NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
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Commissioner

Department of Health and Mental Hygiene
Health Advisory # 4
Prevention of Congenital Syphilis

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- **The rate of congenital syphilis (CS) has increased in the United States, following an increase in syphilis infections among women.**
- **In New York City, cases of primary and secondary (P&S) syphilis among women have been increasing over the past several years, but a rise in local CS rates has not yet been observed.**
- **CS is a devastating but preventable outcome of syphilis infection during pregnancy.**
- **Screening and treatment of syphilis infections in women, especially pregnant women, are required to prevent any increase in CS infections.**
- **New York State law mandates syphilis screening for pregnant women at the first prenatal visit and at delivery.**

Please distribute to All Clinical Staff in Obstetrics and Gynecology, Pediatrics, Primary Care, Internal Medicine, Family Medicine, Emergency Medicine, Infectious Diseases and Critical Care. Please also share with your non-hospital based primary care colleagues.

Dear Colleagues,

After declining for 14 years, the national CS rate among infants < 1 year increased 23%, from 8.2/100,000 live births in 2005 to 10.2 in 2008. This trend followed a 38% rise in primary and secondary (P&S) syphilis rates among women in the United States from 2004-2007 [1]. Untreated or inadequately treated syphilis in a pregnant woman can lead to miscarriage, stillbirth and neonatal death; infants born with CS suffer from irreversible systemic manifestations of syphilis infection, including bone deformities, deafness and other severe neurologic impairments. CS is a devastating but preventable outcome of syphilis infection during pregnancy.

Cases of P&S syphilis among women in New York City increased by 24% between 2008 and 2009. Numerically, female cases increased from 38 of 1,073 cases reported in 2008 to 47 of 1,054 cases reported in 2009. No increase in CS cases has been documented in NYC; there were 17 CS cases reported in 2008 and 11 in 2009. However, if syphilis rates among women continue to increase, a concomitant rise in the local CS rate can be expected. CS is preventable through screening and appropriate management of syphilis infection in pregnancy; preventing CS infections in New York City requires vigilance among providers in identifying and treating syphilis in women and especially, in pregnant women.

<u>Screening Women for Syphilis</u>

- Screen all pregnant women for syphilis at the first prenatal visit and at delivery as mandated by law in New York State [2].

- Perform a sexual history at least annually for all women in order to assess the risk for syphilis and other sexually transmitted infections (STIs), including HIV. The sexual history should include questions about specific sexual behaviors over the past six months, including the number of male and female partners and sites of exposure—oropharynx, vagina, and anus.
- Test all women at risk for syphilis, including: commercial sex workers; women who exchange sex for drugs or services; residents of correctional facilities; women who have sex with MSM; and women who are sex and/or needle-sharing partners of persons with syphilis. Women diagnosed with other STIs, including HIV, may also be at increased risk for syphilis.

Preventing Congenital Syphilis

The majority of CS cases can be prevented if maternal treatment of syphilis infection is completed at least 30 days prior to delivery. Nationally, the majority of congenital syphilis cases occur among infants born to mothers who had syphilis and were untreated, inadequately treated, or whose treatment was undocumented before or during pregnancy [1,3]. Lack of provider adherence to screening guidelines, as well as lack of prenatal care or limited prenatal care, have been associated with congenital syphilis [4,5,6].

- Prenatal care providers: Evaluate sexual risk for syphilis and other STIs at each prenatal visit.
- Emergency department and urgent care providers: Serologically screen pregnant women for syphilis if they have not received adequate prenatal care, without regard to presenting complaint or stage of pregnancy.

Diagnosis and Treatment of Syphilis

The classic presentation of primary syphilis is a transient, painless genital ulcer that can be easily missed in women with vaginal, cervical or anal lesions. The signs of secondary syphilis include: a diffuse rash, often involving the palms and soles; moist, wart-like lesions in the anogenital areas (condyloma lata); mucous patches, hair loss; lymphadenopathy; and occasionally, fever. The diagnosis of primary or secondary syphilis is often elusive, as lesions may be occult, painless, and transient. Furthermore, systemic symptoms may mimic other, more common, illnesses. Syphilis is thus more frequently identified as the result of asymptomatic screening, which remains the cornerstone of syphilis diagnosis.

Serologic screening for syphilis comprises both non-treponemal (e.g. RPR) and treponemal (e.g. FTA, TP-PA, EIA) testing. Most laboratories screen with a non-treponemal test and, if positive, reflexively perform a confirmatory treponemal test; others use the tests in reverse. It is crucial for providers to understand their laboratory's syphilis screening sequence in order to interpret test results. Any positive results should be reviewed in the context of the patient's prior syphilis serologies and treatment history, if available.

- The NYC **Syphilis and Reactor Registry** contains reactive serologies and syphilis treatment histories for events reported in NYC over the past several decades. Information in the Registry is available to licensed providers managing patients *(See Resources Box)*.

Managing Syphilis in Pregnant Women

Treponema pallidum remains exquisitely sensitive to penicillin, and as such, penicillin continues to be the first line treatment for syphilis infection.

- Maintain a low threshold for treating suspicious lesions and/or positive syphilis serologies in pregnant women.
- Use only long-acting benzathine penicillin (Bicillin®LA) to treat syphilis during pregnancy. Pregnant women with syphilis who are allergic to penicillin should be desensitized and treated with Bicillin®LA. The Department of Health and Mental Hygiene can help providers locate facilities offering penicillin desensitization *(See Resources Box below)*.
- Provide appropriate follow-up testing for women treated for syphilis during pregnancy, including repeat syphilis titers at 28 -32 weeks of gestation and at delivery. The majority of women will deliver before their serologic response to treatment can be adequately assessed. Women who have been treated for syphilis during pregnancy require close follow-up after delivery, as do their infants.
- Notify the Department of Health and Mental Hygiene of syphilis at the time of diagnosis. The Department may contact providers and their patients to verify or facilitate treatment of patients and their partners.

Follow-up and Coordination of Care

Hospital and office-based systems are critical to ensure that:

- Relevant lab and treatment information from the prenatal provider is transferred to the obstetric setting prior to delivery;
- Infant's and mother's syphilis serologies are reviewed in tandem prior to hospital discharge of either patient;
- Infant and mother have a plan for appropriate follow-up care upon discharge from the hospital;
- Relevant lab and treatment information from the prenatal provider and obstetric setting are transferred to the outpatient pediatric provider.

Reporting and Department of Health and Mental Hygiene Resources

- Notify the Department of all syphilis diagnoses, regardless of stage.

Syphilis Resources for Providers

Contact the Provider Access Line (PAL) at 1-866-692-3641 or go to http://www.nyc.gov/html/doh/html/std/std.shtml for:

- **Checks of NYC Syphilis and Reactor Registry** information
- Medical consultation on diagnosis and management of syphilis infection
- Referrals for penicillin desensitization
- Notification of sex partners and partner referrals for syphilis testing and treatment
- Reporting of syphilis cases
- Location of NYC Bureau of STD free and confidential clinic services
- Information on related CME courses from the Region II STD/HIV Prevention Training Center

See Also:

- *An Update and Review of the Diagnosis and Management of Syphilis*: http://nycptc.org/x/Syphilis_Module.pdf
- *2006 CDC STD Treatment Guidelines*: http://cdc.gov/std/treatment/

References

1. CDC. Congenital Syphilis—United States, 2003 – 2008. MMWR 2010; 59(14); 413-417.
2. NYS Public Health Law, Article 23 §2308
3. CDC. Congenital Syphilis—United States, 2002. MMWR 2004; 53(31); 716-719.
4. Southwisk KL, et al. An epidemic of congenital syphilis in Jefferson County, Texas, 1994-1995: inadequate prenatal syphilis testing after an outbreak in adults. Am J Public Health 1999;89:557-60.
5. Warner L, et al. Missed opportunities for congenital syphilis prevention in an urban southeastern hospital. Sex Transm Dis 2001;28:92-8.
6. Hogben M, et al. Sexually transmitted disease screening by United States obstetricians and gynecologists. Obstet Gynecol 2002;100:801-7.
7. Cherneskie T, et al. An Update and Review of the Diagnosis and Management of Syphilis. Region II STD/HIV Prevention Training Center; New York City Department of Health and Mental Hygiene, New York, NY: 2006. http://nycptc.org/x/Syphilis_Module.pdf

Sincerely,

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