State of Alaska Epidemiology Bulletin

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Syphilis Outbreak Update — Alaska, 2011–2013

Background

On February 21, 2012, the Alaska Section of Epidemiology (SOE) alerted providers of an outbreak of syphilis that was primarily associated with men who have sex with men (MSM) residing in the Anchorage area.[1] Additional laboratory-confirmed cases were reported to SOE following this initial announcement. The purpose of this *Bulletin* is to update providers regarding the epidemiologic characteristics of cases associated with this outbreak and to underscore several notable findings.

Methods

Syphilis case and interview data were obtained from the SOE reportable conditions database and the Sexually Transmitted Disease-Management Information System. The Centers for Disease Control and Prevention Congenital Syphilis Report Algorithm was used to determine cases of congenital syphilis. A confirmed case is defined as an infant or child in whom *Treponema pallidum* is identified. A probable case is defined as an infant born to a mother who has untreated or inadequately treated syphilis or an infant who has a reactive treponemal test and evidence of congenital syphilis on physical exam. A syphilitic stillborn is defined as a fetal death in which the mother had untreated or inadequately treated syphilis at the time of delivery of a fetus after 20 weeks gestation or a fetus weighing more than 500g.[2]

Results

From January 1, 2011 through June 30, 2013, a total of 47 cases of adult primary, secondary, and early latent syphilis were reported to SOE and investigated. The median age of infected persons was 35 years (range: 18–74). Of the 47 cases,

- 17 (36%) were reported in the first six months of 2013;
- 40 (85%) were in males, 80% (32/40) of whom self-identified as MSM;
- seven were in females, all of whom self-identified as being heterosexual;
- 18 (38%) were in Alaska Native persons, 16 (34%) were in Whites, 8 (17%) were in Hispanics, and 5 (11%) were in Blacks;
- 45 (96%) were in Anchorage/MatSu, Juneau, or Fairbanks residents;
- 12 (26%) were in persons who were also diagnosed with gonococcal or chlamydial infection at or near the time of their syphilis diagnosis;
- nine (19%) were in persons who were diagnosed with human immunodeficiency virus (HIV) either prior to the syphilis diagnosis or shortly afterwards; and
- two (4%) were in persons who were re-infected with syphilis within 1 year of their prior infection/treatment.

Public health personnel attempted to interview all 47 infected adults to identify additional persons at risk for infection. Four persons refused to be interviewed. A total of 152 sexual contacts were identified; 131 (86%) were notified of their exposure; 21 (14%) could not be located. Of those notified,

- 35 (27%) tested negative and did not require treatment because their exposure to syphilis occurred >90 days prior to testing;
- 54 (41%) tested negative and were treated because their exposure dates occurred within 90 days of testing;
- 13 (10%) were infected and treated;
- 10 (8%) were previously treated for their infection; and
- 19 (15%) refused testing and treatment.

Two congenital syphilis cases were identified. One was in an infant delivered to a mother diagnosed and treated for syphilis <30 days prior to delivery, thus meeting the surveillance case definition for probable congenital syphilis. This infant had no clinical signs of infection. The second case, a syphilitic stillbirth, was in an infant delivered at 29 weeks gestation. The mother tested positive at delivery; she had a negative syphilis test during the first trimester.

Discussion

This ongoing syphilis outbreak is primarily affecting the MSM population; however, 32% (15/47) of those adults infected since January 2011 self-identified as having been infected through heterosexual contact. This outbreak has also resulted in two cases of congenital syphilis in the past year, one of which was a syphilitic stillbirth. Prior to this outbreak, the last case of reported congenital syphilis in Alaska was in 1978.

This outbreak has been largely confined to Alaska's urban centers. While two (4%) of the infected persons were living in rural areas of the state when they were diagnosed, they both reported having sexual partners who resided in Anchorage.

The high rate (32%) of syphilis cases that involved co-infection with HIV, gonorrhea, or chlamydia during this outbreak underscores the importance of testing patients suspected of having syphilis for these three additional diseases. Furthermore, it is important to note that syphilis may promote HIV acquisition and transmission, and HIV infections may alter the response to syphilis treatment. Finally, persons co-infected with syphilis and HIV might be at increased risk for neurologic complications.[3]

Recommendations

1. Perform serological non-treponemal (RPR) and treponemal (FTA or TP-PA) tests on everybody suspected of having syphilis, even if the clinical diagnosis is unambiguous.
2. Promptly treat patients with primary, secondary, or early latent syphilis with *Bicillin L-A (benzathine penicillin G) 2.4 million units* in a single intramuscular dose.[3]
3. Offer gonorrhea, chlamydia, and HIV testing to all patients with suspected syphilis infection.[3]
4. Strongly encourage infected patients to participate in SOE's confidential partner notification services.
5. Screen sexually active MSM *annually* for syphilis, HIV, gonorrhea, chlamydia, and hepatitis C; screen sexually active MSM *every 3–6 months* if they engage in high-risk sexual activity (e.g., multiple or anonymous sex partners).
6. Screen all pregnant women for syphilis in their first trimester; if at risk for syphilis, repeat the screen in their third trimester.
7. Perform a pregnancy screen on all women of childbearing age who are diagnosed with syphilis.
8. Obtain a complete sexual history whenever possible during routine patient care. This involves an assessment of the number and sex of sexual partners, anonymous sexual encounters, illicit drug use and alcohol abuse, and the use of online sex-seeking websites.
9. Report all suspected and confirmed cases of syphilis to SOE immediately via fax at 907-561-4239 or telephone at 907-561-4234 or 800-478-1700.

References

1. Alaska Epidemiology *Bulletin.* "Syphilis Outbreak Alaska, 2011-2012 No. 4 February 21, 2012. Available at: http://www.epi.alaska.gov/bulletins/docs/b2012_04.pdf
2. *Congenital Syphilis Case Investigation and Reporting Form Instructions.* CDC 73.12, REV 05/09/2013. Available at: http://www.cdc.gov/std/program/ConSyphInstructions2013.pdf
3. STD Treatment Guidelines, 2010. *MMWR.*;59(RR-12). Available at: http://www.cdc.gov/std/treatment

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