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Contact: 971-673-1111 | cd.summary@state.or.us | www.healthoregon.org/cdsummary

THE RISING TIDE OF SEXUALLY TRANSMITTED INFECTIONS: OREGON, 2017

On September 26, 2017, the Centers for Disease Control and Prevention (CDC) issued a press release titled, "STDs (sexually transmitted diseases) at record high, indicating urgent need for prevention."* The CDC noted, "More than two million cases of chlamydia, gonorrhea and syphilis were reported in the United States in 2016, the highest number ever." Unfortunately, but not surprisingly, marked increases in sexually transmitted infections (STIs) are occurring here in Oregon as well. This *CD Summary* presents the data from Oregon and provides recommendations for providers for screening, diagnosing, treating, and preventing these infections.

OREGON DATA

Chlamydia, gonorrhea and syphilis are the most common bacterial STIs in Oregon.† During 2017, these three infections continued to increase alarmingly (Figures 1–3), representing indisputable statewide epidemics with little evidence of abating.

Although these diseases have several aspects in common (e.g., all are primarily transmitted through unprotected sexual intercourse, and all have increased significantly over the past 5–10 years), they also have some notable differences (e.g., age, sex, and race distributions), and each presents unique challenges (Figures 4–6).

Dwindling antibiotic choices confound health professionals who treat people with gonorrhea.[1] Ophthalmic morbidity, including blindness, and other seldom-seen manifestations of syphilis are teaching a whole new generation of clinicians and public health professionals about "the great imitator."[2] And tragically, 20 babies were born with congenital syphilis in Oregon during 2015–2017.

Figure 1. Chlamydia reported cases: Oregon, 1988–2017

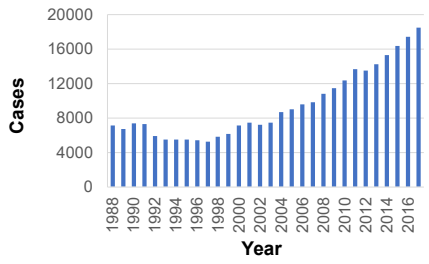


Figure 2. Gonorrhea reported cases: Oregon, 1967–2017

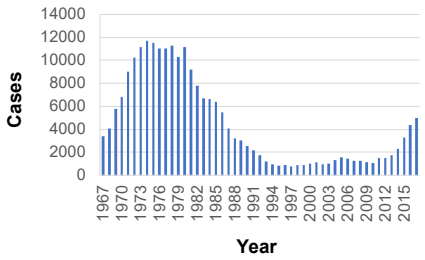


Figure 3. Syphilis: primary, secondary, early latent reported cases: Oregon 1967–2017

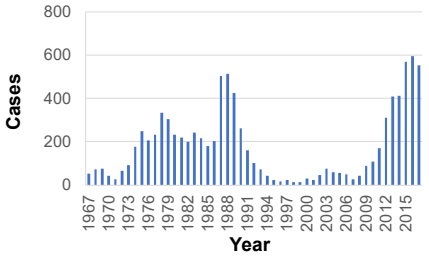


Figure 4. Chlamydia reported cases by age and sex: Oregon, 2017

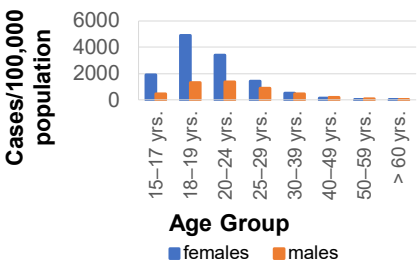


Figure 5. Gonorrhea reported cases by age and sex: Oregon, 2017

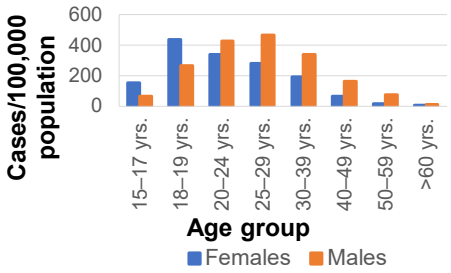
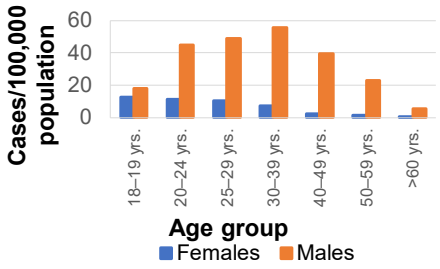


Figure 6. Syphilis: primary, secondary, early latent reported cases by age and sex: Oregon, 2017



WHY IS THIS HAPPENING?

Although some of the increases in reported cases (Figures 7–8, *verso*) can be attributed to increased sensitivity of convenient screening tests (i.e., for chlamydia and gonorrhea), we believe that most of the observed increase represents a true increase in incidence; and after much study far too complex to be understood by nonepidemiologists have concluded that it might have a lot to do with sex.‡ Breaking it down still further, here are some of the specific drivers of the epidemic:

1. increases in intercourse without condoms due to reduced risk of human immunodeficiency virus (HIV) transmission from people with HIV who take anti-retroviral medicines[3];
2. reduced local public health infrastructure and capacity to investigate cases, notify partners and bring them in for screening and treatment[4];

*www.cdc.gov/media/releases/2017/p0926-std-prevention.html

†Sexually transmitted viral infections, including HIV and hepatitis B, are also reportable, but beyond the scope of this *CD Summary*.

‡ the act, that is, not the gender

Figure 7. Incidence rate of gonorrhea and chlamydia by race and ethnicity, Oregon, 2017

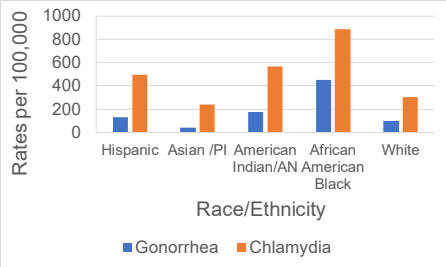
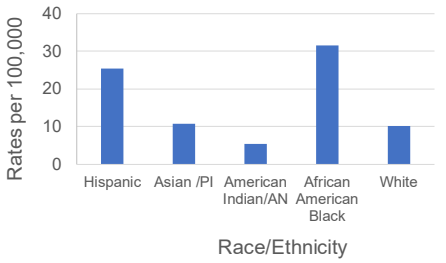


Figure 8. Incidence rate of syphilis by race and ethnicity, Oregon, 2017



3. abundance of mobile apps facilitating "hook-ups" with anonymous sexual partners[5]; and
4. use of methamphetamine and other stimulants, increasing sexual drive while decreasing inhibition.[6]

SCREENING AND TREATMENT: EASIER SAID THAN DONE

An asymptomatic infectious period is common to all three bacterial STIs. This means that transmission can be prevented by frequent screening and treatment of at risk groups to shorten the infectious period. This is the rationale behind measures to test and treat partners. Some evidence suggests that screening of people at highest risk as frequently as every three months is an efficient way to prevent additional infections. In Oregon those at highest risk include:

- men who have sex with men (MSM),
- methamphetamine users,
- people with HIV, and
- people who have previously had the same or another bacterial STI.

Frequent screening requires systematic processes for identifying people who should be screened and ensuring that the screening is done. Currently, most screening tests for STIs take place within health care settings. Yet, little evidence is available to suggest that health care providers consistently collect and record sexual orientation or establish systems to implement regular screening for those who need it that don't overly depend on busy clinicians who are understandably focused on the presenting complaint.

Cost-effectiveness literature provides some support for expanded screening, especially among men who have sex with men, and in corrections and drug-treatment settings. The benefits of screening however, typically accrue to society at large, and not to the financial "bottom line" of the jail, drug-treatment center, or health insurer who incurs the initial cost.[7]

Moreover, for all three STIs, individual short-term morbidity and acuity are low: most people never know they have (or had) syphilis, gonorrhea or chlamydia unless they get tested. Nevertheless, high lifetime incidences of tubal infertility, ectopic pregnancy and chronic pelvic pain are the legacy of unchecked chlamydia and gonorrhea. And even one case of congenital syphilis can cost a young life or result in lifelong disability.

WHAT IS TO BE DONE?

Sexual history. Physicians and other health care providers should make a habit of taking a sexual history from everyone aged ≥13 years, including whether they are sexually active, frequency of sex, number of partners, and gender of sex partners.

Screen and treat. Screening recommendations, based on sexual history for chlamydia, gonorrhea and syphilis are in the Table. In addition, every adult should be screened for HIV at least once — and more frequently for persons in higher-risk groups (e.g., MSM, injection drug users).

Expedited partner therapy (EPT). Health care providers should offer and prescribe treatment for partners of patients diagnosed with gonorrhea or chlamydia, a practice known as "expedited partner therapy," which is not only legal in Oregon, but encouraged by the Oregon Public Health Division and by CDC when partners are unlikely to seek evaluation, testing and treatment. Randomized trials have demonstrated that EPT prevents recurrent infections. Logically, EPT leads to reduced transmission of STIs within a social network.

IT TAKES A VILLAGE

Public health agencies have been making similar recommendations for years with questionable impact. In the absence of game-changing treatment discoveries or immunizations, substantial reductions in STI morbidity will likely require systematic changes that drive comprehensive screening and facilitate treatment.

1. Collecting and recording sexual histories and reflexive screening can be done routinely by someone other than the physician or other licensed health care provider.
2. Offices, clinics, hospitals, and integrated health care systems will need to modify intake procedures to include routine sexual histories, reflexive testing and treatment; create standing orders for screening; and modify the electronic medical record to promote or emphasize sexual history and appropriate screening.
3. Insurers and others could encourage collection of sexual histories and STI screening by reviewing reimbursement practices to ensure that patients don't incur unexpected charges for appropriate STI screening; by creating explicit quality metrics related to sexual history collection and STI screening; and by creating meaningful incentives for these practices.

We need your help! Health care professionals, governmental public health agencies, insurance executives, community organizations, patient advocacy groups, businesses, public policy professionals, economists and academic partners all have a role to play if we are to turn the tide.

FOR MORE INFORMATION

- OHA STD/HIV web page
- Oregon STD Data

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Table. Screening recommendations for bacterial sexually transmitted infections in Oregon*

Disease	Who should be screened	Frequency	Notes
Chlamydia and Gonorrhea			• Everyone with a positive test should be retested 3 months after treatment to screen for reinfection, since reinfection after treatment is very common. • Oropharynx should be screened for gonorrhea if history of oral contact, while screening oropharynx is not recommended for chlamydia.
	Women <25 years of age	At least annually if sexually active	
	Women ≥25 years of age if increased individual risk or high prevalence setting	At least annually if sexually active	• Individual risk factors include: previous STI, recreational drug use (particularly methamphetamine and other stimulants), multiple sex partners, condomless intercourse. • High-prevalence settings include, but are not limited to: correctional facilities, adolescent clinics, and sexually transmitted disease clinics.
	Young men if increased individual risk or high prevalence setting	At least annually if sexually active	• Individual risk factors include: previous STI, men who have sex with men, recreational drug use (particularly methamphetamine and other stimulants), multiple sex partners, condomless intercourse. • High-prevalence settings include but are not limited to, correctional facilities, adolescent clinics, and sexually transmitted disease clinics.
	Men who have sex with men	At least annually if sexually active	Test at sites of contact: • urethra and rectum for chlamydia; • urethra, rectum, and oropharynx for gonorrhea • screen as often as every three months if at increased risk.
	People with HIV infection	At least annually if sexually active	
	Pregnant women <25 years of age	At prenatal visit	• Individual risk factors include: previous STI, recreational drug use (particularly methamphetamine and other stimulants), multiple sex partners, condomless intercourse. • High-prevalence settings include, but are not limited to: correctional facilities, adolescent clinics and sexually transmitted disease clinics. • Pregnant women should undergo test for cure 3–4 weeks after treatment.
	Pregnant women ≥25 years of age if increased individual risk or high prevalence setting	At prenatal visit	Pregnant women should undergo test for cure 3–4 weeks after treatment.
Syphilis			Screen for syphilis by collecting serum for Rapid Plasma Reagin (RPR) test initially followed by a treponeme-specific antibody test such as *Treponema pallidum* Partical Agglutination test (TPPA) if feasible. Alternatively, use a so-called “reverse algorithm” that tests serum initially for treponemal antibodies, usually via an automated immunoassay, followed by RPR if initial antibody test is positive. Reverse-algorithm testing has become common among commercial laboratories in Oregon.
	Sexually active people with HIV	At least annually	
	Sexually active men who have sex with men	At least annually	Screen as often as every three months if at increased risk.
	Sexually active people who use recreational drugs, particularly methamphetamine and other stimulants	At least annually	
	All pregnant women	• First prenatal visit • 28 weeks’ gestation • At delivery	Increased screening is recommended due to ongoing syphilis epidemic and increases in congenital syphilis in Oregon.

*The careful reader will note that these recommendations differ slightly from CDC’s (www.cdc.gov/std/tg2015/screening-recommendations.htm) for sexually transmitted disease screening either to simplify or consolidate (chlamydia and gonorrhea) or to include additional recommendations as a consequence of ongoing epidemics (syphilis and gonorrhea) in Oregon.

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