administer, and bill insurance for Bicillin L-A, and contact your local health department if you are having any challenges with treatment for syphilis, as they may have resources to assist you.

2. Improve Quality of Care

Reducing Barriers

- Consider using a standardized check out protocol in clinics to ensure patients have received all necessary testing, blood draws, and treatment before leaving.
- Promptly report cases of syphilis to the health department within one working day of diagnosis—include pregnancy status, gender of sex partners, syphilis staging, treatment, and partner information.
- Collect as much contact information on patients as possible, e.g., alternate telephone numbers, emails, social media accounts, emergency contact information, and where they reside, spend time, or access services.
- Offer resources to prevent and address intimate partner violence, particularly to patients who could become pregnant.
- Consider utilizing family centered model of care to reduce reinfection and address family-wide health concerns that may contribute to CS risk.
- Utilize peer navigators who have been pregnant and experienced houselessness, incarceration, or substance use to support current and potential patients in accessing care.
- Review harm reduction resources and offer to pregnant clients who use drugs. One resource is the [Academy of Perinatal Harm Reduction’s Pregnancy & Substance Use Harm Reduction Toolkit](#), which reviews harm reduction strategies, navigating health care and legal systems, and prenatal care tips and timeline.
- In emergency departments and urgent care clinics, run a pregnancy test for anyone who may be pregnant. If pregnant, run a STAT syphilis test and treat empirically if preliminary results are positive, especially if likelihood to return for treatment is low.

Screening

- Universally screen patients for syphilis per the [2022 Oregon STI Screening Recommendations](#).
- Take a routine sexual history at least annually that includes the five “P’s” (partners, practices, protection from STIs, past history of STIs, and pregnancy intention) with all patients who are or could become pregnant. See the [CDC’s Guide to Taking a Sexual History](#) for more information.
- Conduct pregnancy testing at the time of syphilis testing.

- Offer syphilis testing during abortion services.
- Draw blood for syphilis testing on-site at the time of prenatal visit.
- Consider bundling syphilis screening with glucose tolerance testing in the third trimester and adding a best practice alert or EHR prompt to ensure 3rd trimester syphilis screening is performed.
- Utilize STAT RPR testing at the time of delivery.
- Mandate and enforce policy requiring that maternal syphilis serostatus is obtained before an infant is discharged from the hospital.

Treatment

- Treat all patients who are or could become pregnant who report exposure to syphilis at time of testing; initiation of treatment should not be delayed while waiting on test results.
- Conduct a physical exam for all patients diagnosed with syphilis to support disease staging.
- Treat all patients who are or could become pregnant diagnosed with syphilis according to stage of disease following clinical guidelines.
- Ensure patients who are or could become pregnant who are positive for syphilis complete treatment by returning to clinic or accessing treatment elsewhere.
- Prioritize partner treatment to reduce reinfection.

3. Enhance Provider Education

- Stay up to date on syphilis and congenital syphilis trends in your area by monitoring [Oregon's data reports](#). The Oregon Health Authority maintains publicly available dashboards with [weekly](#) statewide data and [monthly](#) statewide and county data for early syphilis and congenital syphilis.
- Seek continuing medical education opportunities on syphilis/congenital syphilis screening, diagnosis, and treatment through organizations like the [California Prevention Training Center](#) and [University of Washington STD Prevention Training Center](#).
- Seek education on symptom assessment and testing to avoid misdiagnosis.
- Ensure that syphilis and CS guides and toolkits are available on-hand for providers.
- Complete trainings on health equity, trauma informed care, and harm reduction.
- Learn about the historical experiences that create medical mistrust (e.g., experimentation, forced sterilization, medical apartheid, family separation) and recognize how they are relevant to your patient population. Black, Indigenous, Latinx, Native Hawaiian, Pacific Islander, Asian, and other people of color, people who experience houselessness, people who use drugs, people living in poverty, immigrants, and people living with mental illness have been subjected to medical trauma.

4. Build and Maintain Strong Partnerships

- Call [your local health department](#) as soon as possible when a baby is born to a birth parent with syphilis.
- Allow the local health department to access the electronic health record or provide the local health department with a direct line for medical record requests.
- Engage with community-based organizations and your local health department to raise awareness of syphilis and congenital syphilis in the community.
- Partner with community-based organizations to develop linkages to care.
- Collaborate with, support, and learn from organizations led by Black, Indigenous, Latinx, Native Hawaiian, Pacific Islander, Asian, and other people of color.

- Partner with community-based organizations who work with undocumented individuals and new arrivals, people experiencing homelessness, and people who use drugs.

Contacts and Resources

[Oregon Local Public Health Authority Directory](#): Find contact information for your local health department.

[CDC 2021 STI Treatment Guidelines](#): Provides current evidence-based prevention, diagnostic and treatment recommendations intended to be a source for clinical guidance. Healthcare providers should always assess patients based on their clinical circumstances and local burden.

[STD Clinical Consultation Network](#): The STD Clinical Consultation Network is a free clinical consultation service provided by expert faculty at regional STD Prevention Training Centers, as part of the National Network of STD Clinical Prevention Training Centers. The STD clinical consultation service is available only to licensed healthcare professionals and STD program staff.

[Oregon AETC Peer-to-Peer Provider Consultation](#): The Oregon AETC offers one-on-one education and support to physicians, advanced practitioners, and pharmacists practicing in the state of Oregon. Faculty are trained to distill the latest clinical evidence and guidelines so that you can focus on delivering the highest quality patient care. Check-ins are offered at no cost and content is always free of commercial bias.

[Bulk Provider Education Materials](#): Oregon-specific syphilis and CS evaluation and management tools, STI screening recommendation resources, and STI treatment pocket guides are available to order in bulk through Oregon AETC.

[Indian Country ECHO Syphilis Resources](#): Training presentations and clinician resources developed by the Northwest Portland Area Indian Health Board and other agencies, directed at sites serving Indigenous communities.

[Project Nurture](#): Project Nurture provides prenatal care, inpatient maternity care, and postpartum care for women who struggle with addictions as well as pediatric care for their infants. Women enrolled in Project Nurture receive outpatient addiction treatment by certified alcohol and drug counselors and receive medications for opioid use disorder, including methadone or buprenorphine, alongside their pregnancy care. This program provides comprehensive evidence-based care both for both the pregnancy and addiction, improving maternal and infant outcomes.

Prenatal Provider Survey Summary

A survey of the perceptions, screening practices, and management of syphilis in pregnancy by prenatal care providers in Oregon.

In the context of increasing cases of congenital syphilis in Oregon, the Oregon Health Authority STD Program endeavored to understand prenatal care providers' knowledge of syphilis trends among people who can become pregnant, screening practices, comfort with syphilis serologic test interpretation, and management of pregnant patients with syphilis.

In early 2022, we distributed a short anonymous [survey](#) to prenatal care providers across Oregon through the Health Alert Network (HAN) system and through mailing lists and publications of the Oregon Perinatal Collaborative, the Oregon Academy of Family Physicians, the Oregon Midwifery Council, the Oregon Medical Board, and the Oregon State Nursing Board. The survey was open for 3 months. We present a descriptive analysis of the results of the survey.

We received 96 responses from prenatal care providers (Table 1). Most providers were trained in family medicine (41%), followed by obstetrics/gynecology (OB/GYN) or maternal-fetal medicine (MFM, 31%), midwifery (15%), and other training including advanced practice nursing, internal medicine, emergency medicine, and public health (14%). About half had been in practice for over 10 years and reported seeing up to 50 pregnant patients per year. Sixty-five percent reported practicing in the Portland Tri-County Area, including Multnomah, Washington, and Clackamas counties in Oregon. Two respondents answered "USA" to the question about their county of practice; they are excluded from results based on practice geography since their counties of practice are unknown but included in all other analyses.

Perceptions of syphilis trends and risk among people who can become pregnant

Accurately reflecting the epidemiology of syphilis in Oregon, 52/96 (54%) respondents perceived syphilis to be increasing dramatically among people who can become pregnant. One-third perceived syphilis to be increasing modestly while 14% perceived syphilis to be stable. Midwives were more likely than other providers to perceive syphilis to be increasing dramatically among people who can become pregnant (Figure 2). Providers practicing in the Portland tri-county area were more likely to perceive syphilis to be increasing dramatically compared to those practicing outside the Portland tri-county area (60% v 44%, Figure 3).

Of the 96 respondents, 37 (39%) reported that 30% or more of their patient population had at least one risk factor for syphilis. Risk factors include: younger age; belonging to a racial or ethnic group experiencing inequities in syphilis; multiple or new sex partners; prior sexually transmitted infection (STI) or hepatitis C virus (HCV) infection; houselessness or unstable housing; criminal justice involvement; substance use; and/or partners with multiple partners, unstable housing, criminal justice involvement or substance use. Family medicine providers (Figure 4) and providers practicing in the Portland tri-county area (Figure 5) were more likely to report that 30% or more of their patient population had at least one risk factor for syphilis.

Comfort with the interpretation of serologic tests for syphilis

Of the 96 respondents, 18 (19%) reported feeling very comfortable with interpreting serologic testing for syphilis. The majority (73%) reported feeling comfortable but consulted a reference or a colleague to confirm their interpretation, while 8% reported not feeling comfortable with interpreting syphilis serologies and either consulted a specialist or local public health authority (LPHA) or referred to a specialist for management. Family medicine and OB/GYN/MFM providers and midwives were similarly comfortable with interpreting syphilis serologies while those with other training were more likely to report not being comfortable with interpreting syphilis serologies (Figure 6). Providers practicing outside the Portland tri-county area were slightly more likely to report not being comfortable interpreting syphilis serologies compared to those practicing in the Portland tri-county area (Figure 7).

Screening practices and syphilis diagnosis

Ninety-six percent of the 96 respondents reported screening all pregnant patients routinely at first presentation to prenatal care. The 4% of respondents who did not were all providers with other training practicing outside the Portland tri-county area (Figures 8 and 9). Of the 96 respondents, 66 (69%) screen all patients in the early third trimester regardless of risk or prior screening while 16 (17%) do not routinely screen in the third trimester, 10 (10%) screen only if they feel that a patient is at risk, and 4 (4%) only screen if the patient had not been screened at first presentation to prenatal care. OB/GYN/MFM providers were more likely to screen routinely in the third trimester compared to providers with other training (Figure 10). Providers practicing in the Portland tri-county area were more likely to screen for syphilis routinely in the third trimester compared to providers practicing outside the Portland tri-county area (81% v 44%, Figure 11).

While 74 of the 96 (77%) respondents indicated that they experienced no barriers to syphilis screening, the most commonly cited barriers among those who did experience barriers included unclear guidelines for syphilis screening in pregnancy; that patients do not want to be screened for syphilis; that patients do not get labs drawn; uncertainty about the types of tests to order; concern about reimbursement for several syphilis screenings in pregnancy; and that patients do not show up for appointments (Table 2).

Over half of respondents (54/96) had ever diagnosed a pregnant patient with syphilis and just over a quarter (25/96) of respondents diagnosed a pregnant patient with syphilis in the prior year. Midwives were most likely to have ever diagnosed a patient with syphilis while OB/GYN/MFM providers were most likely to have diagnosed a pregnant patient with syphilis in the prior year (Figure 12). Providers practicing in the Portland tri-county area were slightly more likely to have ever diagnosed a pregnant patient with syphilis compared to those practicing outside the Portland tri-county area, but both were similarly likely to have diagnosed a pregnant patient with syphilis in the prior year (Figure 13).

Ten percent of respondents cared for a pregnant patient whose infant needed treatment for congenital syphilis. Family medicine providers were most likely to have cared for a pregnant patient whose infant needed treatment for congenital syphilis (Figure 14). Eleven percent of providers practicing in the Portland tri-county area and 9% of providers practicing outside the Portland tri-county area had ever cared for a pregnant patient whose infant needed treatment for congenital syphilis.

Partner management and interactions with local public health authorities

Of the 54 respondents who have ever diagnosed a pregnant patient with syphilis, 4 (7%) told their pregnant patients that the local public health authority would call them to help get their partners tested and treated, 10 (19%) encouraged their pregnant patients to tell their partners to get tested and treated, and 40 (74%) did both. Midwives were most likely to tell patients that the local public health authority would call them to help get partners tested and treated (Figure 15). Providers practicing in the Portland tri-county area were more likely to both encourage pregnant patients to tell their partners to get tested and treated and tell patients that the local public health authority would contact them (Figure 16).

Thirty-four of the 54 (63%) respondents who reported ever diagnosing a pregnant patient with syphilis worked with the local public health authority. OB/GYN/MFM, midwives, and providers with other training were more likely than family medicine providers to work with the local public health authority (Figure 17) while providers practicing outside the Portland tri-county area were more likely than those practicing in the Portland tri-county area to work with the local public health authority (Figure 18). Providers reported that the ways the local public health authority helped, from most common to least common, included: contacting partners for testing and treatment, arranging patient treatment at a public health clinic, arranging follow-up testing at a public health clinic, providing long-acting benzathine penicillin G (Bicillin LA) to the clinician to treat the patient in clinic, putting providers in contact with someone with expertise in syphilis diagnosis and/or treatment, and finding records of prior syphilis diagnosis and treatment (Table 3).

Management of pregnant patients with syphilis

Of the 54 respondents who had ever diagnosed a pregnant patient with syphilis, 33 (61%) managed and treated patients independently while 15 (28%) referred to an MFM specialist, 4 (7%) referred to a public health STD clinic, and 2 (4%) referred to an infectious disease specialist for management and treatment. Midwives were most likely to refer patients with syphilis for management while those practicing in the Portland tri-county area were more likely than people practicing outside the Portland tri-county area to refer patients with syphilis for management.

Of the 33 respondents who manage syphilis in pregnant patients, 1 (3%) does not order follow-up testing prior to delivery, 10 (30%) order follow-up testing less than monthly but more than once prior to delivery, 11 (33%) order follow-up testing monthly until delivery, and 11 (33%) order follow-up testing once in the third trimester if the patient was treated earlier in pregnancy (Table 4). Twenty-six respondents (79%) who manage syphilis in pregnancy use the CDC STI Treatment Guidelines and Up-to-Date or other online resource to guide management (Table 5). Eighteen (55%) and 17 (52%) consult a specialist at their institution or a local public health authority, respectively, while 6 (18%) consult a specialist outside their institution and 5 (15%) consult the Oregon Health Authority.

The three most common barriers to managing syphilis in pregnancy were that pregnant patients with syphilis do not follow-up for treatment and repeat testing (11, 33%), providers have never seen the physical exam findings of primary and secondary syphilis (8, 24%), and the clinic where they work does not stock Bicillin, the only approved treatment for syphilis in pregnancy (6, 18%; Table 6).

Figure 2.

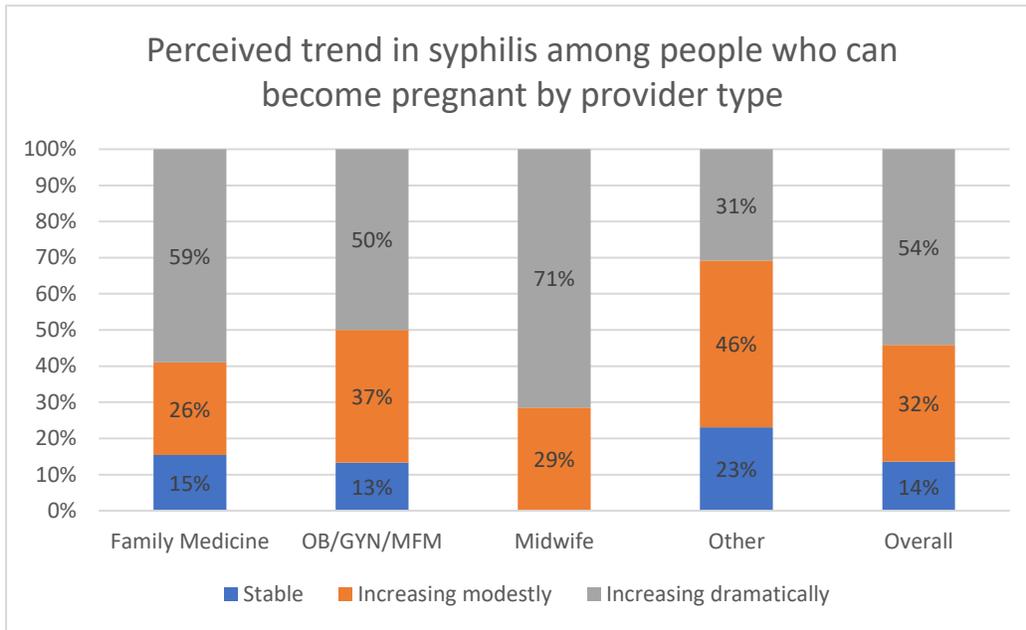


Figure 3.

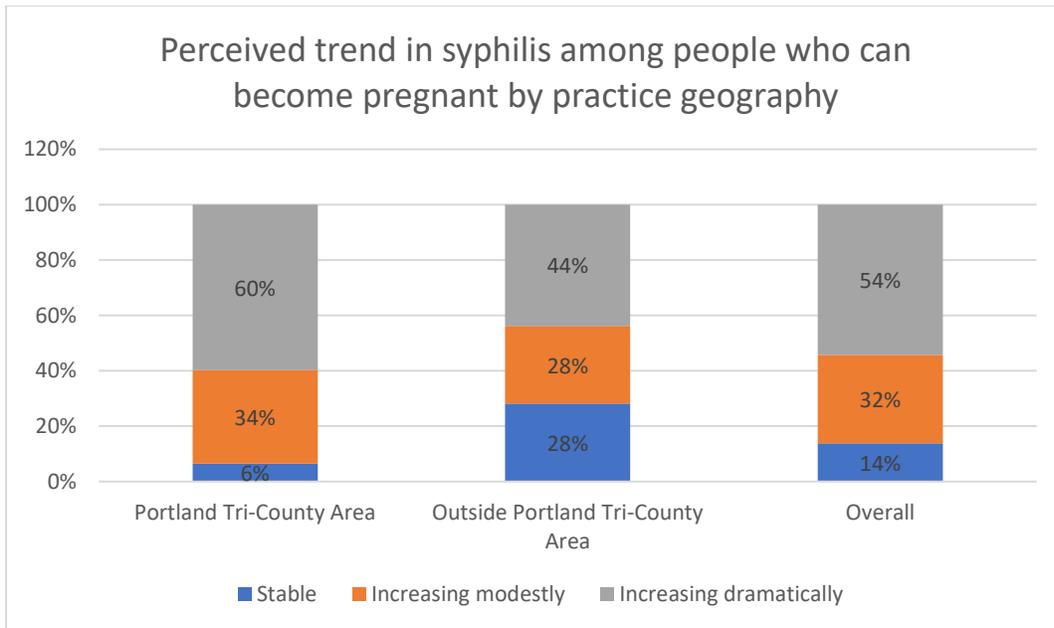


Figure 4.

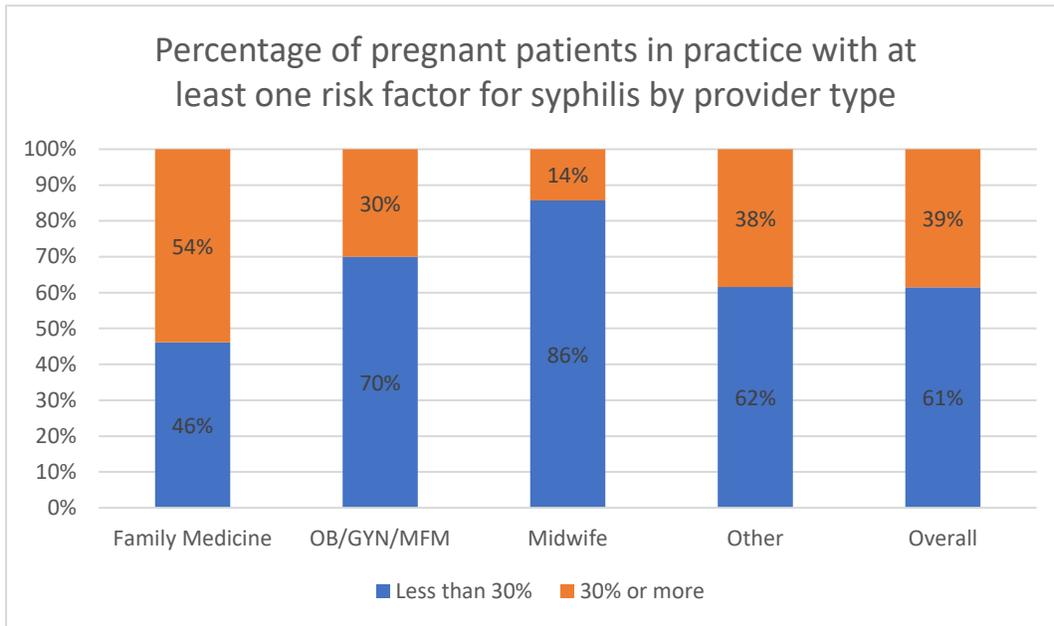


Figure 5.

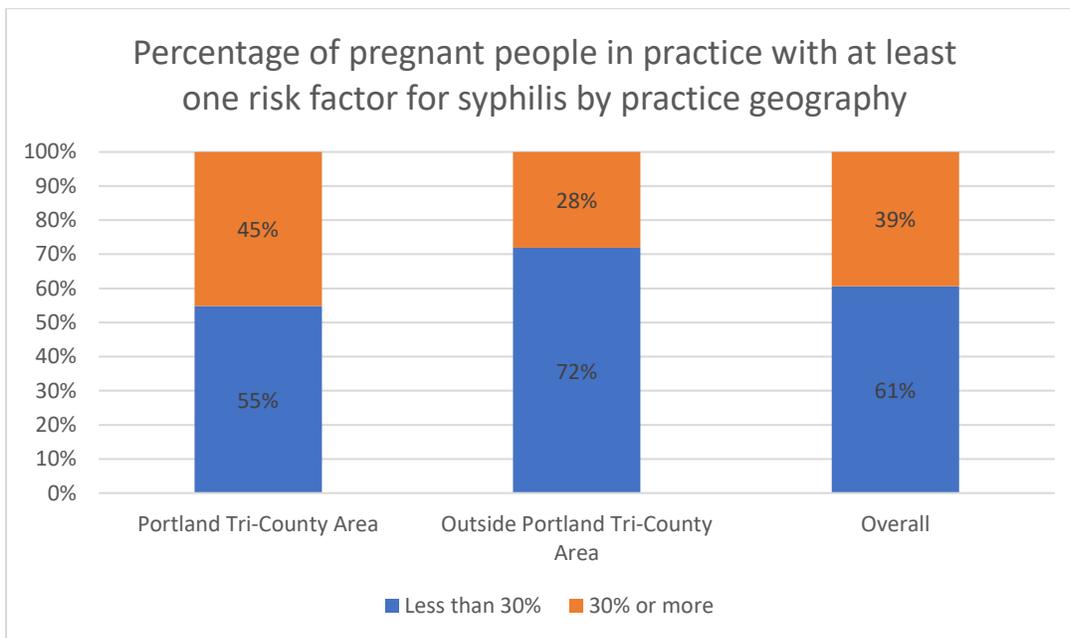


Figure 6.

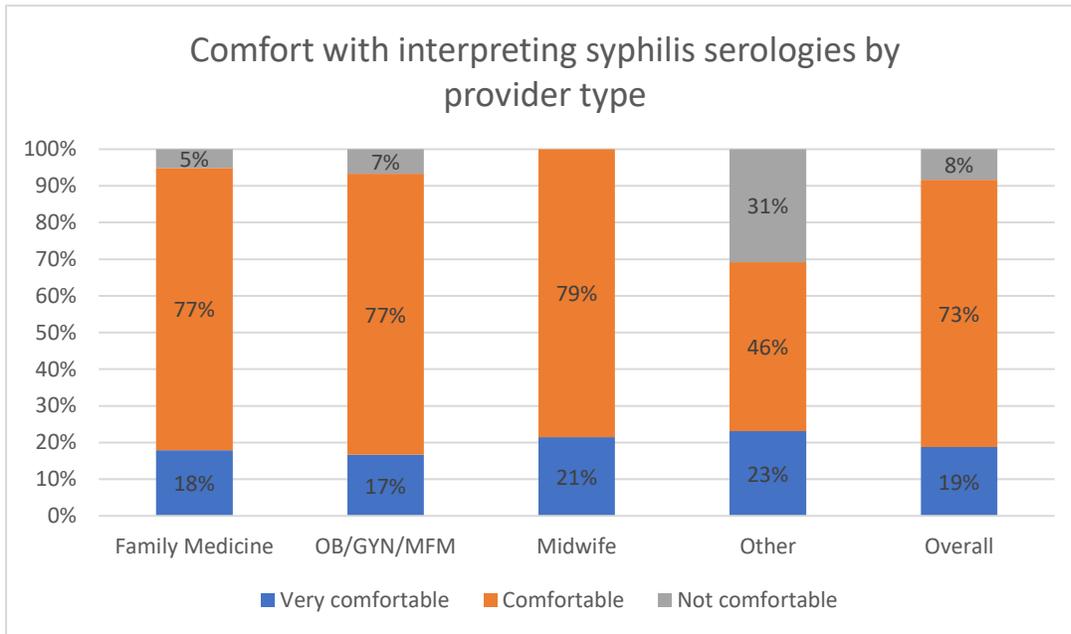


Figure 7.

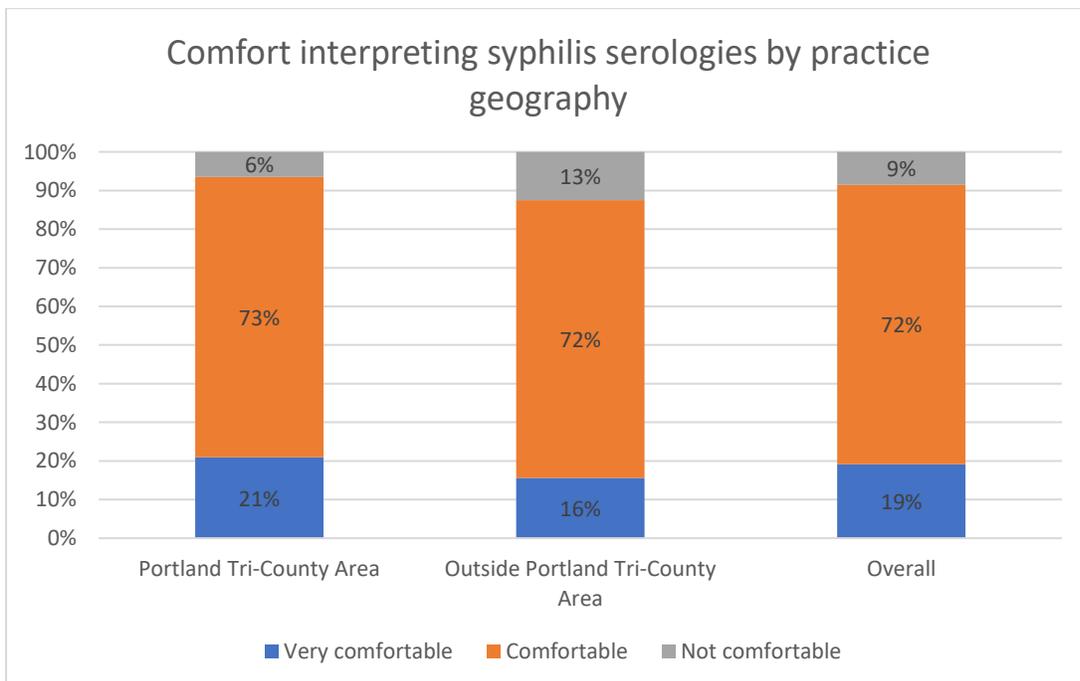


Figure 8.

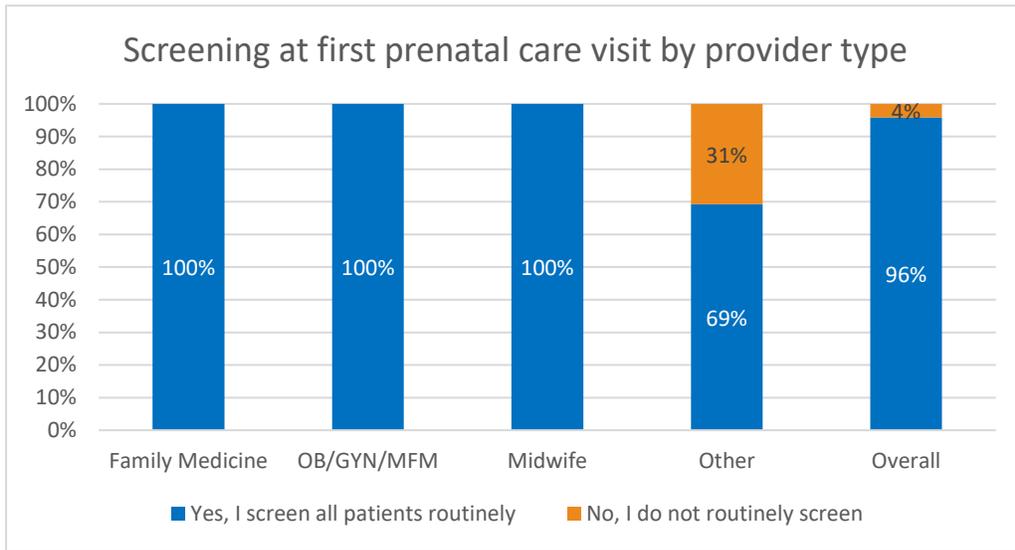


Figure 9.

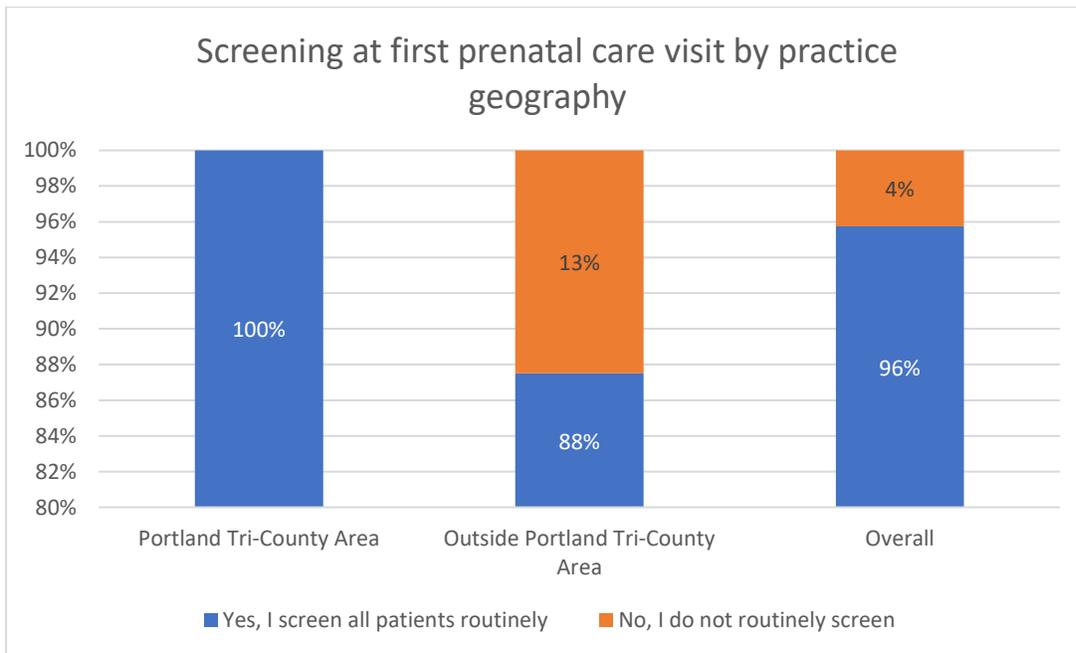


Figure 10.

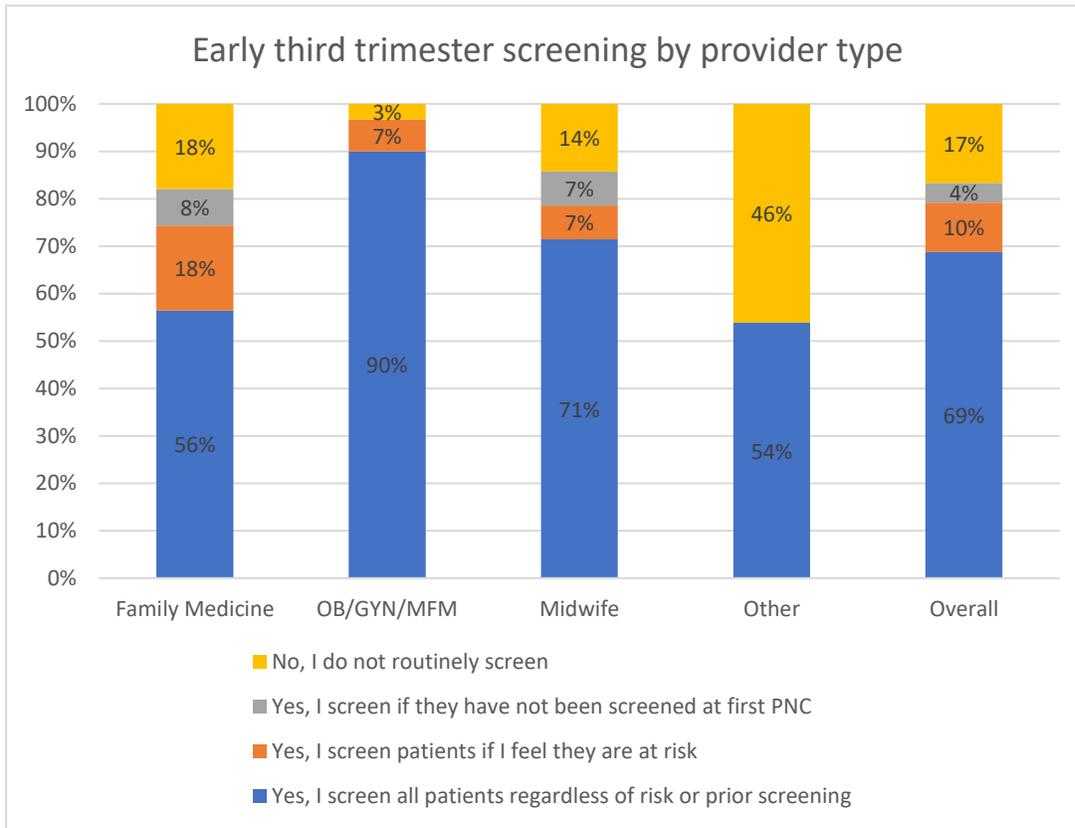


Figure 11.

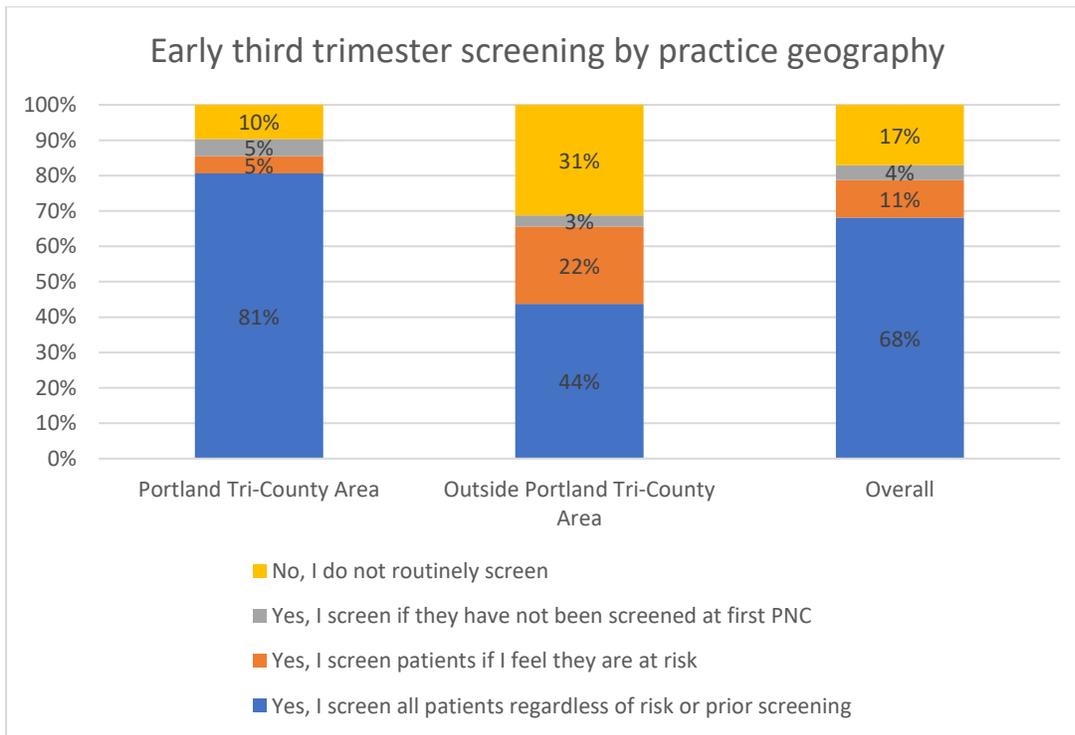


Figure 12.

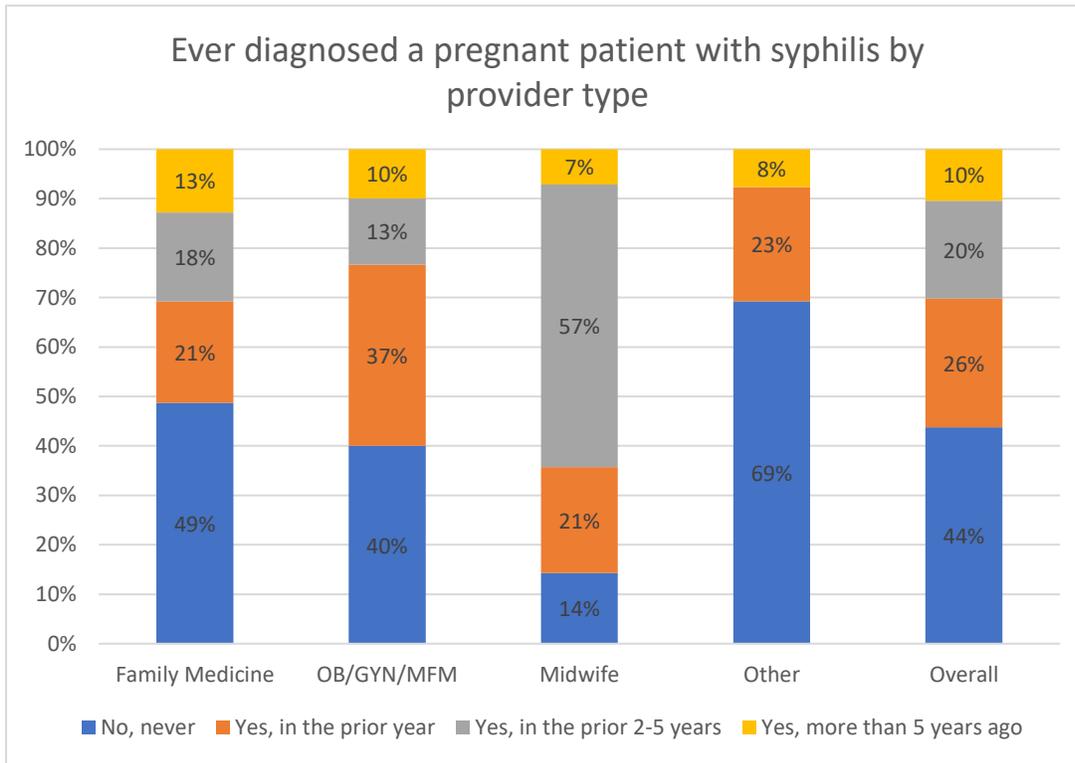


Figure 13.

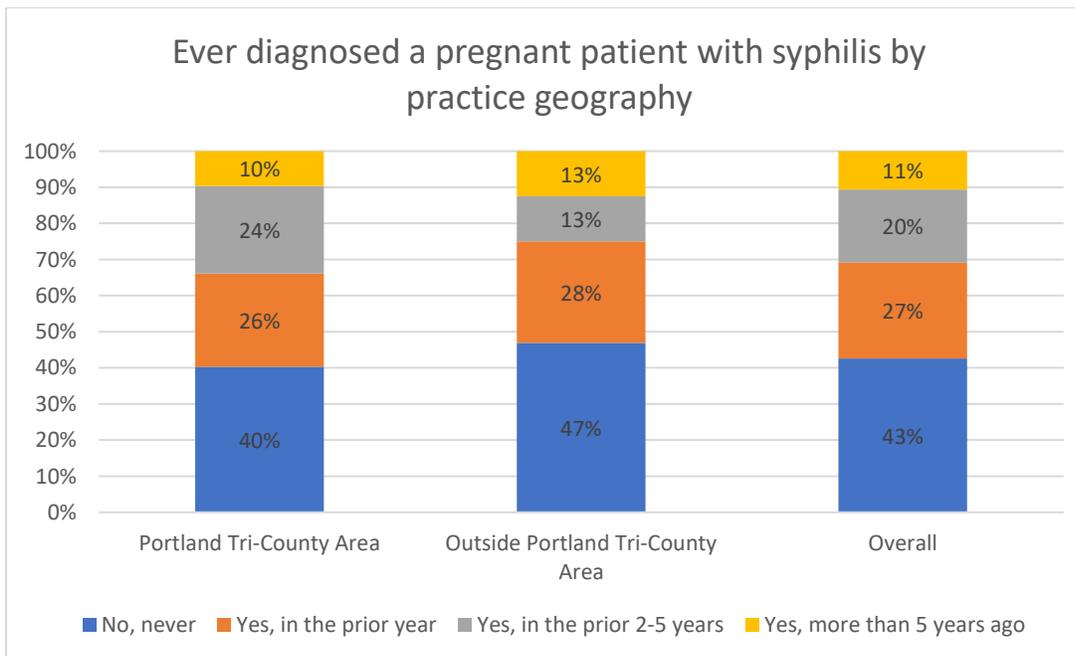


Figure 14.

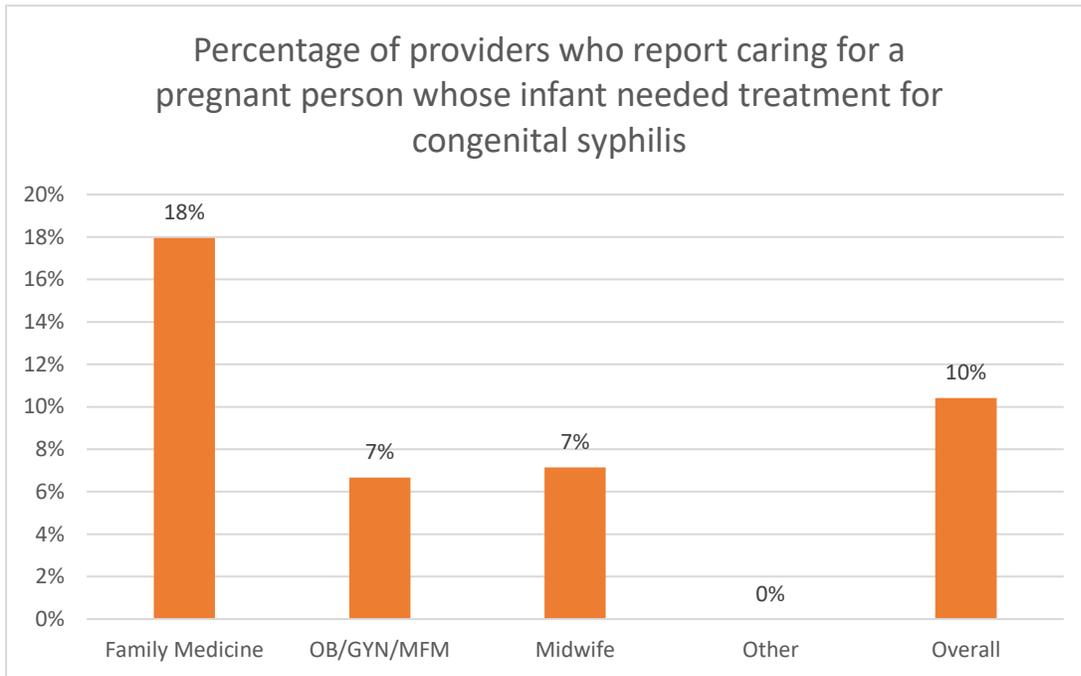


Figure 15.

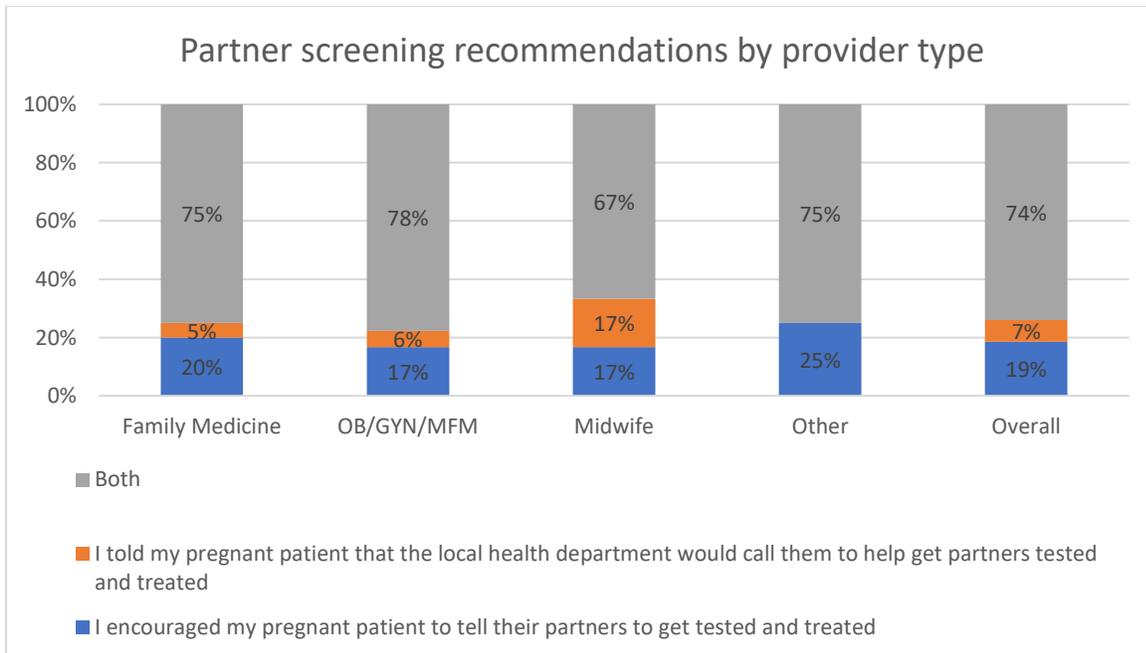


Figure 16.

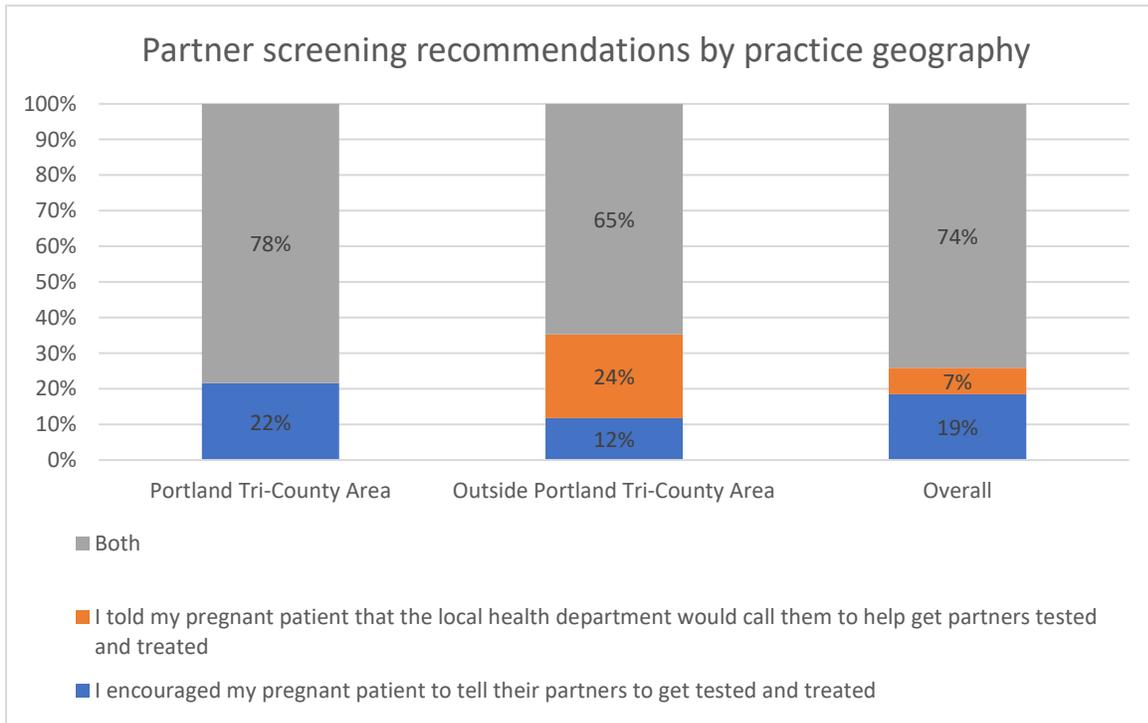


Figure 17.

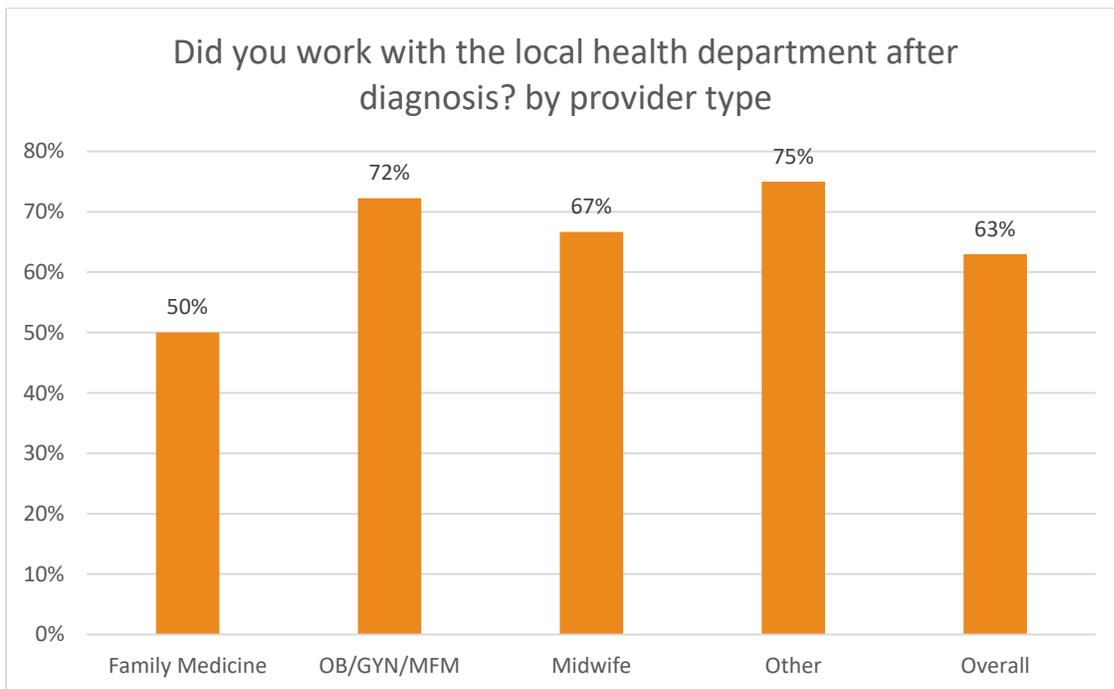


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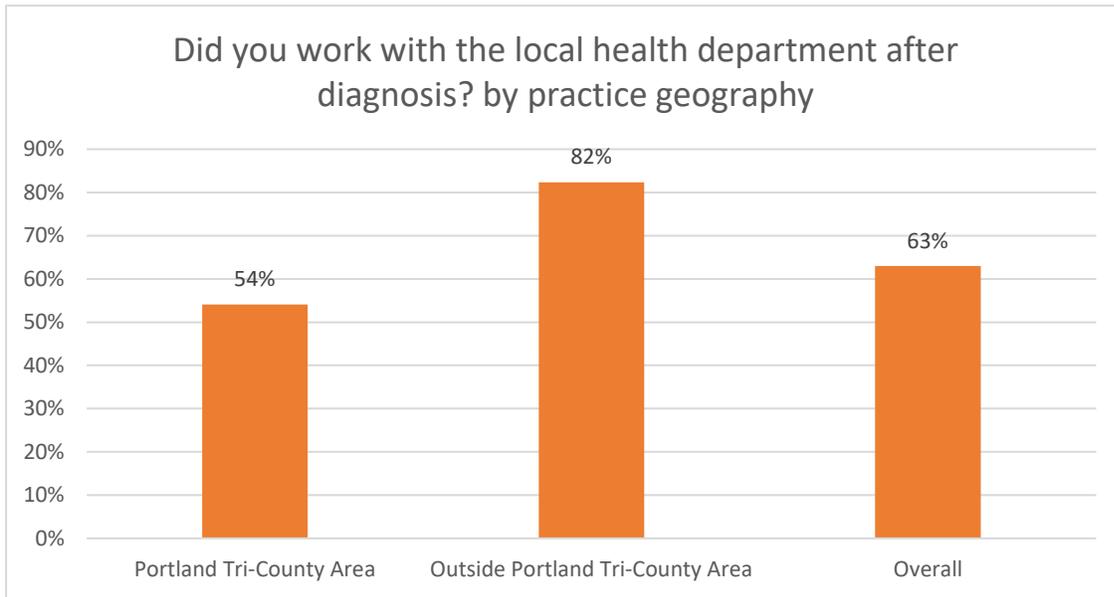


Figure 19.

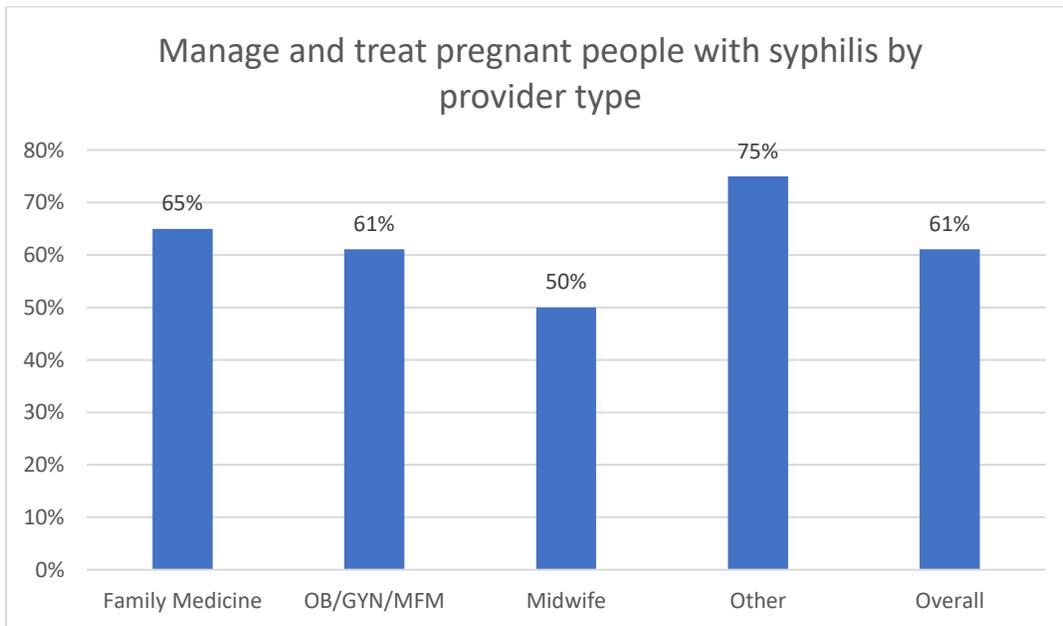


Figure 20.

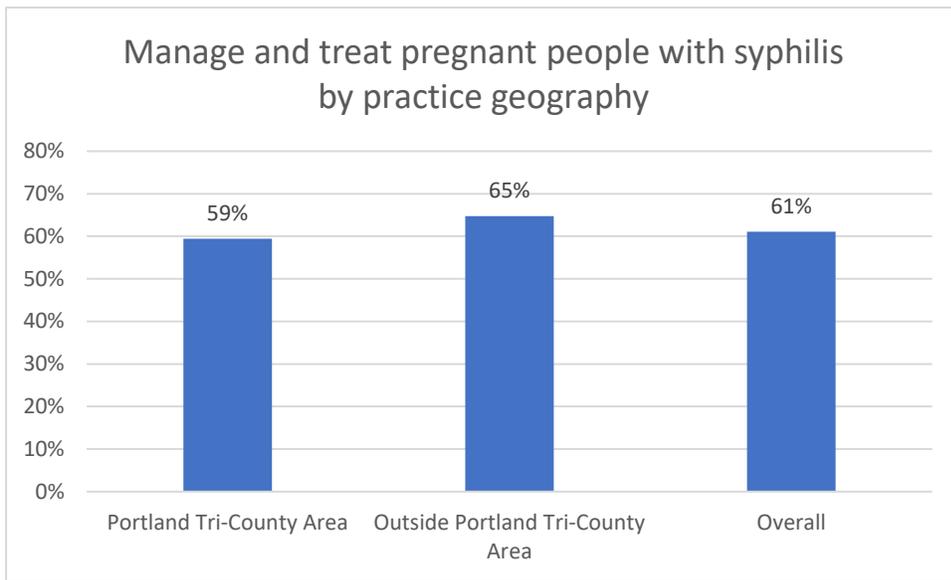


Table 1. Characteristics of respondents		
	n = 96	%
Provider type		
Family Medicine	39	41%
OB/GYN/MFM	30	31%
Midwife	14	15%
Other	13	14%
Years in practice		
Less than 5 years	26	27%
5-10 years	21	22%
More than 10 years	49	51%
Number of pregnant people per year		
Less than 25	19	20%
25-50	28	29%
50-100	10	10%
100-200	15	16%
200-500	19	20%
More than 500	5	5%
Practice geography		
Portland Tri-County Area	62	65%
Outside Portland Tri-County Area	32	33%
Missing	2	2%

Table 2. Barriers to screening	n=96	%
No barriers	74	77%
The guidelines for syphilis screening in pregnancy are not clear	6	6%
My patients do not want to be screened for syphilis	4	4%
Patients do not get labs drawn	3	3%
I'm not sure what tests to order	2	2%
I am concerned that insurance will not reimburse for several screenings in pregnancy	2	2%
Patients do not show up for appointments	2	2%
The clinic where I work does not have a lab on site	1	1%
Syphilis screening is too costly for my patients	1	1%
My patients do not feel comfortable talking about sex and substance use	1	1%
I'm not comfortable interpreting the results of syphilis testing	1	1%
Health system changes to screening practices	1	1%
Third trimester screening is an additional visit	1	1%

Table 3. How did the local public health authority help? Among those who have ever diagnosed a pregnant patient with syphilis and worked with their local public health authority	n=34	%
The health department contacted my patient's partners for testing and treatment	22	65%
The health department arranged patient treatment at a public health clinic	13	38%
The health department arranged for follow-up testing at a public health clinic	8	24%
The health department provided Bicillin LA so that I could provide treatment in the clinic where I work	5	15%
The health department put me in contact with someone with expertise in syphilis diagnosis and/or treatment	4	12%
The health department helped me find records of prior syphilis diagnosis and treatment	2	6%

Table 4. Resources used for managing syphilis in pregnancy among those who have ever diagnosed a pregnant patient with syphilis and manage syphilis in pregnant patients.	n=33	%
CDC STI treatment guidelines	26	79%
Up-to-date or other online resource	26	79%
I consult a specialist at my institution	18	55%
Local public health authority	17	52%
I consult a specialist outside my institution	6	18%
Oregon Health Authority	5	15%

Table 5. Follow-up testing during after syphilis diagnosis in pregnancy among those who have ever diagnosed a pregnant patient with syphilis and manage syphilis in pregnant patients.	n=33	%
I do not order follow-up testing prior to deliver	1	3%
I order follow-up testing less than monthly but more than once prior to delivery	10	30%
I order follow-up testing monthly until delivery	11	33%
I order follow-up testing once in the third trimester if the patient was treated earlier in pregnancy	11	33%

Table 6. Barriers experienced when managing syphilis in pregnancy among those who have ever diagnosed a pregnant patient with syphilis and manage syphilis in pregnant patients.	n=33	%
Pregnant patients with syphilis do not follow-up for treatment and repeat testing	11	33%
I have never seen the physical exam findings of primary and secondary syphilis	8	24%
The clinic where I work does not stock Bicillin LA	6	18%
I am not familiar with how to treat pregnant patients with a penicillin allergy	3	9%
I'm not comfortable interpreting changes in RPR titers over time	2	6%
I'm not familiar with how to stage syphilis	2	6%
I cannot take on the frequent follow-up required to manage pregnant patients with syphilis	1	3%
Infrequent cases in rural practice	1	3%

Prenatal Syphilis Screening, Staging, and Management for Congenital Syphilis Prevention

Screen	<p align="center">Screen <u>all</u> patients at three points in pregnancy:</p> <p align="center">① First prenatal visit or time of pregnancy testing ② 28 weeks' gestation ③ Delivery</p> <p align="center">Initial diagnosis requires both a non-treponemal test (RPR) and confirmatory treponemal test (TP-PA, FTA-ABS, EIA/CIA)</p>			
	SYPHILIS DIAGNOSIS			RISK FACTORS FOR SYPHILIS IN PREGNANCY
Stage	Primary + Chancre	Late Latent or Unknown Duration	Neurosyphilis/ Ocular/ Ootosyphilis³	<p>If there is no record of syphilis screening in pregnancy or screening history is unknown, screen patients with any of these risks (particularly those who attend ED, urgent care, detention/correctional, and/or substance use treatment settings):</p> <ul style="list-style-type: none"> Limited or no prenatal care Injection drug use (or partner who uses injection drugs) Methamphetamine or heroin use (any method) Houselessness or unstably housed Criminal justice involvement within previous 12 months (or partner with criminal justice involvement) Living with HIV or hepatitis C Other STI diagnosed within previous 12 months Multiple sex partners, a new partner, or partner with other partners
	Secondary + Rash and/or other signs ¹	NO symptoms, and infection does not meet criteria for early latent ²	+ CNS signs or symptoms	
Early Latent	NO symptoms, and infection occurred within the past year ²	+ CSF findings on lumbar puncture (LP)		
Treat	<p>Benzathine penicillin G</p> <p>2.4 Million Units Intramuscularly (IM) <u>Once</u></p> <p><i>Certain evidence indicates that additional therapy is beneficial for early syphilis in pregnancy. A second dose of benzathine penicillin G 2.4 million units IM can be given 7 days after the initial dose.</i></p>	<p>Benzathine penicillin G</p> <p>2.4 Million Units IM <u>every 7 days</u>, for 3 doses (7.2 Million Units total)</p> <p><i>A 6-9 day interval between doses is acceptable. If any doses are late or missed, re-start the entire 3-dose series.</i></p>	<p>Aqueous penicillin G</p> <p>18-24 Million Units per day, administered as 3-4 Million Units IV every 4 hours or continuous infusion for 10-14 days. See 2021 CDC STI Treatment Guidelines for non-intravenous alternative regimen.</p>	
	<p>If syphilis treated at/before 24 weeks' gestation, wait at least 8 weeks to repeat titer and repeat again at delivery. Repeat sooner if reinfection or treatment failure is suspected. If treated after 24 weeks' gestation, repeat titer at delivery. Consider more frequent monitoring if at high risk for reinfection in pregnancy (see risks at right).</p> <p>If syphilis diagnosed after 20 weeks' gestation, management should include a fetal ultrasound to look for congenital syphilis.</p> <p>Post-treatment serologic response during pregnancy varies widely. Many women do not experience a fourfold decline by delivery. If sustained (>2 weeks) fourfold increase occurs after treatment completion, evaluate for reinfection and neurosyphilis.</p>			
Monitor				

- Signs of secondary syphilis also include condyloma lata, patchy alopecia, and mucous patches.
- Persons can receive a diagnosis of early latent if, during the prior 12 months, they had a) seroconversion or sustained fourfold titer rise (RPR); b) unequivocal symptoms of primary or secondary syphilis; or c) a sex partner with primary, secondary, or early latent syphilis.
- Neurosyphilis, ocular, and otic syphilis can occur at any stage. Patients need a full neurologic exam including ophthalmic and otic; If clinical evidence of neurologic involvement is observed (e.g. cognitive dysfunction, motor or sensory deficits, cranial nerve palsies, or symptoms or signs of meningitis or stroke), a CSF examination should be performed before treatment. If only ocular/otic manifestations without other abnormalities on neuro exam, CSF evaluation not necessary before starting treatment for neurosyphilis.

Important Considerations for Syphilis Treatment in Pregnancy

Screen early, treat as soon as possible

Treatment failure, and subsequent congenital syphilis, has been associated with treatment later in the pregnancy

Treatment is safe and highly effective for both the pregnant person and fetus

Benzathine Penicillin G (Bicillin L-A) is the ONLY recommended therapy for syphilis during pregnancy

Someone with signs, symptoms, or exposure to syphilis should receive treatment for early disease regardless of whether serology results are available

ADDITIONAL RESOURCES

- **For detailed treatment guidelines**, including penicillin allergy recommendations, see the CDC 2021 STI Treatment Guidelines: www.cdc.gov/std/treatment-guidelines
- **For clinical questions:**
 - Contact Dr. Tim Menza at the Oregon Health Authority (TIMOTHY.W.MENZA@dhsosha.state.or.us), or
 - Enter your consult online at the STD Clinical Consultation Network: stdccn.org

What if my patient is allergic to penicillin?

- **Verify the nature of the allergy.** Approximately 10% of the population reports a penicillin allergy, but less than 1% of the whole population has a true IgE-mediated allergy.
- **Symptoms of an IgE-mediated (type 1) allergy include:** Hives, angioedema, wheezing and shortness of breath, and anaphylaxis. Reactions typically occur within 1 hour of exposure.
- **Refer for penicillin skin testing** if the nature of the allergy is uncertain or cannot be determined.
- **Refer for desensitization with penicillin** if the skin test is positive or the patient has a true penicillin allergy.
- **Desensitization should be performed.** Serious allergic reactions can occur. Consult an allergist.
- **Treat the patient with benzathine penicillin G.** Treat according to appropriate stage of syphilis (see opposite page for treatment regimen).

FOR MORE INFORMATION ABOUT IgE-MEDIATED PENICILLIN ALLERGY:
www.cdc.gov/antibiotic-use/community/pdfs/penicillin-factsheet.pdf
www.cdc.gov/std/treatment-guidelines/penicillin-allergy.htm

Sources

Workowski KA, Bachmann LH, Chan P et al. Sexually Transmitted Infections Treatment Guidelines, 2021. MMWR Recomm Rep 2021;70 (No.4); Assessment, U. Screening for syphilis infection in pregnancy: US Preventive Services Task Force reaffirmation recommendation statement. Ann Intern Med, 2009. 150: p. 705-709; Alexander JM, Sheffield JS, Sanchez PJ, et al. Efficacy of treatment for syphilis in pregnancy. Obstetrics & Gynecology 1999;93(1):5-8; Plotzker RE, Murphy RD, Stoltey, JE. "Congenital Syphilis Prevention: Strategies, Evidence, and Future Directions." Sexually Transmitted Diseases (2018); Wendel GO, Jr, Stark BJ, Jamison RB, Melina RD, Sullivan TJ. Penicillin Allergy and Desensitization in Serious Infections During Pregnancy. N Engl J Med 1985;312:1229-32.