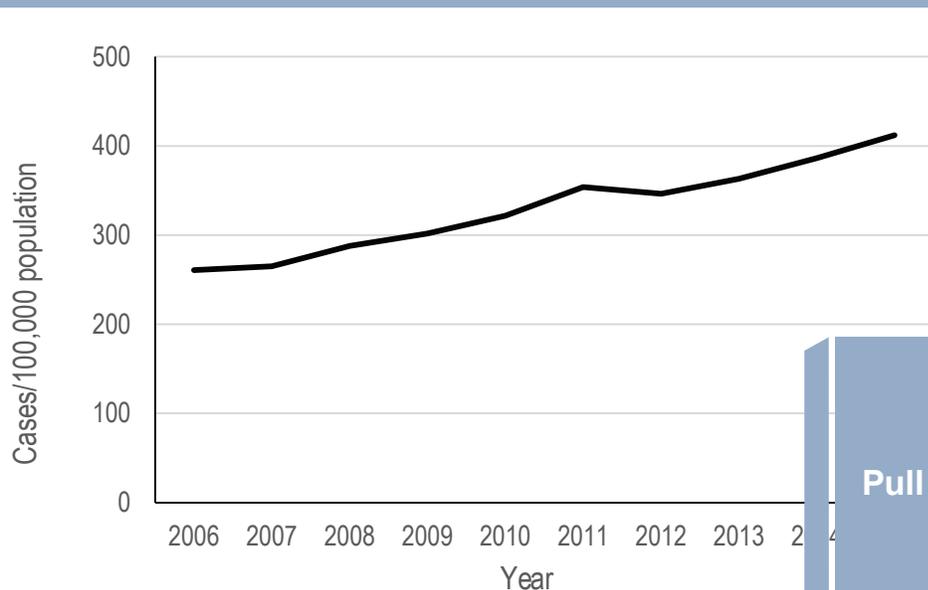


Sexually-transmitted infections are an age-old problem that have been with us since... well, since

Chlamydia—Is More Less?

Healthcare providers and laboratories reported more than 16,000 cases (412 per 100,000 people) of *Chlamydia trachomatis* infection (henceforth 'chlamydia') during 2015, helping it easily retain its position as the most commonly reported communicable disease in Oregon and continuing nearly uninterrupted annual increases of 5% a year for over a decade (Figure 1A). Chlamydia occurs most frequently in young people (Figure 2A, page 2); 65% of all reported cases in Oregon during 2006–2015 occurred in men and women <25 years and, 91% of cases occurred in people under age 35.

Figure 1A. Chlamydia Incidence, Oregon, 2006–2015



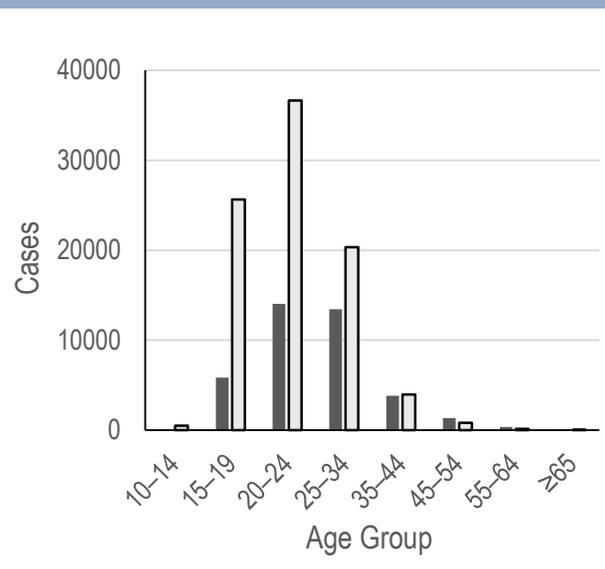
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Paradoxically, increases in reported chlamydia don't necessarily mean chlamydia occurs more frequently. Nowadays almost all chlamydia cases are reported electronically—and automatically—by clinical laboratories. Reduced reliance on beleaguered healthcare providers to report cases probably leads to better 'capture' of incident diagnoses.

Charles Brown
Driftin' Blues

Abundant, convenient, affordable, and accurate screening for chlamydia contributes to increases in the proportion of infections that are recognized. More people have access to screening through health insurance; and chlamydia screening is a typical comparative healthcare quality indicator. This “more-screening-leads-to-more-reported-cases-leads-to-fewer-prevalent-cases” logic finds support in data from the National Health and Nutrition survey which suggest that overall prevalence of chlamydia (<2%) among the US population aged 14–39 years did not increase since 2007.¹ Chlamydia might be an example of a reportable condition for which more is less.

Figure 2A. Chlamydia cumulative incidence by age group, Oregon, 2006–2015

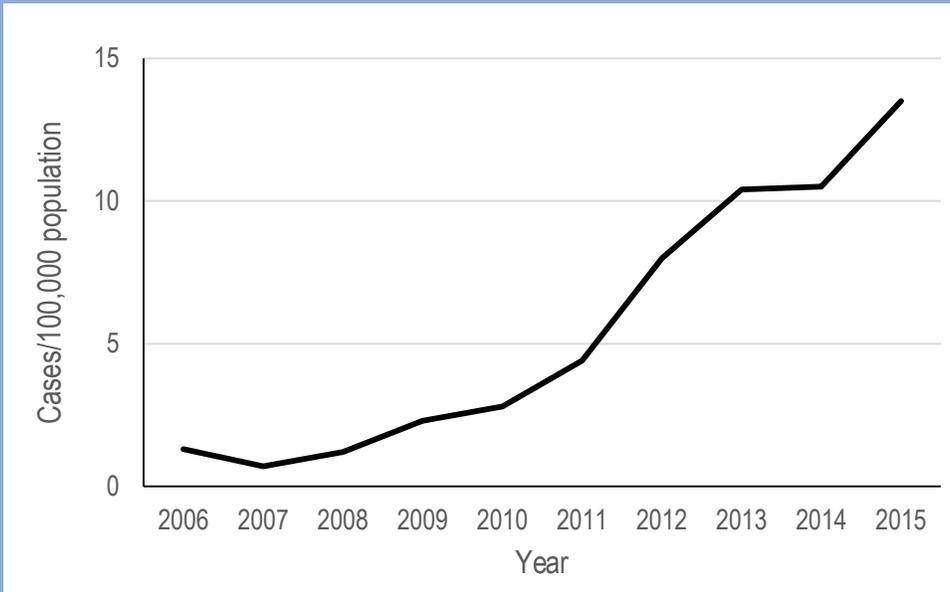


Unfortunately, as case burdens mount and resources dwindle, public health personnel in almost all parts of Oregon lack capacity to interview patients to verify treatment, identify and offer testing or treatment to recent sex partners. More than ever, if healthcare providers don't treat cases, and inquire about partners and encourage them to be tested and treated, it simply doesn't get done. In Oregon, healthcare providers can also legally use expedited partner therapy (EPT), also known as patient-delivered partner therapy, to give treatment or a prescription for treatment to a patient intended for use by one or more sex partners. This can help ensure that partners are treated and prevent further spread. Providers can find more information on EPT including guidelines, frequently asked questions, and patient brochures on the Oregon Health Authority Sexually Transmitted Disease Program website at: www.healthoregon.org/std. In addition, one of the most efficient ways to find and treat cases of Chlamydia is to systematically re-test everyone with a diagnosed infection three months after treatment. Re-infection is quite common (another reason to sprinkle EPT liberally).

All syphilis, all the time

Syphilis continued its emphatic recrudescence during 2015, perhaps exacting retribution for audacious aspirations to eliminate it (Figure 1B, page 3).² After a statewide nadir of 26 cases (<1 per 100,000 population) in 2007, reported cases of early and potentially infectious

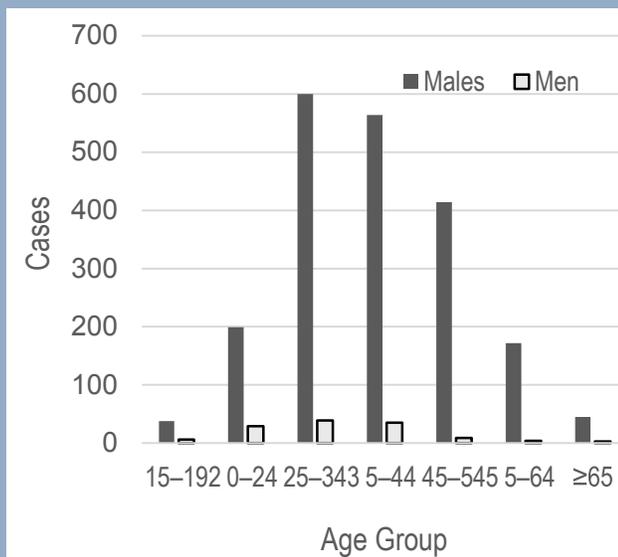
Figure 1B. Early Syphilis* Incidence, Oregon, 2006–2015
 *includes primary, secondary and early latent stage infections



syphilis¹ increased by over 1500%.² through the end of 2015 to 537³ (13.5/100,000) (a 29% increase over 2014).

Men, aged 25 to 54 years continue to account for the most reported infections. (Figure 2B) During the past decade, 60% of men with early syphilis who were asked reported that they had had sex with another man, and 41% of those same men (and a few women) with early syphilis also had pre-existing HIV infection. We recommend that providers take and record a sexual history from all adult patients, even if limited to inquiring about the sex(es) of their patients' sex partners and number of recent partners. Men who have sex with other men, people who have HIV and people who use illicit drugs such as but not limited to heroin, methamphetamine, and cocaine should be tested at least once a year regardless of self-reported sexual history, and every three months for those who are sexually active with multiple partners. Doing anything 4 times a year can be difficult, so OHA has

Figure 2B. Early Syphilis* Incidence, Oregon, 2006–2015
 *includes primary, secondary and early



1 Includes primary, secondary and early latent syphilis infections.
 2 In epidemiological terms, a “ton,” a “gob,” or a “whole mess o’ cases”
 3 As of December 31, 2015

created a web-based system called *Oregon Reminders*⁴ that anyone can use to set up reminders to take medicines, or get screening.

While accounting for fewer than 10% of cases during 2015, cases among women doubled again during 2015 over 2014, continuing a 4-year long trend. Unfortunately, 82% of reported early cases among women during 2006–2015 occurred in women of child-bearing age 20–44 years. After being mostly absent from Oregon for years, congenital syphilis reappeared during 2014 (2 cases) and 2015 (6 cases), including one stillbirth and one live premature newborn born with

Figure 3. Congenital syphilis, Oregon, 2006–2015

intrauterine growth delay and other syphilis-related abnormalities born to an untreated mother (Figure 3). Other reported congenital cases met epidemiologic case definitions, related to delayed diagnosis and treatment of the mother, or laboratory abnormalities identified during neonatal evaluation and were appropriately treated but fortunately, lacked outward evidence of congenital abnormalities related to syphilis.

Centers for Disease Control and Prevention, American College of Obstetrics and Gynecology and the U.S. Preventive Services task force all recommend screening pregnant women for syphilis at the beginning of the third trimester (28 weeks gestation) and at delivery in addition to universally recommended screening during the first trimester (typically before 12 weeks gestation) in “communities and populations in which the prevalence of syphilis is high.” While absolute numbers of congenital syphilis cases remain low in Oregon, the relative

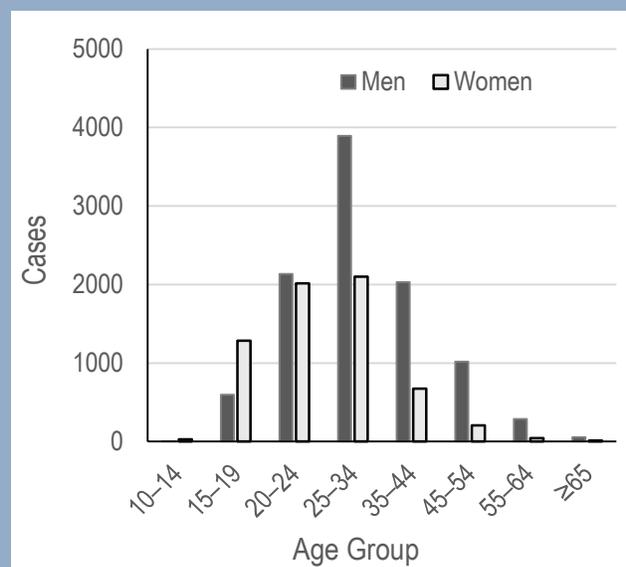
increase from a baseline of fewer than 1 case in three years to 4 cases per year during 2014 is very large. Consequently, we recommend that prenatal providers in Oregon test pregnant women for syphilis at 28 weeks and again at delivery. We recognize that evidence for this recommendation is admittedly sparse, and cost-effectiveness in question.³ On the other hand, congenital syphilis is a catastrophe and the cost of screening is low. Three of Oregon’s eight congenital infections during the past two years could conceivably have been prevented had their provider conducted a second screening at 28 weeks after an early pregnancy screen was negative. Risk-based, or geographically targeted screening would miss cases: only 50% of (80) infections in women during 2013–2015 occurred in women who reported a known risk factor such as previous sexually transmitted infection or illicit substance use. Geographically, cases occurred in 5 different counties, some well-outside the metropolitan area. Providers can find helpful resources on implementing screening, syphilis trends in Oregon, and interpretation of test results on the OHA Website at <https://public.health.oregon.gov/DiseasesConditions/HIVSTDViralHepatitis/SexuallyTransmittedDisease/Pages/spr.aspx>. In addition, OHA created a website for the public and for providers to learn about syphilis and syphilis screening (www.syphaware.org). Visitors can learn about the syphilis epidemic and take a quiz to find out whether they should be screened.

Gonorrhea. If not for syphilis...

...Gonorrhea would *make us sad and blue, we wouldn't even see the*

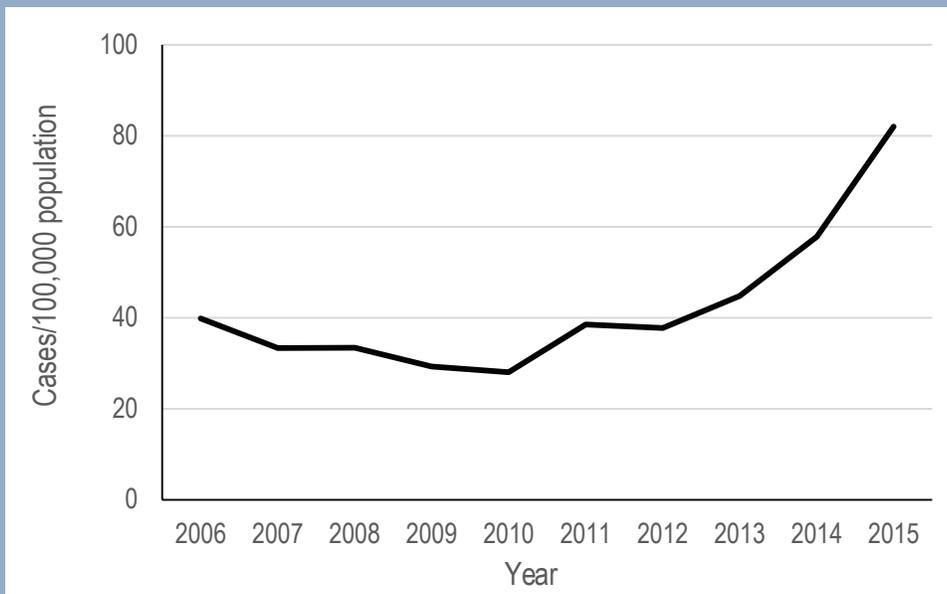
floor. Indeed we're plagued by concurrent gonorrhea and syphilis epidemics (syndemic?) in Oregon, and the U.S. as a whole. Reported cases of gonorrhea rose from 39.8 (1460 cases) in 2006 to 82.0 (3254) reported cases/100,000 population in 2015. In the recent past (c. 2005), gonorrhea was an endemic illness among young heterosexual men and women, with women making up more of the reported cases, probably because they're substantially more likely to receive prenatal care (alright, infinitely) and to seek routine medical care, which presents an opportunity for diagnosis. Gonorrhea incident in Oregon was stable—approximately 30 cases per 100,000....

Figure 2C. Gonorrhea cumulative incidence by age group and sex, Oregon, 2006–2015



manageable. Verily, cases among that demographic have risen slightly since 2006. But those are now augmented by even greater numbers of cases among men aged 25–50 years, many of whom have sex with other men, the same population currently at highest risk of syphilis. Again, like syphilis, at 7% of cases, people with HIV comprise a disproportionate share of reported gonorrhea cases.

Figure 1C. Gonorrhea Incidence, Oregon, 2006–2015



Dear departed 2015 did leave us a smidge of comfort. Apprehension persists about the potential for emergence of antimicrobial resistance among *N. gonorrhoeae*, but elevated minimum inhibitory concentrations of cephalosporins remained absent among isolates tested by the national Gonorrhea Isolate Surveillance Project.

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2. Centers for Disease Control and Prevention. Syphilis Elimination Effort. Available at

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3. Albright CM, Emerson JB, Werner EF, Hughes BL. Third-trimester prenatal syphilis screening. A cost-effectiveness analysis. *Obstetrics and Gynecology*. September 2015; 126(3):479–85

Arbo chart Title goes here

	Disease #1	Disease #2	Disease #3
Virus Species, Genus (Family)	Chikungunya, Alphavirus (Togaviridae) First isolated in Tanzania, 1952	Chikungunya, Alphavirus (Togaviridae) First isolated in Tanzania, 1952	Chikungunya, Alphavirus (Togaviridae) First isolated in Tanzania, 1952
Reservoir	Humans, monkeys, rodents, birds	Humans, monkeys, rodents, birds	Humans, monkeys, rodents, birds
Vector/ Distribution	<i>Aedes aegypti</i> & <i>Ae. albopictus</i> <i>Distribution: East coast, SE U.S., (including Texas)</i>	<i>Aedes aegypti</i> & <i>Ae. albopictus</i> <i>Distribution: East coast, SE U.S., (including Texas)</i>	<i>Aedes aegypti</i> & <i>Ae. albopictus</i> <i>Distribution: East coast, SE U.S., (including Texas)</i>
Transmission	Human-to-vector-to human (anthroponotic)	Human-to-vector-to human (anthroponotic)	Human-to-vector-to human (anthroponotic)
Incubation	3-7 days (range: 1-12 days)	3-7 days (range: 1-12 days)	3-7 days (range: 1-12 days)
Disease-World	Countries around the Indian Ocean, Philippines, Caribbean, Africa, Europe, El Salvador	Countries around the Indian Ocean, Philippines, Caribbean, Africa, Europe, El Salvador	Countries around the Indian Ocean, Philippines, Caribbean, Africa, Europe, El Salvador
Disease-U.S.	Puerto Rico	Puerto Rico	Puerto Rico