NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE
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2022 Health Alert # 3

Increases in gonorrhea and syphilis among females in New York City

Please Share this Alert with Colleagues in: Primary Care, Pediatrics, Adolescent Medicine, Family Medicine, Internal Medicine, Obstetrics and Gynecology, Urgent Care, Emergency Medicine, Infectious Diseases

- Reported diagnoses of *Neisseria gonorrhoeae* infections (gonorrhea, GC) and primary and secondary (P&S) syphilis are increasing in NYC among people reported as female ("females"), with most cases among those reported as Black and Latino. Many New Yorkers have delayed routine sexually transmitted infection (STI) screening during the COVID-19 pandemic.
- Resume annual GC and *Chlamydia trachomatis* (chlamydia, CT) screening for sexually active females under 25 years of age, per Centers for Disease Control and Prevention (CDC) recommendations. Screen for syphilis in females with history of incarceration or transactional sex work.
- Screen for syphilis three times during all pregnancies: at (1) first prenatal care examination, (2) 28-32 weeks' gestation, and (3) delivery, per NYC Health Code and New York State (NYS) Public Health Law.
- In 2021, the Centers for Disease Control and Prevention (CDC) updated its STI treatment guidelines, including for GC and CT. CDC now recommends only a single 500 mg intramuscular dose of ceftriaxone for uncomplicated GC. Treatment for coinfection with CT with oral doxycycline (100 mg twice daily for 7 days) should be administered when chlamydial infection has not been excluded.
- Maintain vigilance for GC treatment failures. Increased minimum inhibitory concentrations of azithromycin, cefixime, and ceftriaxone have been observed among GC isolates in the U.S., including NYC.

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Dear Colleagues,

In NYC, more females were diagnosed with GC and P&S syphilis in the first half of 2021 than the first half of 2019 (**Table 1**). Commercial laboratory data indicate that STI screening sharply declined during the first half of 2020, making comparisons difficult between 2020 and 2021. Possible continued declines in STI screening due to the COVID-19 pandemic suggest that case data may mask an even larger increase in STIs among females.

Gonorrhea
Gradual increases in female GC cases in NYC have been observed since 2014, with a steeper, 23% increase in cases reported from the first half of 2019 (n=3,043) to the first half of 2021 (n=3,751). In contrast, male GC cases declined 9% from the first half of 2019 (n=10,250) to the first half of 2021 (n=9,338). While increases in female GC cases have been observed across all race and ethnicity groups examined, cases reported as Black or Latino account for the majority of all female cases (58% of female cases with known race and ethnicity in the first half of 2021). Cases among females 29 years or younger account for the majority of female GC cases.

P&S Syphilis
Males account for most P&S cases (93% in the first half of 2021). Increases in reported cases of female P&S syphilis began in NYC in 2015, following decades of low and stable rates.[1] From the first half of 2019 to the first half of 2021, the number of P&S cases among females increased 17%, whereas there was a 2% decrease in

male cases. While recent increases in P&S syphilis cases have been identified among females in all race and ethnicity groups examined, among females diagnosed with P&S syphilis in the first half of 2021, most were Black or Latino (75%). Notably, from the first half of 2019 to the first half of 2020, P&S syphilis cases among females 15 to 19 years increased 125% (4 to 9 cases) and cases among females 20 to 24 years increased 39% (13 to 18 cases).

Congenital Syphilis

Increases in P&S syphilis among females presage increases in congenital syphilis (CS), an infection that can result in devastating health outcomes, including stillbirth, preterm birth, and early infant death.[2] In NYC, from 2017 to 2018, the number of CS cases increased 186% (7 cases to 20 cases, including one syphilitic stillbirth at 31 weeks).[3] The number of CS cases remained elevated in 2019 (17 cases) and 2020 (17 cases), underscoring the importance of screening for syphilis three times during all pregnancies - at the first prenatal encounter, 28-32 weeks gestation, and at delivery – as well as for females of childbearing age who are at high risk of acquiring syphilis.

Health Inequities in Data

Racial inequities in STI rates can be attributed to long-term structural racism, not biological or personal traits. The disproportionate burden of GC and P&S syphilis among females who are Black or Latino in NYC reflects the impact of structural racism, which prevents communities of color from accessing vital resources and opportunities, and negatively affects overall health and well-being. Read more about health equity from the NYC Department of Health and Mental Hygiene (DOHMH) and CDC.

Screening, Testing, Treatment, and Partner-Management Recommendations for Females with GC or Syphilis

Take a sexual history to ascertain need for screening at the oropharynx, vagina, and anorectum. Follow CDC STI treatment guidelines to detect infection and manage patients with gonorrhea and syphilis.

GC

- Screen for urogenital GC and CT at least annually for sexually active females under 25 years. Screen females over 25 years with risk factors (new sex partner, more than one sex partner, sex partner with concurrent partners, or sex partner who has an STI or transactional sex). Transgender people and gender diverse people should be screened based on anatomy, age, and risk factors.
- Offer pharyngeal GC screening to females who report receptive oral sex, and rectal screening to those who report receptive anal sex.
- Perform standard genital examinations when indicated, but keep in mind that GC and CT are frequently asymptomatic. Look for cervical discharge or inflammation, signs of pelvic inflammatory disease, and penile urethral discharge. People who report sexual exposure to GC in the last 60 days and symptomatic people should be tested and presumptively treated.
- **Treat GC per CDC STI treatment guidelines, which now recommend monotherapy with ceftriaxone**, and no longer include azithromycin. If concurrent CT infection cannot be excluded, treat patient with doxycycline 100 mg PO BID for seven days. In pregnancy, CT treatment is azithromycin 1 g PO once rather than doxycycline. Note: Any person with oropharyngeal GC should receive ceftriaxone or gentamicin/azithromycin and return 7–14 days after initial treatment for a test of cure.
- Suspected cephalosporin treatment failure: Clinicians who diagnose GC infection with suspected cephalosporin treatment failure should perform culture and antibiotic susceptibility testing of relevant clinical specimens, consult an infectious disease specialist or an STI clinical expert (stdccn.org/render/Public) for guidance in clinical management, and report the case to the NYC DOHMH by calling the Provider Access Line (866-692-3641). The NYC DOHMH will facilitate communications with CDC, as indicated.
- Contacts to a sex partner with GC: Test for CT and GC and presumptively treat for exposure to GC. If CT infection cannot be excluded in the index patient, also treat the partner for CT. Treat the patient's sex

partners to prevent reinfection of the index patient. Link sex partners to HIV, syphilis, and other STI testing, to protect against syphilis reinfection and to interrupt forward transmission in the community. The NYC Sexual Health Clinics can provide free evaluation and treatment for STIs.

- Expedited partner therapy (EPT): EPT is permissible for GC in NYS. When using EPT for GC, provide the index patient with cefixime 800 mg PO once (in-hand or by prescription) for sex partner(s) who are unlikely to present for testing and treatment. If CT infection cannot be excluded in the index patient, also treat the partner for CT. For more information, see the NYS Department of Health's interim guidance on expanded EPT for STIs.

Recommended GC Treatment	Alternative GC Treatment
Ceftriaxone **500** mg IM once for patients <330 lbs. (150 kg) **1 g** IM once for patients >330 lbs. (150 kg) If CT infection has not been excluded, treat for CT with doxycycline 100 mg PO BID for 7 days	*If ceftriaxone is not available or feasible:* **Cefixime** 800 mg PO once *If cephalosporin allergy:* **Gentamicin** 240 mg IM once split half into each gluteus muscle **PLUS** **Azithromycin 2 g** PO once

Syphilis

- During pregnancy: Screen for syphilis three times: a) at the first prenatal encounter, b) 28-32 weeks gestation, and c) at delivery. Consider screening for syphilis in people who present with unexplained dermatological lesions.
- Asymptomatic, non-pregnant females: Screen for syphilis in females at increased risk (changes in sex partners or behaviors, sex partner diagnosed with an STI, history of incarceration, history of transactional sex work). Consider screening in transgender and gender diverse people at least annually based on reported sexual behaviors and exposure.
- Look for the transient clinical manifestations of early syphilis (example images here), which include:
  - Ulcers, especially genital, anal, and oral ulcers. Syphilitic ulcers are often single, painless, indurated, on a non-purulent base; however, they may also present as multiple, atypical, or painful lesions
  - Rash of any type, anywhere on the skin
  - Velvety growths (condylomata lata)
- Syphilis treatment depends on the stage of disease. For assistance with staging reference the CDC STI treatment guidelines and contact the Provider Access Line (866-692-3641).
- *There is no alternative syphilis treatment in pregnancy.* Pregnant people with penicillin allergy must be desensitized to penicillin and treated with benzathine penicillin G. Pregnant people *cannot* receive the alternative treatment of doxycycline.
- Contacts to a sex partner with syphilis: Test for syphilis and, given the long incubation period, presumptively treat patients who are contacts to syphilis or report contact with individuals with symptoms suggestive of syphilis. Health care providers should not hesitate to provide post-exposure presumptive treatment to pregnant patients with contact to a sex partner with syphilis.
- Partner treatment: Link sex partners to HIV, syphilis, and other STI testing, to protect against syphilis reinfection and to interrupt forward transmission in the community. NYC Sexual Health Clinics can provide free evaluation and treatment for STIs.

Counseling Patients Diagnosed with STI

Counsel patients to abstain from all types of sex until symptoms resolve and for at least one week after treatment. Advise patients to notify recent sex partners. Offer presumptive treatment to contacts to STIs. Reinforce consistent condom/barrier use with vaginal, anal, and oral sex. Offer HIV testing to patients diagnosed with an STI. In addition, discuss the option of taking pre-exposure prophylaxis (PrEP) to prevent HIV, and make sure they know about emergency post-exposure prophylaxis (PEP). Screen patients again for STIs after three months to rule out reinfection.

NYC Sexual Health Clinics and NYC Sexual Health Clinic Hotline

Select NYC Sexual Health Clinics continue to provide low- to no-cost services for STIs, including HIV. Services include STI evaluation, testing, and treatment; HIV testing, PrEP and emergency PEP, and treatment initiation for people diagnosed with HIV who would like to start HIV treatment for the first time; contraception services; and vaccines. Anyone who is 12 or older can receive walk-in services, regardless of immigration status. No parental consent is necessary. For more information, visit **nyc.gov/health/clinics**.

Telemedicine services are available through the NYC Sexual Health Clinic Hotline at 347-396-7959, Monday through Friday, from 9 a.m. to 3:30 p.m.

Providers who are unable to perform routine STI services due to pandemic constraints can encourage patients to visit a NYC Sexual Health Clinic or call the NYC Sexual Health Clinic Hotline.

Resources

- NYC Syphilis Registry: Licensed health care providers can access current and historical syphilis test results and treatment information to inform the diagnosis and management of syphilis in their patients
- Disease Reporting: GC and syphilis are reportable infections in NYC
- The Diagnosis, Management, and Prevention of Syphilis: An Update and Review by NYC DOHMH and NYC STD Prevention Training Center
- CDC STI treatment guidelines
- NYS Department of Health interim guidance on expanded EPT for STIs: Interim guidance on EPT for CT, GC, and trichomonas, including information that must be relayed to partners for whom EPT is intended
- Health Equity: NYC Health Race to Justice and CDC Health Equity resources

References

1. New York City Department of Health and Mental Hygiene. 2016 DOHMH Alert #14: Syphilis is increasing among women of child-bearing age in New York City, 2016. Published July 11, 2016. Accessed October 21, 2021. Available at: https://www1.nyc.gov/assets/doh/downloads/pdf/han/alert/increases-in-syphilis-among-women.pdf
2. Cooper JM, Sánchez PJ. Congenital syphilis. *Semin Perinatol*. 04 2018;42(3):176-184
3. New York City Department of Health and Mental Hygiene. 2019 DOHMH Alert #8: Congenital syphilis cases in NYC nearly tripled in the last year. Published April 11, 2019. Accessed October 21, 2021. Available at: https://www1.nyc.gov/assets/doh/downloads/pdf/han/alert/2019/congenital-syphilis-cases-in-nyc.pdf

Table 1. Reported cases of gonorrhea and primary and secondary syphilis infection among people reported as female in New York City, January – June, 2019, and January – June, 2021[1-3]

Characteristic	Year				Percent Change
	January - June 2019		January - June 2021[4]		
	No.	%	No.	%	
Gonorrhea (total)	**3,043**		**3,751**		**↑23%**
Age (years)					
<20 years	929	31%	896	24%	↓4%
20-29 years	1,488	49%	1,956	52%	↑31%
30-39 years	451	15%	649	17%	↑44%
40-49 years	119	4%	156	4%	↑31%
50-59 years	42	1%	62	2%	↑48%
≥ 60 years	13	0%	32	1%	↑146%
Race and ethnicity					
Asian	33	1%	34	1%	↑ 3%
Black	1,284	42%	1,455	39%	↑13%
Latino	572	19%	726	19%	↑27%
White	119	4%	170	5%	↑43%
Other	158	5%	133	4%	↓16%
Unknown	871	29%	1,226	33%	↑41%
Primary and Secondary Syphilis (total)	**58**		**68**		**↑17%**
Age (years)					
<20 years	5	9%	9	13%	↑80%
20-29 years	24	41%	24	35%	0%
30-39 years	15	26%	25	37%	↑67%
40-49 years	11	19%	7	10%	↓36%
50-59 years	3	5%	2	3%	↓33%
≥ 60 years	0	0%	1	1%	
Race and ethnicity					
Asian	0	0%	3	4%	
Black	22	38%	32	47%	↑45%
Latino	15	26%	19	28%	↑27%
Other	11	19%	7	10%	↓36%
Unknown	2	3%	3	4%	↑50%
White	8	14%	4	6%	↓50%

[1] Data from the first six months (January to June) of 2021 were compared to the first six months of 2019 because data indicate that routine STI screening during 2020 was heavily impacted by the New York State on PAUSE order, which was in effect from March 22, 2020, to June 7, 2020, making 2020 an unreliable comparison period for assessing trends.
[2] Information on the sex and race and ethnicity of people reported with an STI is based primarily on provider and laboratory reports received by the New York City Department of Health and Mental Hygiene's Bureau of Hepatitis, HIV, and Sexually Transmitted Infections (BHHS), with additional information collected from BHHS case investigation or partner services interviews for specific infections (e.g., syphilis). Information on race and ethnicity is often missing (approximately 30% of gonorrhea cases)). Trends should be interpreted with caution.
[3] Numbers by age and race and ethnicity may not sum to the total because of records with missing or unknown data.
[4] 2021 data are preliminary. They reflect the impact of COVID-19 and should be interpreted accordingly.