

Central Oregon Public Health Quarterly

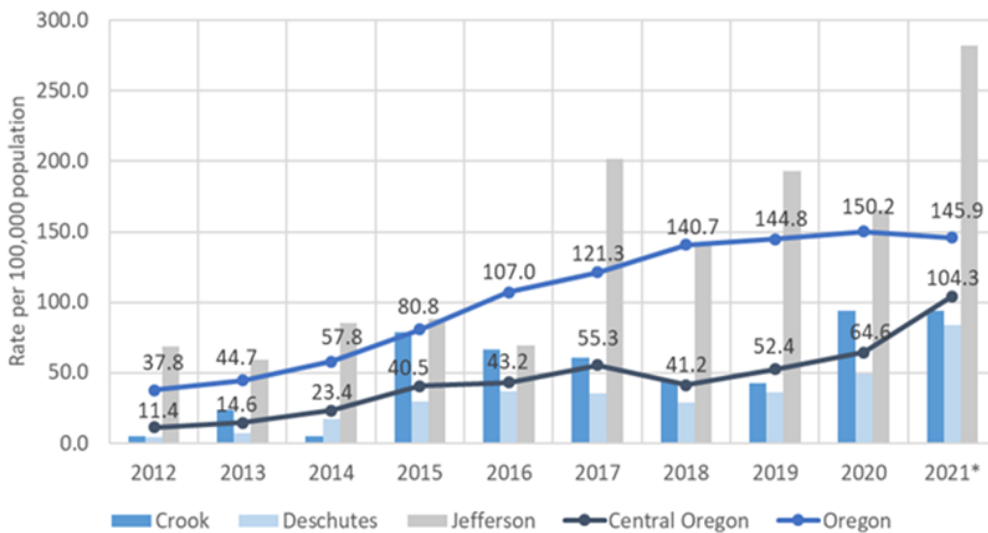
Communicable Disease Update for Crook, Deschutes, and Jefferson Counties
Fourth Quarter, 2021

24/7 Communicable Disease reporting lines: : Crook County: 541-447-5165 : Deschutes County: 541-322-7418 : Jefferson County: 541-475-4456

Spotlight on: Gonorrhea

Figure 1

Regional and Statewide Gonorrhea Rates 2012-2021



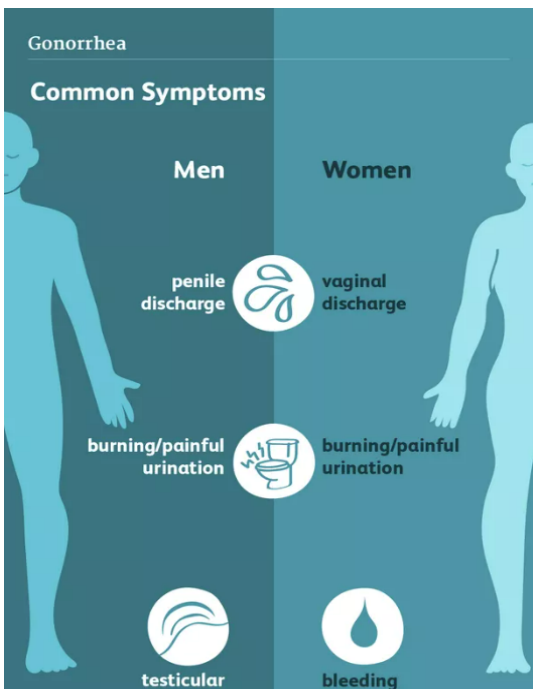
Gonorrhea Rates in Oregon (OR) & Central OR have been increasing over the past 10 years

- Rates of Gonorrhea in Oregon (OR), Central Oregon (OR), & the U.S. have been **increasing over the past 10 years**
- From 2017-2022, rates in **Jefferson County have been particularly high** ($\geq 2X$'s) compared to Crook & Deschutes County (see fig. 1)
- While the majority of new cases in OR (~80%) are diagnosed in urban areas, **the greatest increases in gonorrhea diagnoses (2019-2020) have been in frontier areas (an increase of 197%)** [Oregon Health Authority (OHA), May, 2022]

*Data are provisional and subject to change.

Note: Rates are calculated using population estimates from: the 2020 Annual Population Report from Portland State University's College of Urban & Public Affairs Population Research Center & 2019 housing & demographic data from the U.S. Census Bureau's American Community Survey (ACS)

Gonorrhea at a Glance: Symptoms & Demographics



*<https://www.verywellhealth.com/symptoms-of-gonorrhea-2329059>

Note: 10-15% of men and ~80% of women have **no symptoms**

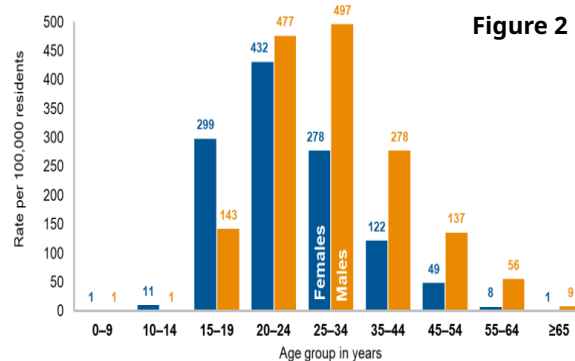


Figure 2

- In OR (see fig. 2 on left), **incidence was highest among males (25-34) & females (20-24)**

- From 2014-2018 in OR, the **rate among males increased 129%** (78 to 178 cases per 100,000 males) & **among females 174%** (39-107 cases per 100,000 females)

{<https://www.oregon.gov/oha/PH/ABOUT/Documents/indicators/gonorrhea.pdf>}

- One of the **populations disproportionately impacted by gonorrhea include men who have sex with men (MSM)** (see fig. 3)

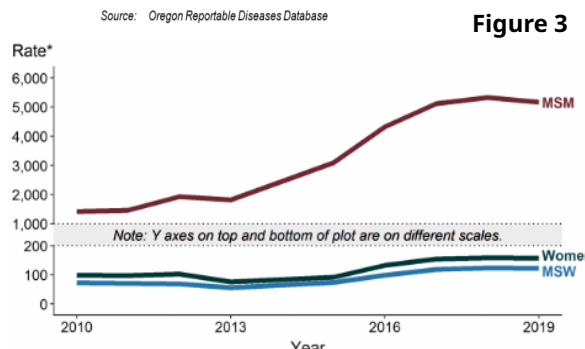


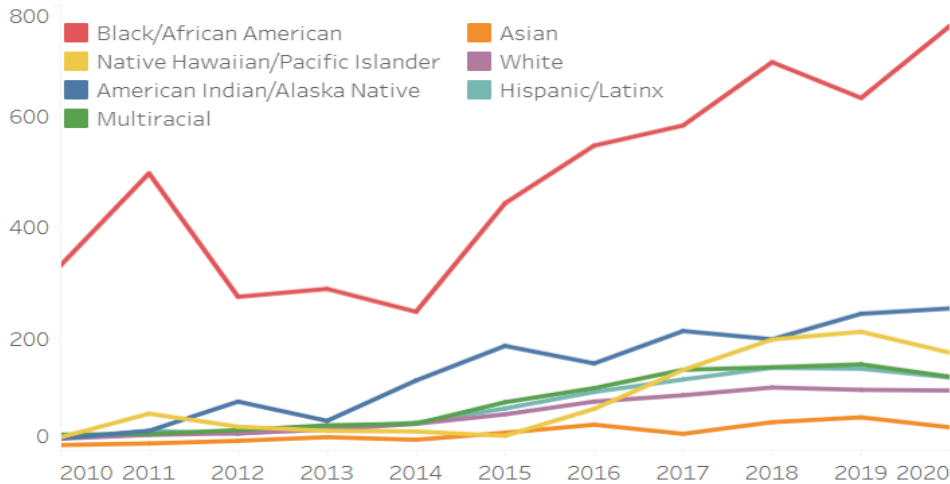
Figure 3

MSM=Men who have sex with men; **MSW**=Men who have sex with women
{<https://www.cdc.gov/std/statistics/2019/overview.htm>}

Gonorrhea: Racial/Ethnic Differences

Figure 4

Black/African Americans had higher gonorrhea incidence rates in the last decade than any other racial/ethnic groups.



- In Oregon, **Black/African Americans are disproportionately affected by gonorrhea** (see fig. 4*, left)
- Similarly, the Centers for Disease Control (CDC) (2018) reported **overall rates of gonorrhea cases among Blacks in U.S. were 7.7 X's the rate among Whites**
 - Black males were 8.5 times the rate of White males
 - Black females were 6.9 times the rate among White females [\[https://www.cdc.gov/nchhstp/healthdisparities/africanamericans.html\]](https://www.cdc.gov/nchhstp/healthdisparities/africanamericans.html);

*[Oregon Health Authority \(OHA\)](#), updated as of May 27, 2022

Factors Impacting Recent Rate Increases



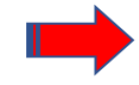
Why have some of the greatest increases in gonorrhea in recent years occurred in frontier areas* across OR?



Scarcity of Sexually Transmitted Infection (STI) care services & interruption of these services by COVID-19 may have contributed to a disproportionate increase in rural areas [{OHA, 2022}](#)



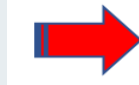
Why do blacks disproportionately experience a high burden of infections caused by gonorrhea?



Some factors that may play a role include: **barriers to health care access; racial residential segregation; & concentrated poverty** (associated with an increased likelihood of being in a **high risk sexual network**) [\[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2845836/\]](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2845836/)



What about the increase in online dating/hook-up sites?



With the increase in mobile dating websites & applications, people are able to network quickly-**increasing the potential for sexual encounters & risky sexual behaviors**

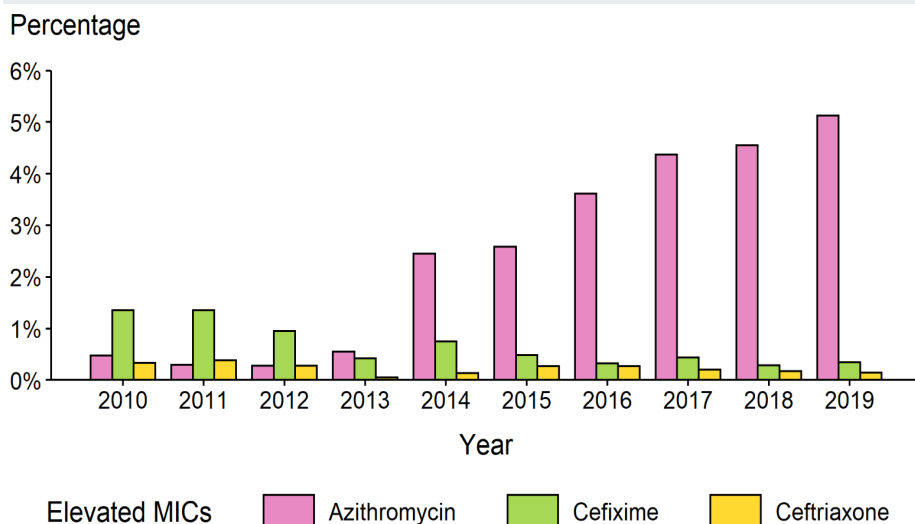
While this is a current active area of research, investigators speculate this may be a **contributing factor to increasing STIs** across the world [\[PMID: 33444190\]](https://pubmed.ncbi.nlm.nih.gov/33444190/)

*Frontier areas in Oregon are defined as those counties with ≤ 6 people per square mile

Photos courtesy of: [frontierus.org](https://www.frontierus.org) (top photo) & [freepik.com](https://www.freepik.com) (bottom 2)

Treatment Considerations for the Future

Figure 5. Percentage of Isolates with Elevated Minimum Inhibitory Concentrations (MICs) to Three Commonly Administered Antibiotics for Treating *Neisseria gonorrhoeae*



- As with other bacterial infections, *Neisseria gonorrhoeae* can quickly develop resistance to antibiotics
- In 2019, nearly [half of all infections in the U.S. were estimated to be resistant to at least 1 antibiotic](#)
- From 2010-2019, almost all circulating strains of gonorrhea in the U.S. **remain susceptible to ceftriaxone**
- Updated **treatment guidelines** released by CDC (Dec. 2020) recommend [a single 500mg intramuscular dose of ceftriaxone](#) [\[for uncomplicated gonorrhea\]](#);
- [Ongoing gonorrhea treatment surveillance](#) should remain a public health priority to **maintain high quality of care & address the threat of antimicrobial-resistant strains**

Figure source: <https://www.cdc.gov/std/statistics/2019/overview.htm>