

November 9, 2021

SUMMARY:

In October 2021, the Indiana Department of Health (IDOH) and the Vanderburgh County Health Department (VCHD) detected an outbreak of adult syphilis in a geographical area near Evansville, IN, after increases in reported syphilis cases were seen in Daviess, Dubois, Gibson, Knox, Spencer, Vanderburgh, and Warrick counties.

To date, 21 cases have been identified in this outbreak, which included adults with syphilis infections that have occurred in the past year—with the majority of them in highly infectious stages (primary and secondary syphilis, 16 of 21 cases). From patient interviews, common risk factors among the cases include the following:

- Homelessness
- Exchanging money or drugs for sex
- Using methamphetamine
- Injection drug use
- Using social media/internet to meet partners
- Recent incarceration (within the last year)

Additionally, this outbreak has been linked to exposures to other infectious diseases, including human immunodeficiency virus (HIV) and viral hepatitis (hepatitis A and C).

RECOMMENDATIONS FOR PROVIDERS:

Healthcare providers and front-line workers in STD District 8 should be aware of the important components of adult syphilis, including signs and symptoms, transmission routes and testing/treatment recommendations.

Primary and secondary stages of syphilis are considered the most infectious, but transmission is possible at any point during the first year of infection. Transmission occurs via sexual contact or from a pregnant mother to her unborn baby. Some of the most common symptoms of syphilis include, but are not limited to:

- Round, painless sores on the genitals, rectum, or lips
- Rash on the palms, soles, or torso
- Hair loss
- Smooth, white patches inside the mouth or on the tongue

For a clinical suspicion of syphilis, it is recommended that a serologic rapid plasma reagin (RPR) test be performed, with reflex to a quantitative RPR if reactive, as well as a confirmatory fluorescent treponemal antibody (FTA) test. Providers should instruct patients to refer their sexual partners to the VCHD for evaluation, testing, and presumptive treatment for syphilis, as sexual contacts to early syphilis are at the most risk of infection.

The CDC-recommended treatment regimen for adults with either primary, secondary, or early non-primary/non-secondary syphilis is **benzathine penicillin G 2.4 million units IM in a single dose**. Adults with late or unknown duration syphilis should receive **3 doses of benzathine penicillin G 2.4 million units (7.2 million units total) administered at 1-week intervals**. Although doxycycline has been used as an alternative treatment for syphilis, it is not advised to treat patients with a multi-day regimen during an outbreak where lack of patient adherence to the full treatment course is of concern.

Screening and Treatment Recommendations for Pregnant Women and Women in Childbearing Years to Prevent Congenital Syphilis

It is also important to be especially vigilant about screening pregnant women for syphilis according to clinical and public health recommendations (**at first trimester or first prenatal visit; between 28-32 weeks gestation; and at delivery**). It is imperative that adequate treatment be administered to the mother as quickly as possible to avert a potential congenital syphilis (CS) birth, with **at least** the first dose (depending on stage of syphilis) administered **no less than 30 days prior to delivery** for CS prevention. Pregnant women with penicillin allergies should undergo desensitization, as Bicillin is the only recommended treatment for syphilis during pregnancy. The CDC's full STD Treatment Guidelines can be viewed at this link: <https://www.cdc.gov/std/treatment-guidelines/default.htm>.

Studies¹⁻² in the U.S. have shown that **syphilis screening** of all pregnant women presenting for any care in hospital emergency departments is an effective method of identifying syphilis cases. **Hospitals should consider implementing this strategy.**

PRELIMINARY OUTBREAK CASE DEFINITION:

Patients should be considered **confirmed cases** linked to this outbreak if they meet the following criteria:

- Diagnosed as a case of early syphilis (primary, secondary, early non-primary/non-secondary syphilis) per the Centers for Disease Control and Prevention's (CDC) syphilis case definition (<https://ndc.services.cdc.gov/case-definitions/syphilis-2018/>) since June 2021 **AND** reside in one of the STD District 8 counties (Daviess, Dubois, Gibson, Knox, Martin, Perry, Pike, Posey, Spencer, Vanderburgh, and Warrick counties) **AND** are experiencing at least one of the risk factors mentioned above.
- **OR** if they are a sexual or needle-sharing partner to a confirmed case meeting the above outbreak criteria **AND** have syphilis themselves **BUT** live outside STD District 8

¹ Ernst, A. A., Romolo, R., & Nick, T. (1993). Emergency department screening for syphilis in pregnant women without prenatal care. *Annals of emergency medicine*, 22(5), 781–785. [https://doi.org/10.1016/s0196-0644\(05\)80791-7](https://doi.org/10.1016/s0196-0644(05)80791-7)

² Barnes, A., Jetelina, K. K., Betts, A. C., Mendoza, T., Sreeramaju, P., & Tiro, J. A. (2019). Emergency Department Testing Patterns for Sexually Transmitted Diseases in North Texas. *Sexually transmitted diseases*, 46(7), 434–439. <https://doi.org/10.1097/OLQ.0000000000001003>



Patients should be considered as **probable cases** linked to this outbreak if they meet the following criteria:

- If they are undiagnosed but have signs or symptoms suggestive of infectious syphilis **AND** reside in one of the STD District 8 counties **AND** are experiencing one of the risk factors mentioned above.
- **OR** if they are undiagnosed but have signs or symptoms suggestive of infectious syphilis **AND** their only risk factor is meeting their sexual or needle-sharing partners in an area of Evansville known as "Jintown".

Any patients meeting the locally derived outbreak case definition (confirmed or probable) should be reported to the VCHD **within 24 hours.**

FOR ADDITIONAL INFORMATION: Please contact the IDOH Division of HIV/STD/Viral Hepatitis Prevention Program Director, John Nichols, 317-232-3082, or the VCHD STD Program at 812-435-2400, option 1.

ADDITIONAL RESOURCES

- Indiana Reporting Laws and Online STD Communicable Disease Reporting Form (printable/faxable version also available): <https://www.in.gov/health/files/Indiana-Confidential-Sexually-Transmitted-Disease-Report.pdf>
- Syphilis-specific IDOH case reporting form: <https://redcap.isdh.in.gov/surveys/?s=KCEWLR8DLF>

