

EXTRA-GENITAL GONOCOCCAL AND CHLAMYDIAL INFECTIONS IN OREGON

Earlier this year* (February 2018) we reported on the overall increase in sexually transmitted infections (STI) in Oregon, including chlamydia, gonorrhea, and syphilis, and included information on who should be screened and when, by disease and patient characteristics. This *CD Summary* focuses on a growing subset of these cases, namely extra-genital infections, providing Oregon data, specific screening recommendations, and resources for clinicians on who we rely to help control this public health problem.

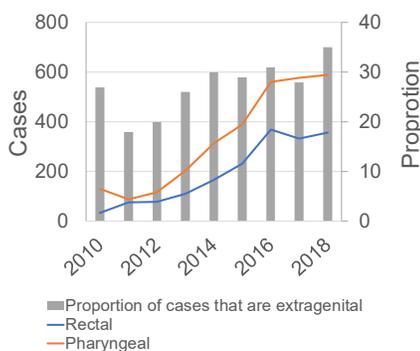
OREGON DISEASE DATA

Since 2010, cases of extra-genital gonorrhea and Chlamydia have increased among both men and women.

Among men, rectal gonorrhea has risen more than 10-fold, from 33 cases in 2010 to 358 cases in 2018 (Figure 1). Pharyngeal gonorrhea has increased more than 4-fold from 131 cases in 2010 to 589 cases in 2018. The proportion of all gonococcal infections that are rectal or pharyngeal increased from 20% in 2010 to 35% in 2018.

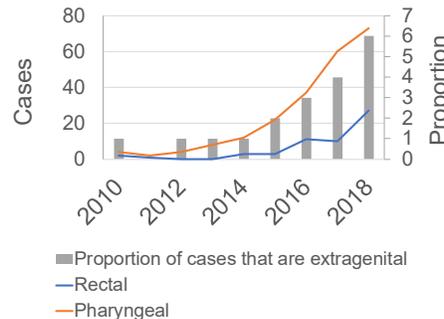
Among women, rectal and pharyngeal gonococcal infections have in-

Figure 1. Extra-genital gonococcal infections among men, Oregon, 2010–2018



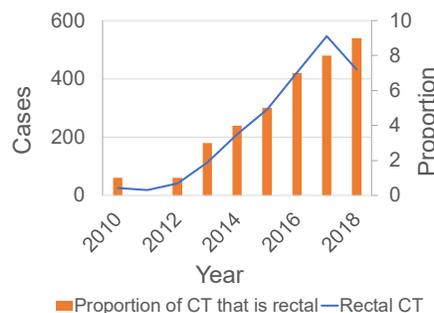
creased exponentially, from two rectal cases in 2010 to 27 in 2018, and four pharyngeal cases in 2010 to 73 in 2018 (Figure 2).

Figure 2. Extra-genital gonococcal infections among women, Oregon, 2010–2018



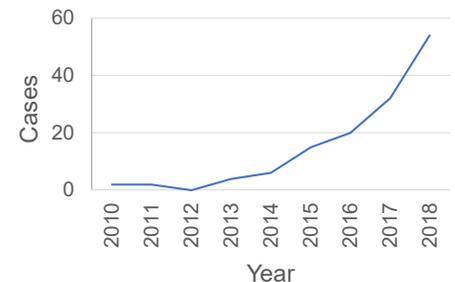
Rectal Chlamydia has increased markedly among men, from 26 cases in 2010, to 432 cases in 2018 (Figure 3). The proportion of Chlamydial infections among men that were rectal increased from 1% to 9% over the same time period.

Figure 3. Rectal Chlamydia among men, Oregon, 2010–2018



Finally, among women, rectal Chlamydia also increased markedly, from two cases in 2010 to 54 cases in 2018 (Figure 4). Because the number of cases of urogenital Chlamydia exceeds

Figure 4. Rectal Chlamydia among women, Oregon, 2010–2018



10,000 cases each year, the proportion of all Chlamydia that is rectal is very low and not presented here.

These increases in cases of extra-genital gonococcal and Chlamydial infections are due to a combination of: increased screening, more sensitive screening methods (i.e., nucleic acid amplification tests), and most importantly, a true increase in disease burden as indicated by the increases in overall gonococcal and Chlamydial infections, and early syphilis cases in Oregon and the United States.

SCREENING RESULTS

Men who have sex men (MSM) are highly vulnerable to extra-genital gonorrhea and Chlamydia. Among MSM, 86% of rectal Chlamydia and 84% of rectal gonococcal infections are asymptomatic.¹ Screening urine only would miss 77% of rectal Chlamydial infections and 95% of rectal gonococcal infections.² Among heterosexual women, screening urine only would miss 6–20% of rectal Chlamydia and 15–30% rectal gonococcal infections.^{3–5}

According to the STD Surveillance Network (SSuN), which collects clinical and behavioral information on a random sample of clients attending the Multnomah STD Clinic, 70% of MSM

* [The Rising Tide of Sexually Transmitted Infections: Oregon, 2017](#)

were screened for rectal STI. Of those men, 15.2% had rectal gonorrhea and 17.6% had rectal Chlamydia. More than 80% were tested for pharyngeal gonorrhea, and 13.5% were positive. By contrast, >90% were screened for urethral infections: 6.4% were positive for gonorrhea and 6.4% were positive for Chlamydia. Put another way, MSM are more likely to have an extra-genital infection than they are to have a urethral infection.

SCREENING FREQUENCY

In a sample of 455 MSM in the Portland Metro area recruited as part of the population-based National HIV Behavioral Surveillance (NHBS) System, only 37% reported being screened for a rectal sexually transmitted infection in the prior 12 months (Table). Ninety percent of the sample saw a health care provider during the same period; however, only 40% of those men reported being screened. Screening was unchanged if a respondent reported being out to their health care provider or if their healthcare provider always or often asked about sex. Only 52% of men who reported receptive anal sex were screened. HIV-positive men (58%, $P = 0.008$) and those on pre-exposure prophylaxis were more likely to be screened (69%, $P < 0.001$) compared to negative men (36%) and men not on pre-exposure prophylaxis (26%), respectively. Among HIV-positive MSM participating in Oregon's Medical Monitoring Project, only 15% were

Table. MSM screened for rectal STI in the last 12 months, Portland, Oregon, 2016†

POPULATION (n)	SCREENED (%)
All (n=455)	168 (37%)
Visited HCP, last 12 months (n=406)	162 (40%)
Out to HCP (n=397)	163 (41%)
Receptive anal sex, last 12 months (n=247)	128 (52%)
HIV test, last 12 months (n=208)	113 (54%)
HCP always/often asks about sex (n=179)	93 (52%)
On PrEP, last 12 months (n=88)	61 (69%)
HIV-positive (n=71)	41 (58%)

† National HIV Behavioral Surveillance System

screened for any extra-genital gonorrhea and Chlamydia and only 11% were screened for rectal infections.

BARRIERS TO SCREENING

In a survey of 28 providers caring for people at risk for extra-genital gonorrhea and Chlamydia, 68% cited lack of time as a barrier to screening for extra-genital infections.⁶ Thirty-nine percent cited patient reluctance (e.g., the patient was tested elsewhere, the patient was "unprepared," or the patient preferred a same-sex provider), 21% reported that they were uncomfortable with the sexual history or exam, and 7% reported that they were unsure about how to collect specimens and felt that they lacked staff support for collecting the specimens.

SCREENING STRATEGIES

To control the current epidemics of STIs, it is paramount that we increase detection of these infections so that they can be treated.

Maintain an opt-out approach to screening for STIs. While sexual histories are an important part of assessment of vulnerability to STIs, they are influenced by patient fears of judgment and stigma and providers time to devote to and, comfort with, talking openly about sex. Instead, the public health approach is to offer patients the array of options for testing for STIs (i.e., blood testing for syphilis and HIV, urine testing for gonorrhea and chlamydia, and swabs of the throat and rectum for gonorrhea and chlamydia) and allow patient to choose which tests apply to them.

Nurse-based screening. One option to increase extra-genital testing for gonococcal and Chlamydial infections is to have nursing staff offer extra-genital screening to patients prior to appointments with their healthcare provider. Nursing staff could perform sample collection or, like collecting a urine for urinalysis, patients and clients may collect their own samples for testing prior to their visit. The author of this *CD Summary* (Dr. Menza, Medical Director of the HIV/STD/TB Section) has also seen success with offering patients nursing visits for STI screening that includes extra-genital screening where a patient or client without symptoms does not need to see a health care provider.

Self-collected rectal and pharyngeal swabs. Data show that self-collection of extra-genital samples is as good

as provider-collection of extra-genital samples among both men and women.⁷ Among HIV-positive patients who were offered and completed self-collection, more than 90% reported that it was easy, that it was comfortable, that they would recommend screening to a friend, and that they would collect samples at home.⁸ Eighty-eight percent reported that they'd prefer to collect their own samples and 77% reported that they would test more often.

Home-based screening. While not universally available and expensive (myLAB Box home testing kits cost \$189–369, mylabbox.com), home-based self-collection for HIV and STI screening is used in many clinical studies and may represent a way to increase asymptomatic routine HIV and STI screening.

FOR MORE INFORMATION

- Oregon Health Authority HIV, STD, and Viral Hepatitis Program www.oregon.gov/oha/PH/DISEASES/CONDITIONS/HIVSTDVIRAL-HEPATITIS/Pages/index.aspx
- 2015 CDC STD Treatment Guidelines www.cdc.gov/std/tg2015/default.htm

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