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Increase in *Neisseria meningitidis*–Associated Urethritis Among Men at Two Sentinel Clinics — Columbus, Ohio, and Oakland County, Michigan, 2015

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Neisseria meningitidis (*Nm*) urogenital infections, although less common than infections caused by *Neisseria gonorrhoeae* (*Ng*), have been associated with urethritis, cervicitis, proctitis, and pelvic inflammatory disease. *Nm* can appear similar to *Ng* on Gram stain analysis (gram-negative intracellular diplococci) (1–5). Because *Nm* colonizes the nasopharynx, men who receive oral sex (fellatio) can acquire urethral *Nm* infections (1,3,5). This report describes an increase in *Nm*-associated urethritis in men attending sexual health clinics in Columbus, Ohio, and Oakland County, Michigan.

The Columbus and Oakland County clinics are two of the sites participating in CDC's Gonococcal Isolate Surveillance Project,* through which urethral isolates from the first 25 men evaluated each month with *Ng* urethritis undergo antibiotic susceptibility testing. At both clinics, staff members obtain urethral swabs from men for Gram stain and culture, and urine for nucleic acid amplification testing (NAAT) for *Ng*. During January–November

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*<https://www.cdc.gov/std/gisp/gisp-protocol-may-2016.pdf>.

2014, Columbus documented no cases of presumed *Nm* urethritis (i.e., urethral gram-negative intracellular diplococci, growth of oxidase-positive bacterial colonies on modified Thayer-Martin media, and negative urine NAAT for *Ng*). However, two presumed cases occurred in December 2014. During January–September 2015, a total of 52 cases of urethritis were confirmed to be caused by *Nm* by Analytic Profile Index *Neisseria-Haemophilus* (API NH) (BioMérieux) testing and *sodC* polymerase chain reaction (PCR). Using the same criteria, Oakland County had documented two cases of *Nm* urethritis in 2013, eight cases in 2014, and 15 cases during January–October 2015.

Fifty-two urethral *Nm* isolates from Columbus and 12 from Oakland County were sent to CDC for molecular characterization. All Columbus isolates were non-groupable by slide agglutination serogrouping and serogroup specific PCR. Multilocus sequence typing demonstrated that all isolates were ST-11 and part of the CC-11/ET-37 clonal complex. Eleven of the 12 Oakland County isolates exhibited the same genetic profile as the Columbus isolates.

Demographic characteristics of the Columbus and Oakland County patients were similar (Table). Median age of the Columbus patients was 30.0 years (interquartile range = 24.5–39.0 years); median age of the Oakland County patients was 29.0 years (interquartile range = 18.0–47.0 years). Among all patients, 99% reported heterosexual orientation, and 97% had symptomatic urethritis. Oral sex was reported by 100% of Columbus patients (data on receipt of fellatio was not available) and 93% of Oakland County patients (100% received fellatio). Among Columbus patients, 84% reported two or more sex partners in the preceding 90 days, whereas 56% of Oakland County patients reported two or more partners in the preceding 60 days. Five Columbus patients reported out of state travel during the preceding 60 days, including to New York, Chicago, Miami, Philadelphia, and West Virginia. Travel information was unavailable for Oakland County patients. Based on urethral Gram stain results, 90% of patients were treated for presumed *Ng* infection with the CDC-recommended regimen (6), which is also appropriate treatment for *Nm* urethritis. Vaccination data for the patients were incomplete, but meningococcal vaccination was documented in five Columbus patients (received during 2007–2012) and three Oakland County patients (received during 2007–2009).

Cases of urethritis caused by a clonal strain of *Nm* (non-groupable, ST-11 and CC-11/ET-37) are occurring among primarily heterosexual men seeking sexual health services in Columbus, Ohio, and Oakland County, Michigan. Because the strain appears to be spreading sexually, increased awareness is warranted. Clinicians should treat *Nm* urethritis as they would treat *Ng* urethritis (a single 250-mg dose of intramuscular ceftriaxone plus a single 1-g oral dose of azithromycin) (6). Until more data are available on transmission and sequelae, sex partners of patients with *Nm* urethritis should be treated as they would be for exposure to urogenital *Ng*. Increases in *Nm* urethritis cases above baseline should be reported to CDC via e-mail, nmurethritis@cdc.gov (protected health information should not be sent to this e-mail).

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Table
Characteristics of men with confirmed urethral *Neisseria meningitidis* infection at two sentinel clinics — Gonococcal Isolate Surveillance Project, Columbus, Ohio, and Oakland County, Michigan, 2015

Characteristic	Columbus (N = 52)	Oakland County (N = 15)
	No. (%)	No. (%)
Race		
White	7 (13)	0 (—)
Black	44 (85)	15 (100)
Asian	0 (—)	0 (—)
Other	1 (2)	0 (—)
Ethnicity		
Non-Hispanic	52 (100)	15 (100)
Hispanic	0 (—)	0 (—)
Sexual orientation		
Heterosexual	52 (100)	14 (93)
Homosexual	0 (—)	0 (—)
Bisexual	0 (—)	1 (7)
Symptoms		
Discharge and/or dysuria	51 (98)	14 (93)
No discharge or dysuria	1 (2)	0 (—)
Balanitis	0 (—)	1 (7)
History of self-reported or confirmed episode of previous <i>Neisseria gonorrhoeae</i> infection (lifetime)		
Yes	27 (52)	5 (33)
No	25 (48)	10 (67)
No. of confirmed episodes of <i>N. gonorrhoeae</i> infection (preceding 12 months)		
One	14 (27)	1 (7)
Two	2 (4)	0 (—)
Three or more	1 (2)	0 (—)
No documented previous episodes	34 (65)	14 (93)
Unknown	1 (2)	0 (—)
Most recent HIV status		
Positive (documented or self-reported)	1 (2)	0 (—)
Negative (documented in preceding 3 months)	51 (98)	15 (100)
Exchange sex for drugs or money*		
Yes	8 (15)	0 (—)
No	43 (83)	15 (100)
Unknown	1 (2)	0 (—)
Any injection drug use*		
Yes	1 (2)	0 (—)
No	48 (92)	15 (100)

Characteristic	Columbus (N = 52)	Oakland County (N = 15)
	No. (%)	No. (%)
Unknown	3 (6)	0 (—)
Any noninjection recreational drug use, excluding alcohol (preceding 60 days)[†]		
Yes	20 (38)	10 (67)
No	29 (56)	5 (33)
Unknown	3 (6)	0 (—)
Any antibiotic use (preceding 60 days)		
Yes	2 (4)	NC
No	42 (81)	NC
Unknown	8 (15)	NC
Treatment provided[§]		
Ceftriaxone plus azithromycin	47 (90)	13 (87)
Ceftriaxone plus doxycycline	2 (4)	1 (7)
Ceftriaxone alone	0 (—)	0 (—)
Azithromycin alone	2 (4)	1 (7)
Unknown	1 (2)	0 (—)
Urethral coinfection with <i>Chlamydia trachomatis</i> by NAAT		
Positive	10 (19)	0 (—)
Negative	42 (81)	15 (100)

Abbreviations: HIV = human immunodeficiency virus; NAAT = nucleic acid amplification testing; NC = not collected.

* During the preceding 60 days for Columbus cases and preceding 12 months for Oakland County cases.

[†] Might include drugs such as ecstasy, methamphetamines, crack, cocaine, marijuana, and poppers.

[§] Primary treatment for presumed *N. gonorrhoeae* infection.