# SEXUALLY TRANSMITTED INFECTIONS

## 2021 ANNUAL REPORT

Published November 2023

### Honoring the Unsung Heroes

**Office of STI Control**
Bureau of Infectious Disease and Services
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ARIZONA DEPARTMENT OF HEALTH SERVICES

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# Executive Summary

STIs have been increasing in Arizona over the years. From 2020 to 2021, **syphilis** had the highest percent increase (**29%**). In 2021, Arizona had the **highest congenital syphilis rate** in the U.S.

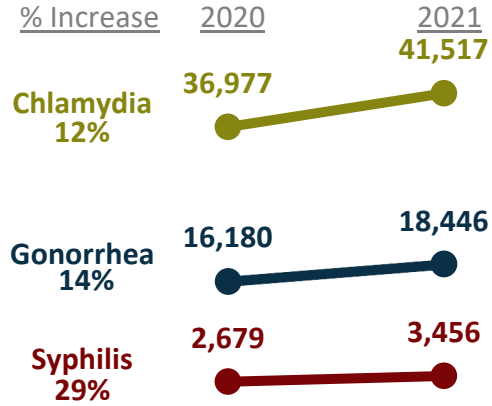
## Why do we monitor STIs?

STIs are serious infections that can lead to severe outcomes if left untreated, including infertility.[1] People with an STI are also more likely to become infected with HIV.[2]

## How common are STIs?

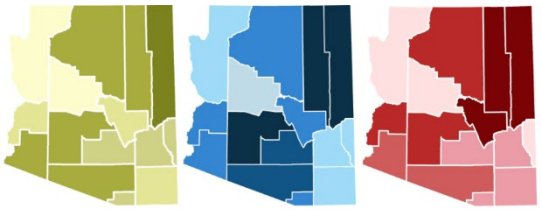
STIs have been increasing in Arizona for years. Case counts temporarily decreased in 2020 due to the impact of COVID-19. However, case counts rebounded with 63,600 cases reported in 2021.


**Chlamydia** continues to be the most common reportable STI in Arizona, followed by **gonorrhea** and **syphilis***.




*Includes primary, secondary, and early latent syphilis cases.

**Chlamydia, gonorrhea,** and **syphilis** are widespread.



*Darker shades indicate a higher rate.

## Syphilis in Arizona

In one year, Arizona's number of new (primary, secondary, and early latent) syphilis cases increased by 29%. Although males continue to make up the largest proportion of syphilis cases, the increase of syphilis among females is a serious concern. Largely reflecting the increase in syphilis among females of childbearing age, Arizona's **congenital syphilis** cases **increased** by **52%** from 2020 to 2021. In 2021, Arizona had the **highest rate of congenital syphilis** in the U.S. with a rate of **237** compared to the U.S. rate of 78.[3] Regular testing and appropriate treatment for syphilis in pregnant persons can help prevent syphilis infection in babies. The increase in congenital syphilis highlights missed opportunities for prevention.

**References**

1. Centers for Disease Control and Prevention. 10 Ways STDs Impact Women Differently from Men – CDC Fact Sheet. https://www.cdc.gov/std/health-disparities/STDs-Women-042011.pdf.
2. Centers for Disease Control and Prevention. STDs and HIV-CDC Detailed Fact Sheet. https://www.cdc.gov/std/hiv/stdfact-std-hiv-detailed.htm.
3. Centers for Disease Control and Prevention. National Overview of STDs, 2021. https://www.cdc.gov/std/statistics/2021/overview.htm#Disparities.

# Disease Intervention Specialist (DIS)

The work of DIS is integral to STI intervention and surveillance. DIS are public health professionals who investigate cases and link exposed partners to testing, treatment, and additional services to help prevent and control STIs.[1]

## Who are DIS?

Disease Intervention Specialists (DIS) are professionals who help people diagnosed or exposed to STIs. DIS assist with partner notification and provide information for testing, treatment, and other resources.

## What services do DIS provide?

DIS help find people who might have an STI or were exposed to one. They provide education about the infection and ensure that individuals receive the right treatment to feel better and stop the infection from spreading.

"Through **helping patients** navigate linkage to care and treatment services, I provide the support and education our community needs when facing a new STI diagnosis." - Arizona DIS

DIS also assist with partner notification, by notifying exposed partners and connecting them to care without revealing how they received their information.

DIS help reduce the chances of getting an STI in the future by creating a risk reduction plan that best fits the individual. When a person talks to a DIS, everything is confidential. They will not share any information with partners or family members of the patient. DIS are important because they reduce stigma, provide education, and support clients by understanding their needs to offer appropriate resources. DIS can help patients find testing or treatment locations nearby and address any questions about the STI. DIS may be present at outreach events providing education and testing services to the community. They can also provide referrals and resources for housing, food, and transportation. Their goal is to support patients by providing the right information to stay healthy and reduce the stigma associated with STIs.

"By being sex positive and **meeting clients where they're at**, I feel I contribute to reducing stigma and other barriers related to sexual health." - Arizona DIS

## Impact of DIS in Arizona

In 2021, DIS helped ensure over **1,800** Arizonans exposed to an STI **received testing**, and more than **1,600 were preventively treated**.

"I impact the community by being a **representative** of a portion of the community we serve in Arizona. I feel that I can relate to people who are…similar…and I am able to provide partner services in an empathetic way." - Arizona DIS

**DIS interviewed 1,508 Arizonans infected with an STI** in 2021 within one week of their diagnosis. Of early syphilis cases, DIS helped ensure **75% were adequately treated within two weeks** of their diagnosis.

**References**

1. Centers for Disease Control and Prevention. Disease Intervention. https://www.cdc.gov/std/projects/disease-intervention/default.html.

# Prevention

**STI prevention** saves lives.

Controlling the spread of STIs in Arizona requires a broad effort, including the **public**, **healthcare providers**, and **health departments**.

## Prevention saves lives

Pregnant women infected with an STI can pass the infection to their child during gestation or at delivery, causing the baby to develop serious health problems if not treated. Untreated syphilis is particularly severe and can lead to miscarriage, stillbirth, and infant death.

**In Arizona, pregnant women should be screened at their first prenatal visit, third trimester, and delivery.[1]**

## How can you prevent STIs?

Use condoms or other prevention methods when having any type of sex. If you live in Arizona and need condoms, visit NicePackage.org for a free delivery once every month.

Reduce number of anonymous sex partners.

Get tested for STIs between partners. Visit this CDC website to find free/low-cost STI testing near you.

Evaluation, treatment, and counseling of sex partners of persons who are infected with an STI.[2]

**Condoms are effective in reducing risk for: HIV, syphilis, chlamydia, gonorrhea, hepatitis B, trichomoniasis, HPV, and herpes.[3]**

## How can healthcare providers help prevent STIs?

Providers can help by adhering to current treatment guidelines, working closely with their local health department to treat and follow up with partners, and using the clinical consultation network. For patients with chlamydia or gonorrhea, healthcare providers can offer additional medication to treat partners without performing a physical exam. Expedited partner therapy (EPT) allows for cost-effective and timely treatment of partners and helps prevent re-infection.

## STIs control successes

In 2021, the Arizona Department of Health Services (ADHS) provided funding to **screen both uninsured and underinsured people**, local health departments **treated 1,425 partners**, and **167 potential congenital cases were prevented**.

**References**

1. Arizona Department of Health Services. Congenital Syphilis - Providers. https://www.azdhs.gov/preparedness/epidemiology-disease-control/disease-integration-services/std-control/congenital-syphilis/index.php#cs-providers.
2. Centers for Disease Control and Prevention. Clinical Prevention Guidance. https://www.cdc.gov/std/treatment-guidelines/clinical.htm.
3. Centers for Disease Control and Prevention. Primary Prevention Methods. https://www.cdc.gov/std/treatment-guidelines/clinical-primary.htm.

# Chlamydia and Gonorrhea

**Chlamydia is the most commonly reported bacterial STI in Arizona and the US.[1]**

In Arizona, 41,517 new cases of chlamydia were reported in 2021, which accounted for the majority of all reported STIs.


## Symptoms and adverse outcomes

Most chlamydia infections are asymptomatic. However, for persons that develop symptoms, they may include: a burning sensation while urinating and abnormal vaginal, penile, or rectal discharge.[1]

An untreated chlamydia infection can lead to additional health problems. Women may develop pelvic inflammatory disease (PID), which can lead to an abscess, chronic pelvic pain, infertility, or ectopic pregnancy. Prompt treatment with antibiotics is key to preventing permanent scarring and damage to reproductive organs. If women do not respond to PID treatment, surgery may be required.[2] Men are at risk of developing inflammation of the tube that carries sperm, along with testicular pain and swelling.[1]

## Screening guidelines

Screening guidelines vary by gender for chlamydia. Sexually active women are recommended to have routine screening, resulting in women being more likely to be tested in comparison to men.[1] Due to the difference in guidelines, nearly 64% of reported chlamydia cases in Arizona were in women.

**Gonorrhea is the second most commonly reported bacterial STI in Arizona and the US.[2]**

Gonorrhea is another common bacterial STI that can infect the genitalia, throat, and rectum.[3] In Arizona, there were 18,446 cases reported in 2021.

## Symptoms and adverse outcomes

Similar to chlamydia, gonorrhea can infect both men and women, and most infections are asymptomatic. When symptoms do occur, men typically experience painful urination and urethral discharge, while women may develop painful urination, vaginal discharge, and vaginal bleeding.[3]

When a gonorrhea infection remains untreated, both men and women are at risk for further complications. Women are at risk of developing PID and men may develop inflammation of the tube which carries sperm, both of which can lead to infertility.[3]

## Antibiotic resistance

**Gonorrhea bacteria can quickly develop resistance to antibiotics, so adhering to treatment guidelines is key.[4]**

Each month, specimens from Arizona are tested for antibiotic resistance to ensure recommended treatments remain effective. More than **400 specimens were submitted for testing**, and **NONE demonstrated resistance** to ceftriaxone, the recommended gonorrhea treatment in 2021.

Chlamydia and gonorrhea are treated with antibiotics; review the current treatment guidelines here.

**References**

1. Centers for Disease Control and Prevention. Chlamydia – CDC Detailed Fact Sheet. https://www.cdc.gov/std/chlamydia/stdfact-chlamydia-detailed.htm.
2. Centers for Disease Control and Prevention. Pelvic Inflammatory Disease (PID) – CDC Detailed Fact Sheet. https://www.cdc.gov/std/pid/stdfact-pid-detailed.htm.
3. Centers for Disease Control and Prevention. Gonorrhea – CDC Detailed Fact Sheet. https://www.cdc.gov/std/gonorrhea/stdfact-gonorrhea-detailed.htm.
4. Centers for Disease Control and Prevention. National Overview. https://www.cdc.gov/std/statistics/2021/overview.htm.

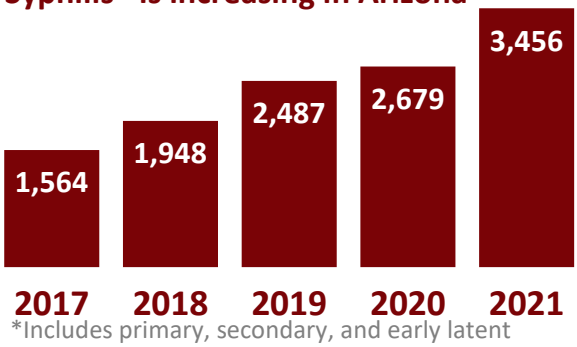
# Syphilis: It's Complicated but Curable

**Syphilis** can only be spread if the person is **symptomatic** or **pregnant**; however, the symptoms of syphilis can be subtle and often missed.

Syphilis infection can lead to **severe outcomes** in untreated people, including vision and hearing loss.

All stages of syphilis can be treated with **antibiotics**.

## Syphilis* is increasing in Arizona




*Includes primary, secondary, and early latent syphilis cases.

## Syphilis can be severe

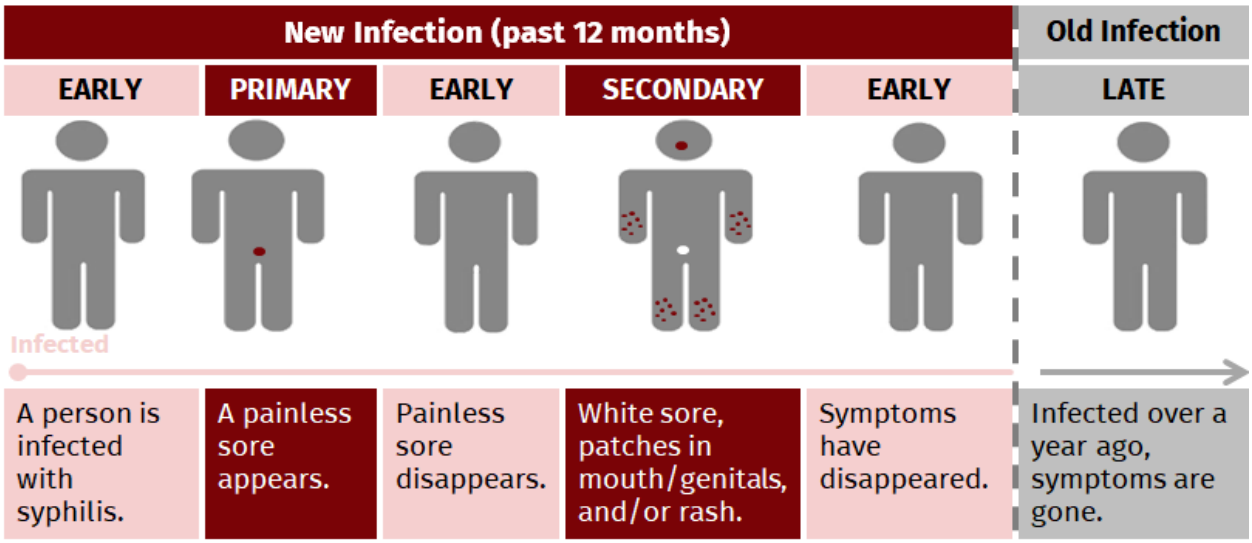
When left untreated, syphilis can travel through the body and cause problems in the **bones, ears, eyes, heart, and brain**.[1] These problems can occur at any time, even years after initial infection.

## Syphilis can be treated with antibiotics

The CDC **recommended treatment** is long-acting Benzathine penicillin G. Early infections (primary, secondary, and early latent) can be treated with one dose, while late latent or unknown duration infections should be treated with three doses administered at weekly intervals.

## How do you know it's a new case?

In the first year of infection, a person with syphilis switches between **having symptoms** to **not having symptoms.** Infected people can only pass the infection to partners in the first year when **symptoms are present**. However, pregnant persons can pass the infection to their developing baby at any time. Usually, a year after infection, **syphilis symptoms disappear**.




**References**

1. Centers for Disease Control and Prevention. Syphilis – CDC Fact Sheet. https://www.cdc.gov/std/syphilis/stdfact-syphilis.htm.

# Congenital Syphilis

In Arizona, there was a **52% increase in syphilis in babies** from 2020 to 2021.

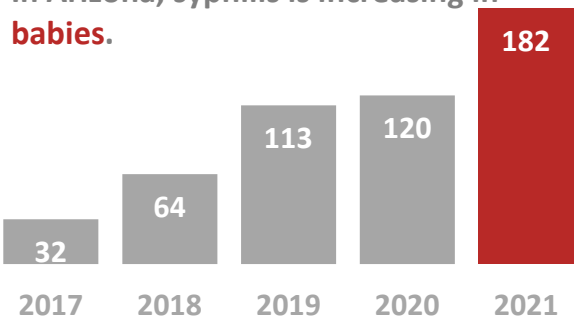
Rates of syphilis are rapidly **increasing in females**.

In Arizona, congenital syphilis frequently occurred as a result of **late or no access to prenatal care**, **being infected late in pregnancy**, or **issues obtaining adequate treatment**.

## Congenital syphilis

Pregnant persons with untreated syphilis can pass the infection to their developing baby at any time, causing **bone disorders, deafness, other congenital defects, or even death**.[1]

**In Arizona, syphilis is increasing in babies.**

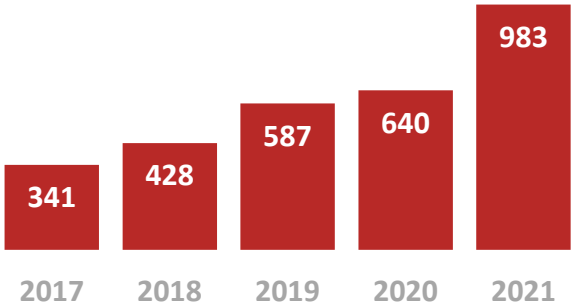



**In 2021, 14 babies died of syphilis in Arizona.**

**Two in three** babies with syphilis were reported in **Maricopa County**.

## Why is congenital syphilis increasing?

A lack of timely prenatal care and syphilis testing is a large contributor to the increase of congenital syphilis.[2] Additionally, instances in which pregnant persons were diagnosed efficiently, lack of adequate treatment was also shown to be a factor.[2] The increase in congenital syphilis largely reflects the **increase of syphilis overall**. In Arizona, from 2020 to 2021, cases of syphilis in babies increased 52% while **cases in women*** increased 54% as shown in the graph below.




## Access to prenatal care is important

CDC recommends screening all pregnant persons for syphilis in their first trimester.[1] In Arizona, pregnant persons should be screened at their **first prenatal visit**, **in the third trimester**, and **at delivery**.[3] Many pregnant persons with syphilis struggle to access consistent prenatal care, if they are able to access prenatal care at all. Actively screening all pregnant persons at their first prenatal visit, and again in the third trimester can lead to timely treatment and prevent complications for both mother and baby.[1]

*Includes primary, secondary, and early latent syphilis cases.

**References**

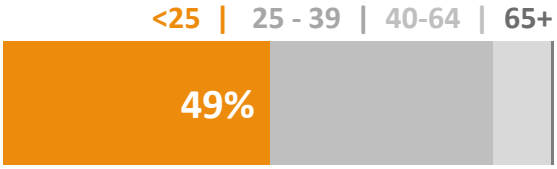
1. Centers for Disease Control and Prevention. Congenital Syphilis – CDC Fact Sheet. https://www.cdc.gov/std/syphilis/stdfact-congenital-syphilis.htm.
2. Kimball A, Torrone E, Miele K, et al. Missed Opportunities for Prevention of Congenital Syphilis - United States, 2018. *MMWR Morb Mortal Wkly Rep*. 2020;69(22):661-665. doi:10.15585/mmwr.mm6922a1. https://www.cdc.gov/mmwr/volumes/69/wr/mm6922a1.htm.
3. Arizona Department of Health Services. Congenital Syphilis - Providers. https://www.azdhs.gov/preparedness/epidemiology-disease-control/disease-integration-services/std-control/congenital-syphilis/index.php#cs-providers.

# Adolescents and Young Adults

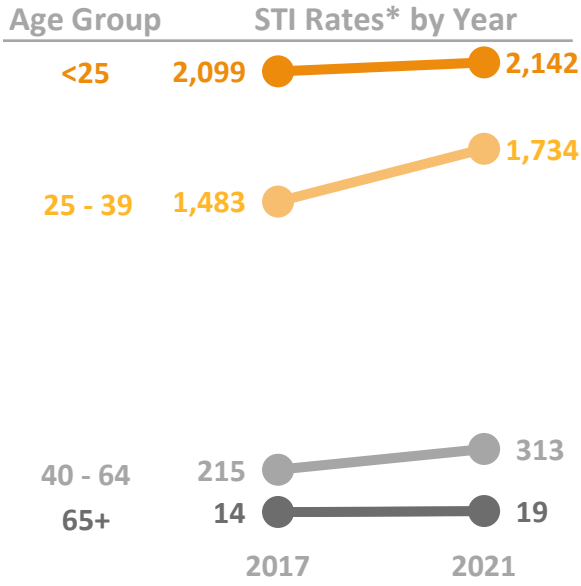
**<25Y** Youth 15 through 24 years old have the highest rates of STIs and should be offered **annual screening**.

## Youth are disproportionately burdened by STIs

About half of all STIs are reported in **persons under the age of 25**.




As STIs rise, **youth continue to have the highest rates of STIs** when compared to other age groups.




*Age adjusted rates are calculated per 100,000.

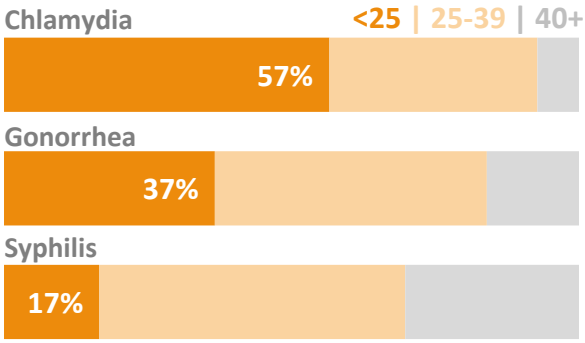
## Why are youth at risk?

Adolescents and young adults are learning how to navigate relationships, prevention services, and advocate for their health with their partners. They are also at increased risk because they have limited access to screening and treatment, have concerns about confidentiality, are biologically more susceptible to STIs, and may have multiple sex partners between screening and treatment.[1] **CDC recommends annual screening for sexually active women under 25 years old**.[2]

**Less than 1% of STIs occur in persons 65 years and older.**

## Are there differences by infection?

Youth (<25) represent over half of all chlamydia cases, 37% of all gonorrhea cases, and 17% of syphilis cases.




**References**
1. Centers for Disease Control and Prevention. Sexually Transmitted Infections Among Young Americans. https://www.cdc.gov/std/products/youth-sti-infographic.pdf.
2. Centers for Disease Control and Prevention. STD & HIV Screening Recommendations. https://www.cdc.gov/std/prevention/screeningreccs.htm.

# Sexual Orientation and Gender Identity (SO/GI)

Men who have sex with men (MSM) and gender expansive persons are disproportionately impacted by STIs.

Demographic information, particularly SOGI data, is severely limited for chlamydia and gonorrhea.

## SO/GI

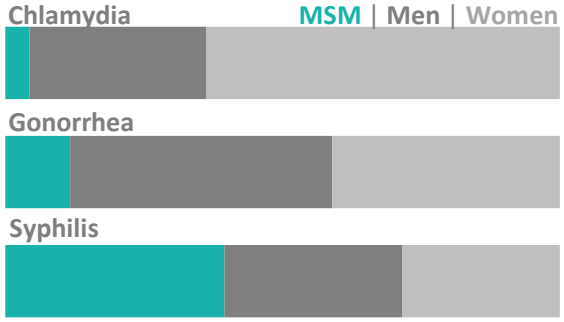
**Sexual orientation** is a person's physical, romantic, and/or emotional attraction to another person or people.[1] **Gender identity** is different than sexual orientation. It is a person's internal sense of their own gender and it is not visible to others. Gender identity may align with a person's assigned sex at birth. Transgender and non-binary individuals identify with a gender that does not align with their assigned sex at birth.

Transgender and gender diverse individuals often experience stigma and barriers to healthcare, which can result in missed opportunities for treatment and prevention of STIs.[2] MSM may also experience stigma and discrimination that can affect access to healthcare. This, in combination with a greater likelihood of MSM encountering partners with an STI, raises their risk of acquiring STIs.[3]

Culturally competent care is critical for providers to appropriately collect SO/GI data from clients, which can facilitate appropriate screening, as recommendations vary by population. For example, the CDC recommends screening **gay, bisexual, and other MSM** for chlamydia, gonorrhea, syphilis, and HIV **at least annually**. For **transgender and gender diverse persons**, CDC screening recommendations are **based on anatomy**, as well as **reported sexual behaviors and exposures**.[4]

## STIs in MSM

In Arizona, **40%** of syphilis cases were reported among **MSM** in 2021. Conversely, only **4%** of all chlamydia cases and **12%** of gonorrhea cases identified as MSM. MSM might be underrepresented in chlamydia and gonorrhea cases due to missing SO/GI data. We heavily rely on provider reporting to capture demographic information and often receive incomplete SO/GI data. STI case investigations can obtain the missing SO/GI data, however, syphilis investigations are typically prioritized above chlamydia and gonorrhea due to the possibility of severe outcomes of syphilis if untreated.




## STIs in transgender persons

Determining STI case counts and rates in transgender persons relies on having sufficient gender identity information for cases, which is often missing. Out of the 63,600 cases of STIs in 2021, less than 1% were reported as transgender persons. Recently, Arizona has focused on taking steps to try to improve completeness of SO/GI reporting.

**References**

1. GLAAD. Glossary of Terms: LGBTQ. GLAAD Media Reference Guide – 11th Edition. https://glaad.org/reference.
2. Centers for Disease Control and Prevention. Transgender and Gender Diverse Persons. https://www.cdc.gov/std/treatment-guidelines/trans.htm.
3. Centers for Disease Control and Prevention. What Gay, Bisexual and Other Men Who Have Sex with Men Need to Know About Sexually Transmitted Diseases. https://www.cdc.gov/std/life-stages-populations/stdfact-msm.htm.
4. Centers for Disease Control and Prevention. Sexually Transmitted Infections Treatment Guidelines, 2021. https://www.cdc.gov/std/treatment-guidelines/screening-recommendations.htm.

# HIV Coinfections

Repeat infections can put people at risk for more severe health outcomes and make them vulnerable to getting infected with another STI or HIV.

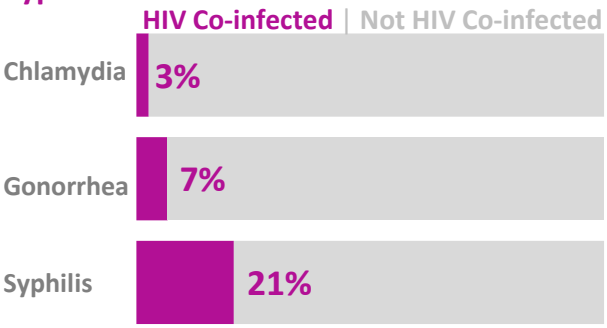
STI prevention is HIV prevention.

Among those infected with an STI, HIV coinfections are more common in men who have sex with men and older persons.

## STI/HIV coinfections

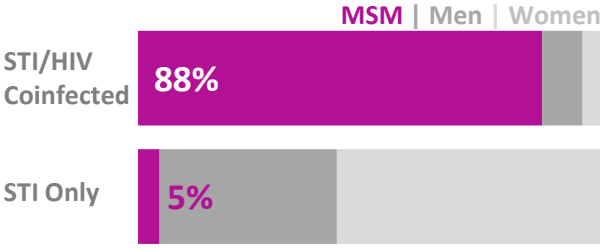
STIs and HIV have similar factors that put someone at risk of acquiring an infection, so **STI prevention is HIV prevention**. Due to the similar risk factors, individuals can have an STI and HIV at the same time, known as a **coinfection**.*

## HIV coinfections are most common with syphilis

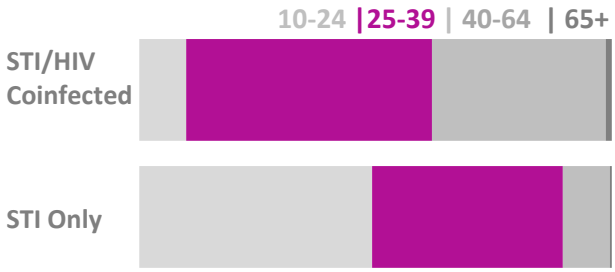



## HIV coinfection disparities

Most STI cases coinfected with HIV are among **men who have sex with men**.




STI/HIV coinfections were more commonly reported in **25-39-year-olds** than STI-only cases.




## HIV prevention

HIV can be prevented by taking **PrEP** (pre-exposure prophylaxis). PrEP is a medicine, available as a pill or injection, which can reduce the chances of getting HIV from a sex partner living with the virus.[1]

Getting tested and treated for STIs can lower the risk of getting HIV.[2] Therefore, using condoms regularly, reducing the number of anonymous sexual partners, and not drinking alcohol or using drugs before sex can help prevent **both** STIs and HIV.[3] Learn more about HIV prevention methods and find services near you at this **link**.

*New and previous HIV positive cases are included in the coinfection counts.

**References**

1. Centers for Disease Control and Prevention. About PrEP. https://www.cdc.gov/hiv/basics/prep/about-prep.html.
2. Centers for Disease Control and Prevention. Protect Yourself During Sex. https://www.cdc.gov/hiv/basics/hiv-prevention/protect-yourself-during-sex.html.
3. Centers for Disease Control and Prevention. STDs and HIV-CDC Basic Fact Sheet. https://www.cdc.gov/std/hiv/stdfact-std-hiv.htm.

# A message from the Office of STI Control (OSTIC)

The ADHS OSTIC is committed to addressing this rise in STIs especially syphilis by collaborating with internal and external partners to promote prevention and control. ADHS partners include the Centers for Disease Control and Prevention, county and tribal health departments, community-based organizations, and Arizona medical providers. It is important that the Arizona public and leaders encourage dialogue about sexual health and infection prevention, particularly among communities that are most impacted by these infections. Promoting prevention, screening, treatment, and access to services can improve the sexual health and wellness of all Arizonans.

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# Arizona Department of Health Services
# Bureau of Infectious Disease and Services

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## Mission

The Mission of the Arizona Department of Health Office of STI Control (OSTIC) is to improve the sexual health of all Arizonans by strengthening the prevention and control of sexually transmitted infections in Arizona through education, surveillance, collaboration, and program development.

Note: Department organization and staff titles are accurate as to the time of publication and may not correspond to the time period of the report.

**Appendix 1: Data Dashboards**

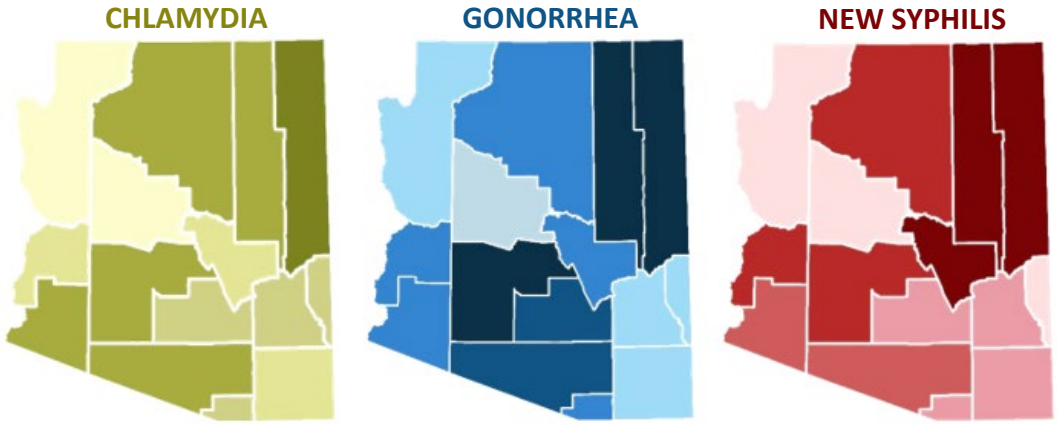
## 2021 STIs in Arizona

### STIs increased in 2021.

STI cases have almost doubled since 2011.


### STIs are common throughout Arizona.

2021 STI Rates* by County**



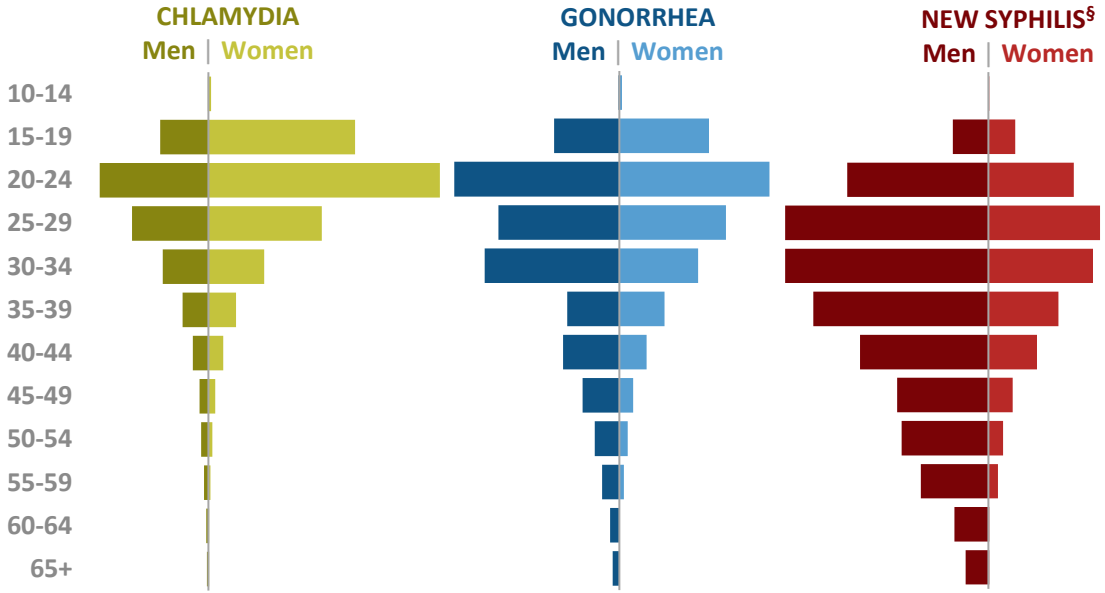

### Key Populations

**Ages 15-24** — **Youth**

**MSM*****

**Pregnant Women**

### STI rates* differ by gender and age.




Note: Chlamydia screening recommendations differ by gender.

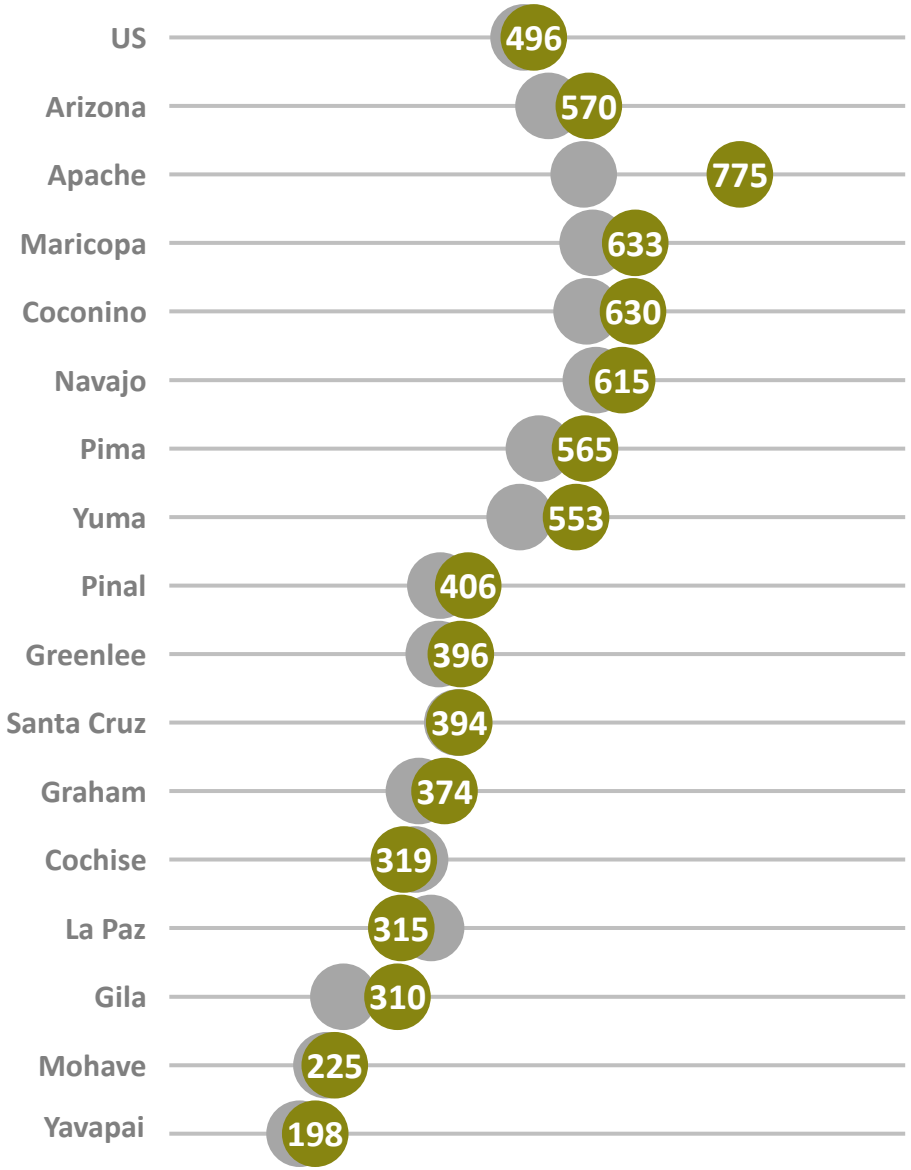
*Rates calculated per 100,000.

**Darker shades indicate higher rates.

***MSM = Men who have sex with men.

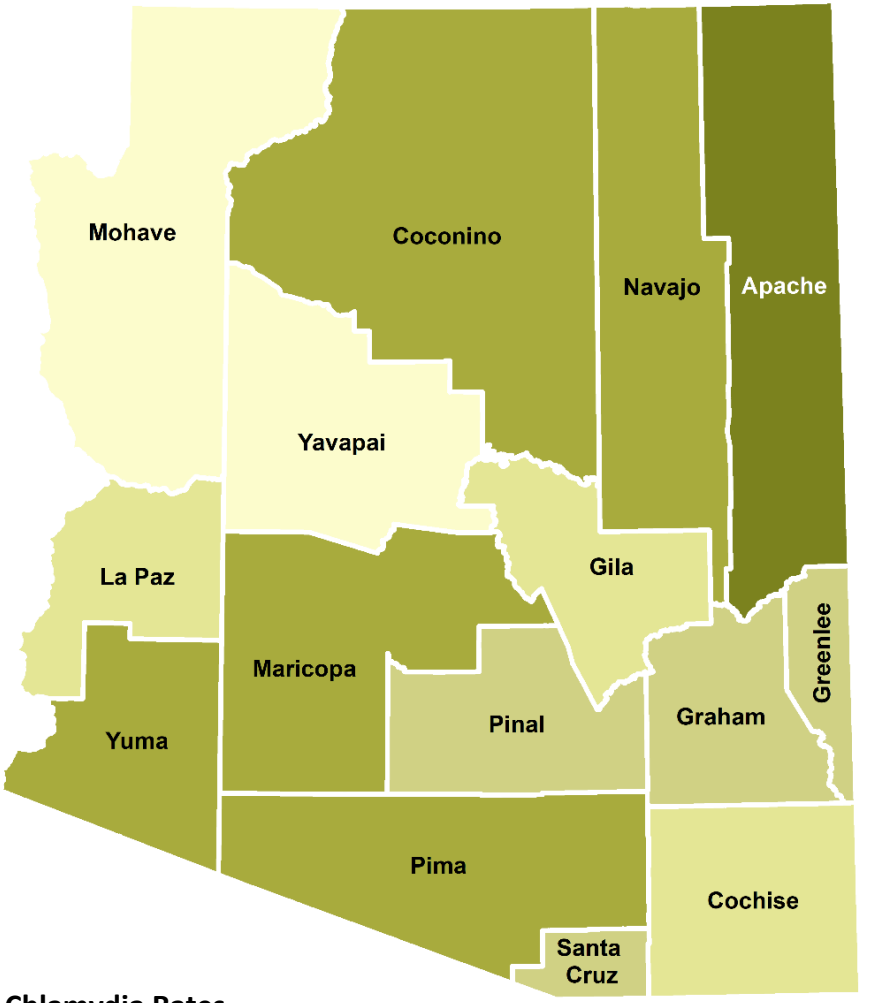
§Includes primary, secondary, and early latent syphilis only.

## Rates* of chlamydia increased in almost every county between 2020 and 2021.




## The highest chlamydia rates* are in both rural and urban counties.

In 2021, 62% of the Arizona population resided in Maricopa county, while 1% resided in Apache county.

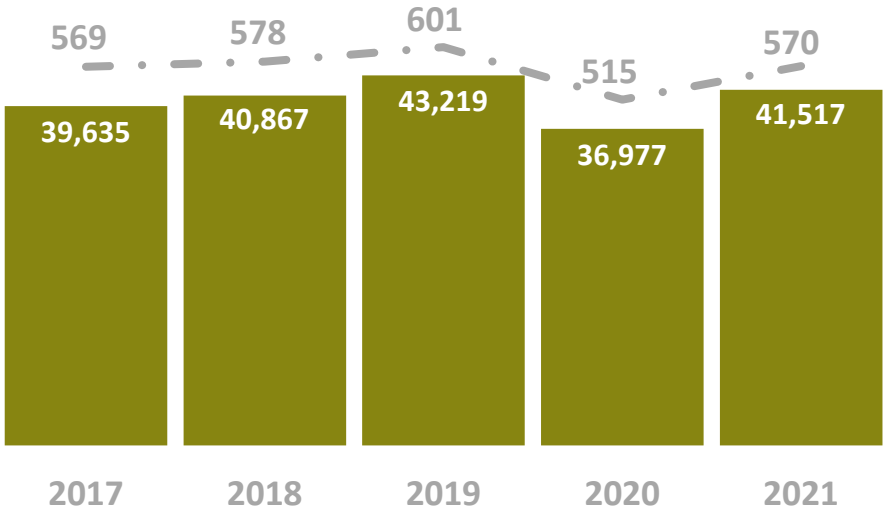



*Rates calculated per 100,000 using finalized population denominators of the most recent year available.

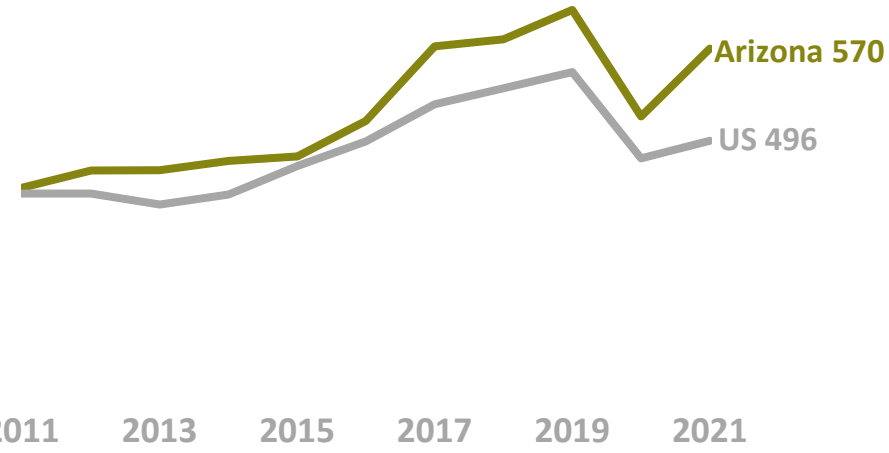
**References**

1. Arizona Office of Economic Opportunity. 2021 Arizona Population Estimates. https://www.azcommerce.com/media/gmtnexac/july1_2021_arizona_population_estimates.pdf.

## In Arizona, chlamydia cases and rates* increased from 2020 to 2021.

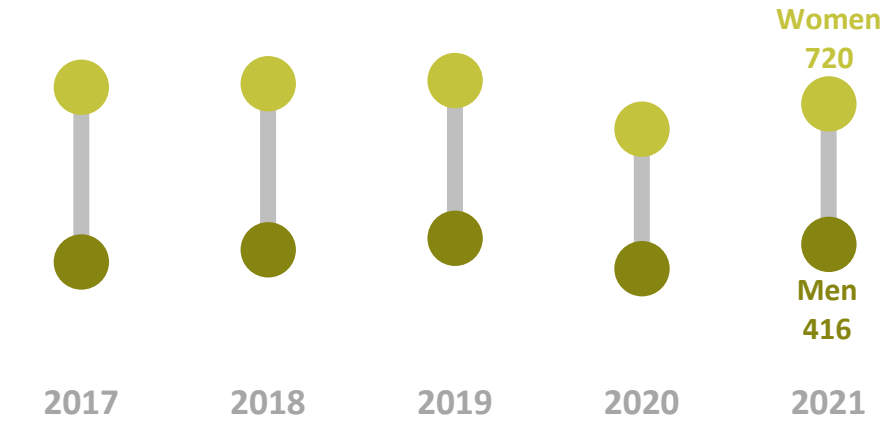



## Chlamydia rates* increased in Arizona and the United States from 2020 to 2021.

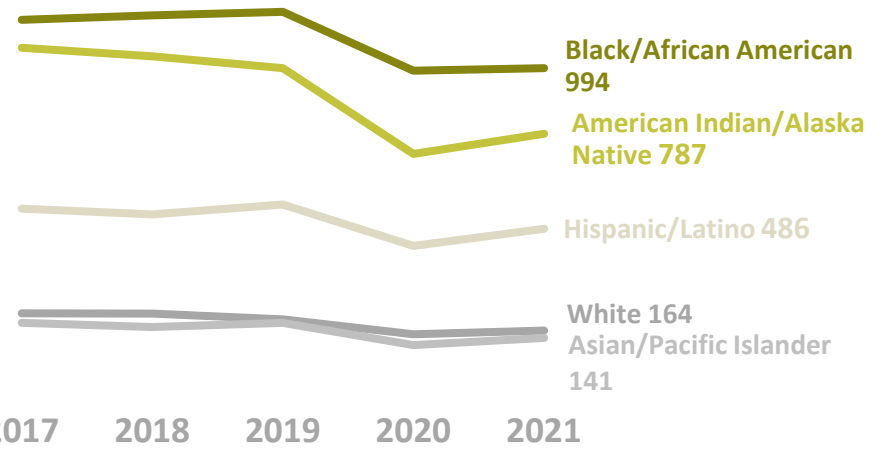



## Women consistently have higher rates* of chlamydia than men.

Women are recommended to have routine screening which likely contributes to the higher rates of infections detected.




## Chlamydia rates* increased among all Arizona racial and ethnic populations** in 2021.

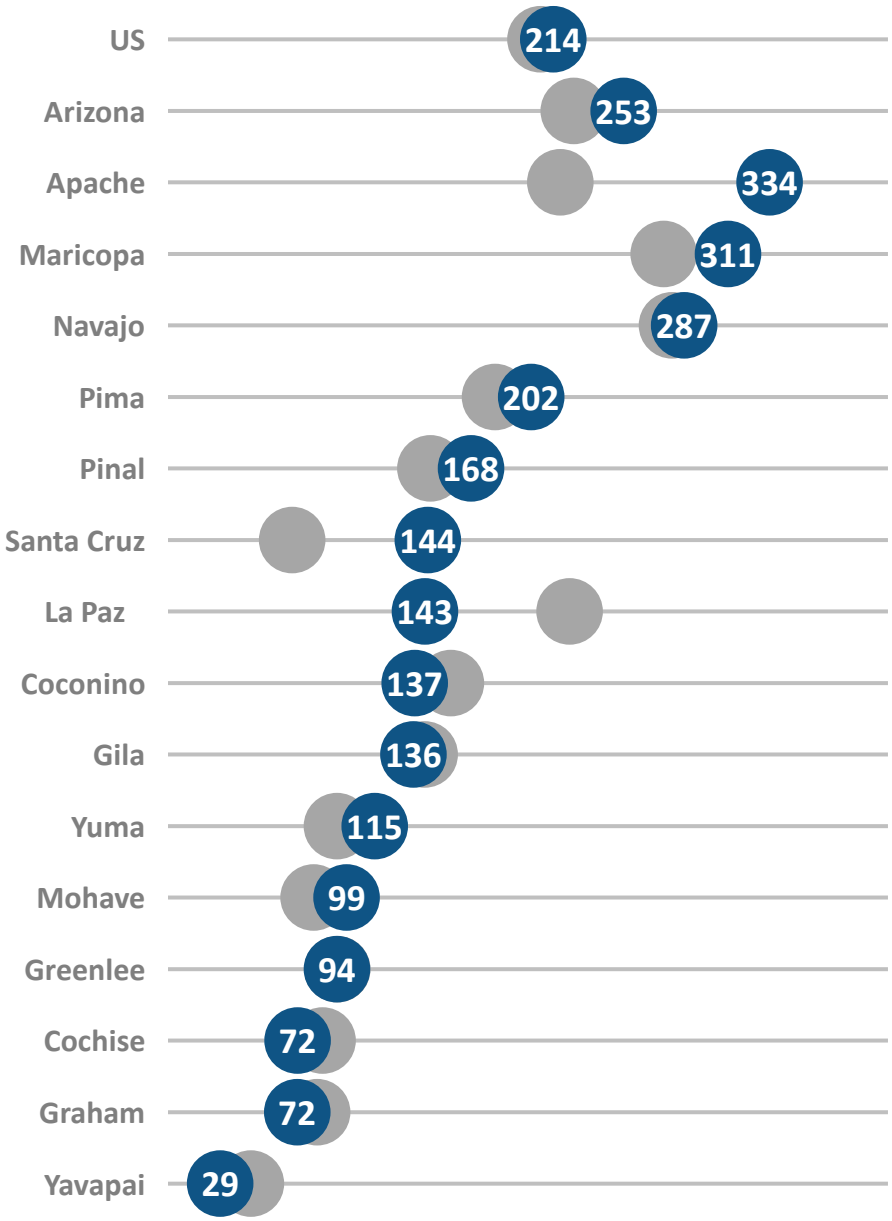



*Rates calculated per 100,000 using finalized population denominators of the most recent year available.

**Race and ethnicity are not frequently reported for chlamydia. In 2021, 39% of cases were missing race and ethnicity information.

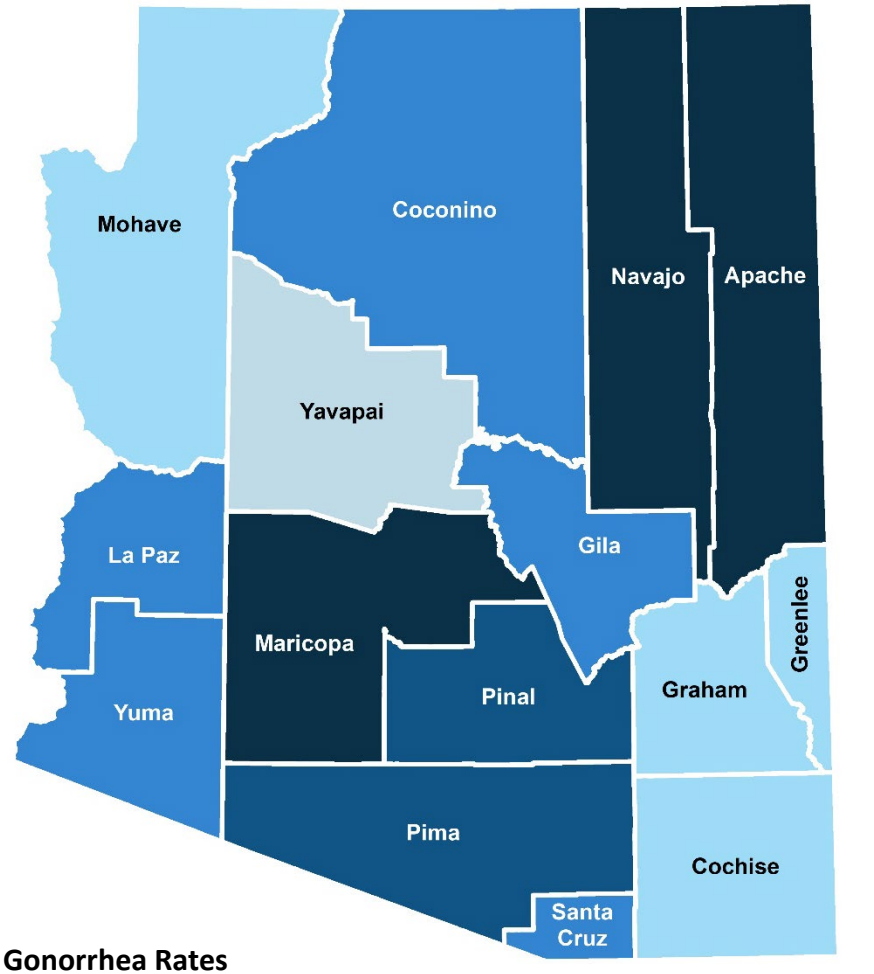
Note: Caution in interpreting 2020 chlamydia data. For details on the COVID-19 impact on chlamydia case rates, see 2020 annual report.

## Gonorrhea rates* by county in 2020 and 2021.




## Apache, Maricopa, and Navajo counties have the highest rates* of gonorrhea.

Despite both Apache and Maricopa county having gonorrhea rates higher than 300 per 100,000 in 2021, Apache county reported fewer than 250 cases, while Maricopa county reported over 14,000.




**Gonorrhea Rates**

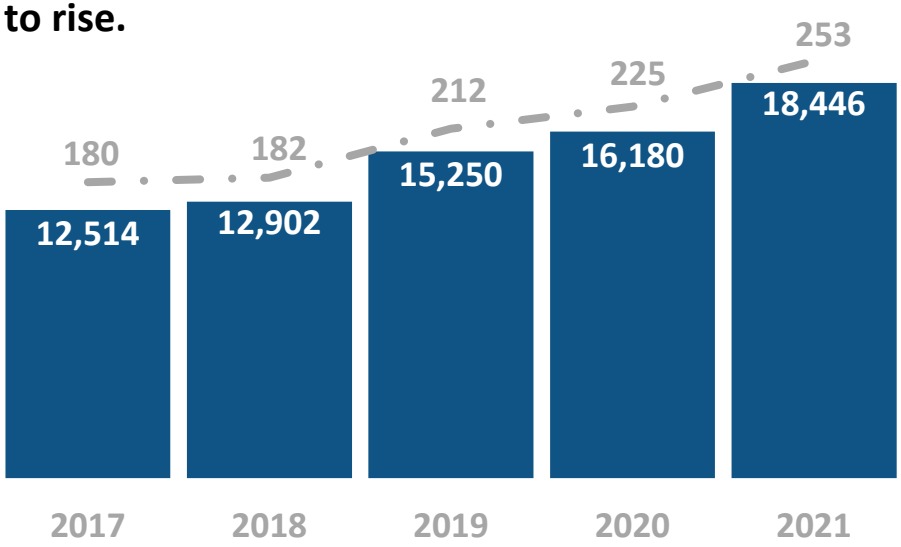
| 0 – 29 | 30 – 99 | 100 – 144 | 145 – 202 | 203 – 334 |
|---|---|---|---|---|

*Rates calculated per 100,000 using finalized population denominators of the most recent year available.

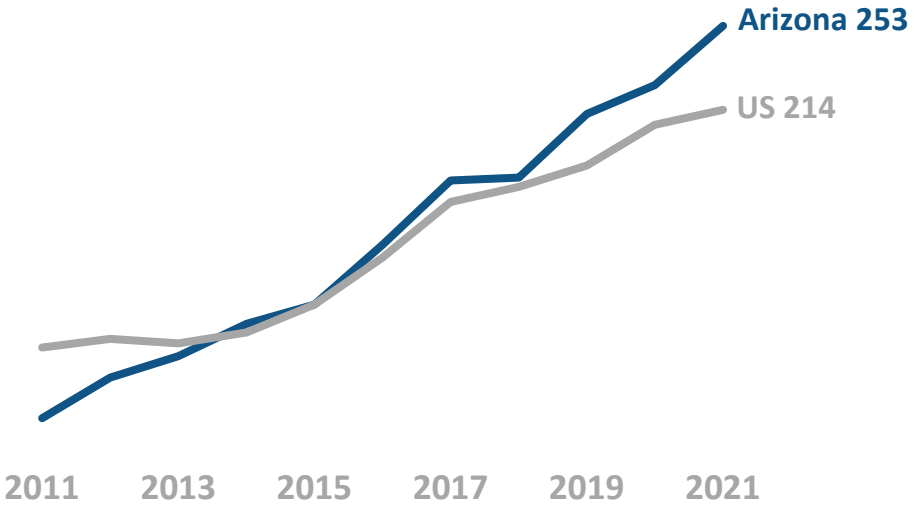
**References**

1. Arizona Office of Economic Opportunity. 2021 Arizona Population Estimates. https://www.azcommerce.com/media/gmtnexac/july1_2021_arizona_population_estimates.pdf.

## In Arizona, gonorrhea cases and rates* continue to rise.

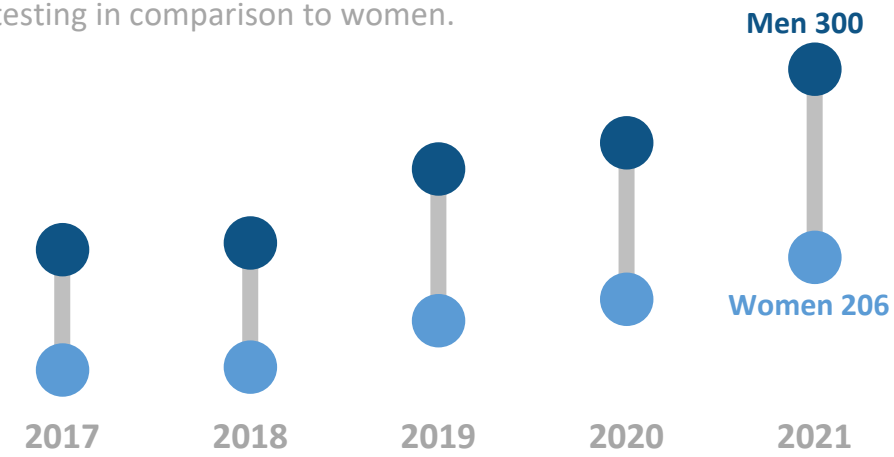



## Gonorrhea rates* continue to rise in Arizona and the United States.



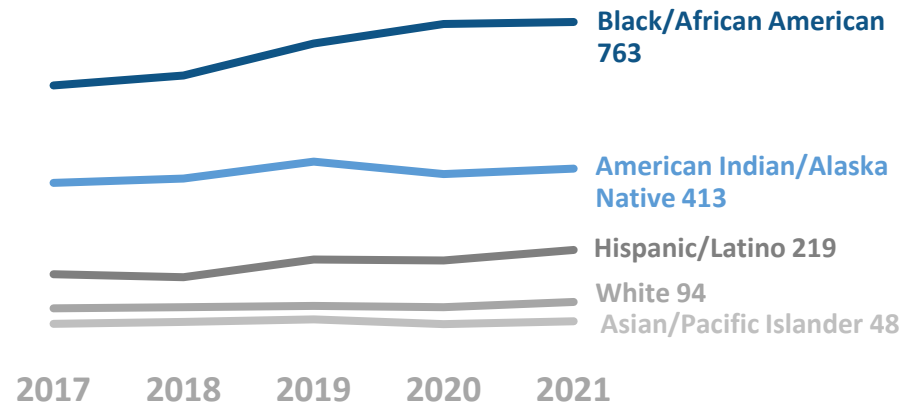

## Men consistently have higher rates* of gonorrhea than women.

Men are more likely to notice symptoms and seek out testing in comparison to women.




## Gonorrhea rates* disproportionately impact Black/African American communities in Arizona.

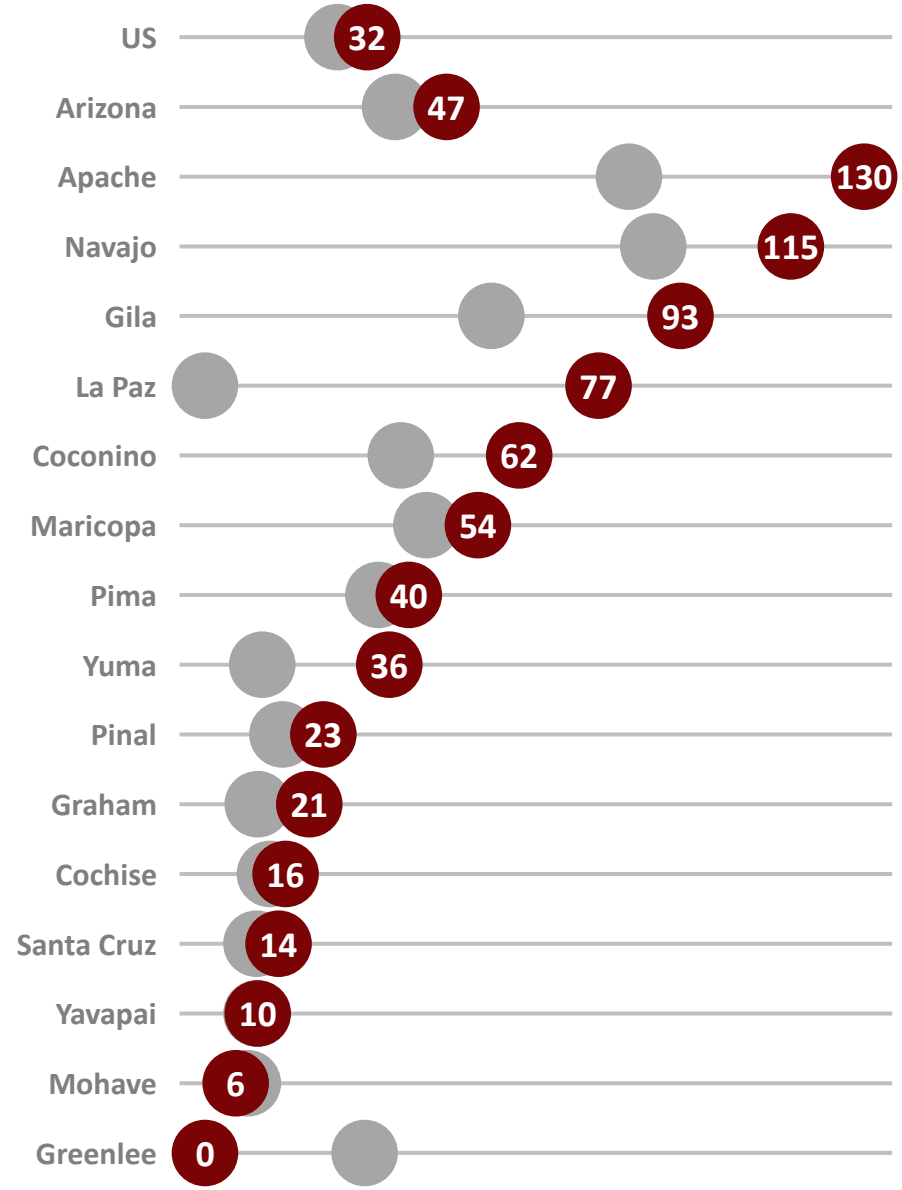
Racial and ethnic minority groups face barriers to accessing quality health services. Learn more by visiting this CDC website.




*Rates calculated per 100,000 using finalized population denominators of the most recent year available.

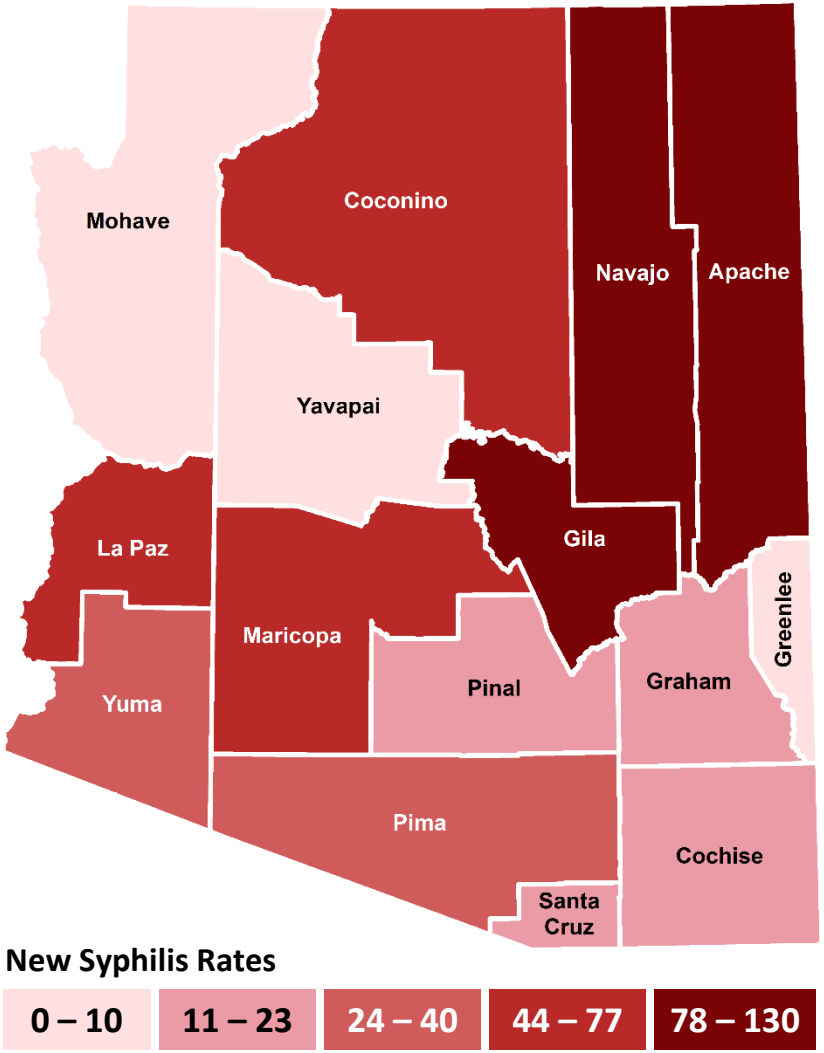
**Race and ethnicity are not frequently reported for gonorrhea. In 2021, 25% of cases were missing race and ethnicity information.

## New syphilis* rates** by county in 2020 and 2021.




## Apache, Gila, and Navajo counties had the highest rates** of new syphilis*.

People living in rural areas are at a greater risk of poor health outcomes. Limited options of healthcare providers and transportation are some rural barriers to accessing care.[1]



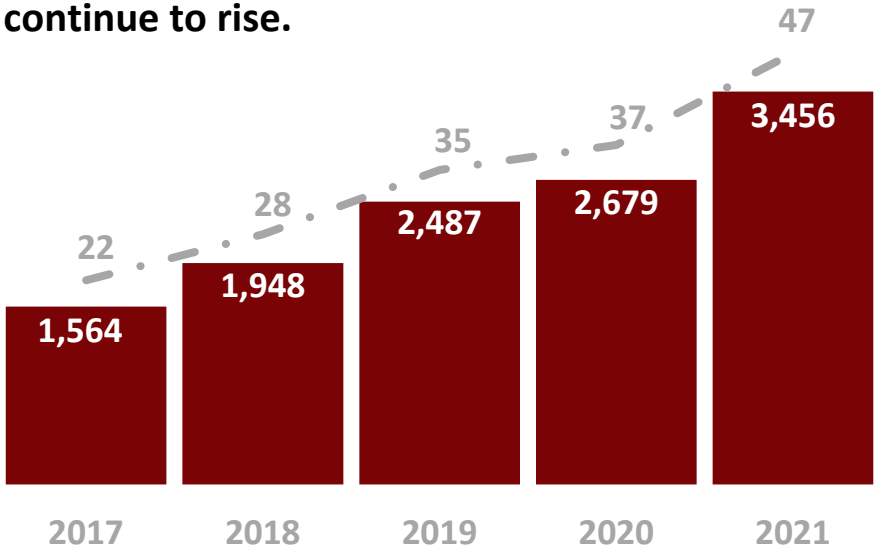

*Includes primary, secondary, and early latent syphilis only.

**Rates calculated per 100,000 using finalized population denominators of the most recent year available.

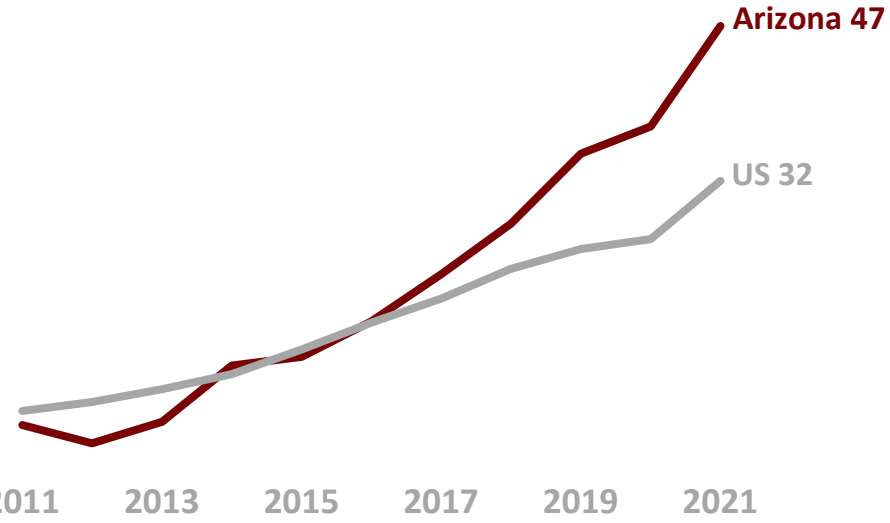
**References**

1. U.S. Food & Drug Administration. Rural Health. https://www.fda.gov/consumers/minority-health-and-health-equity-resources/rural-health.

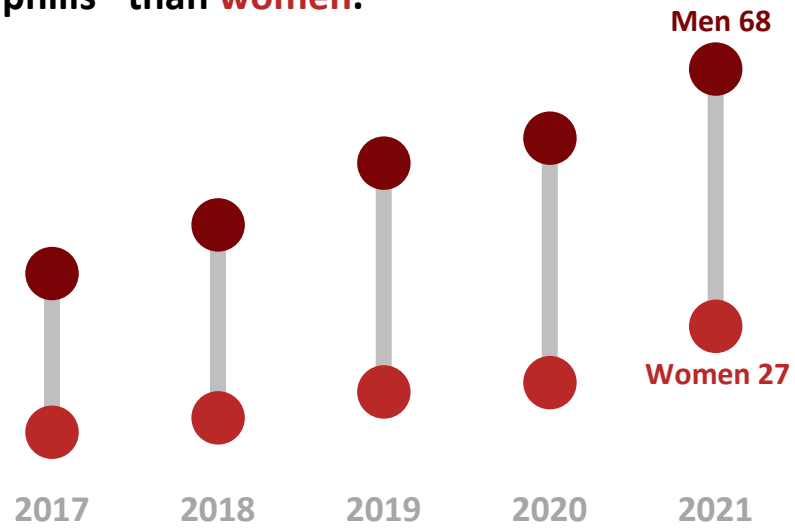
## In Arizona, new syphilis* cases and rates** continue to rise.




## Arizona has a higher rate* of new syphilis than the United States.

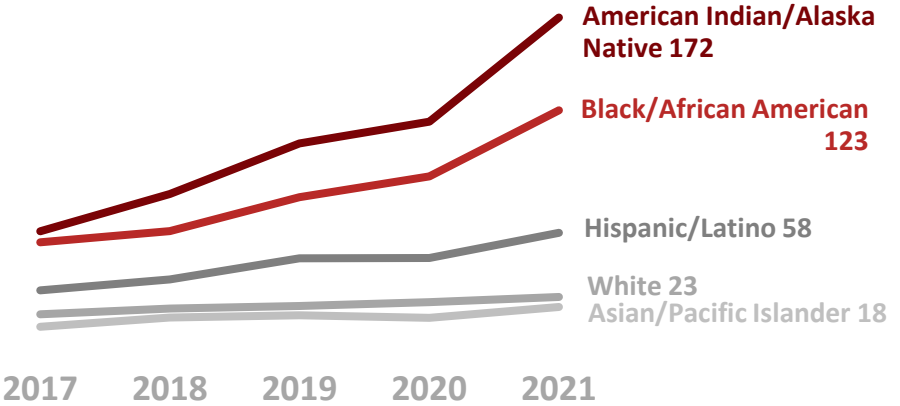



## Men consistenly have higher rates** of new syphilis* than women.




## New syphilis* rates** disproportionately impact American Indian/Alaska Natives.

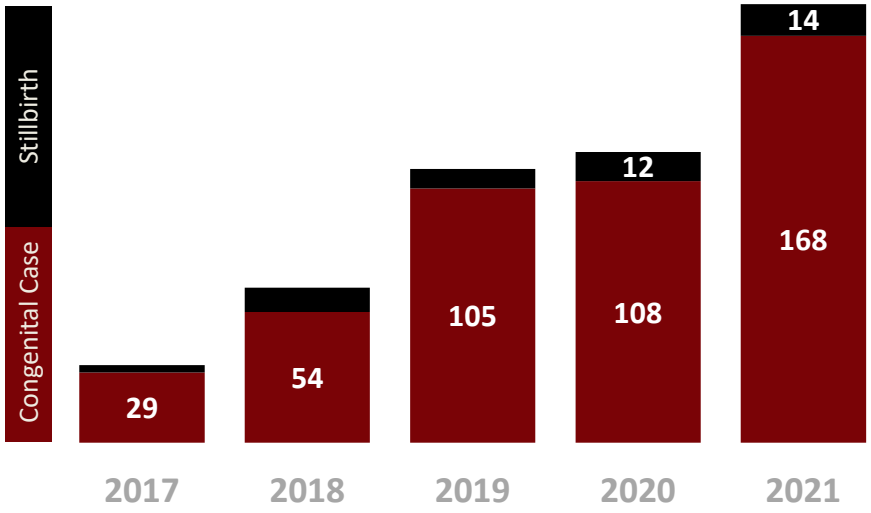
Racial and ethnic minority groups face barriers to accessing quality health services. Learn more by vising this CDC website.



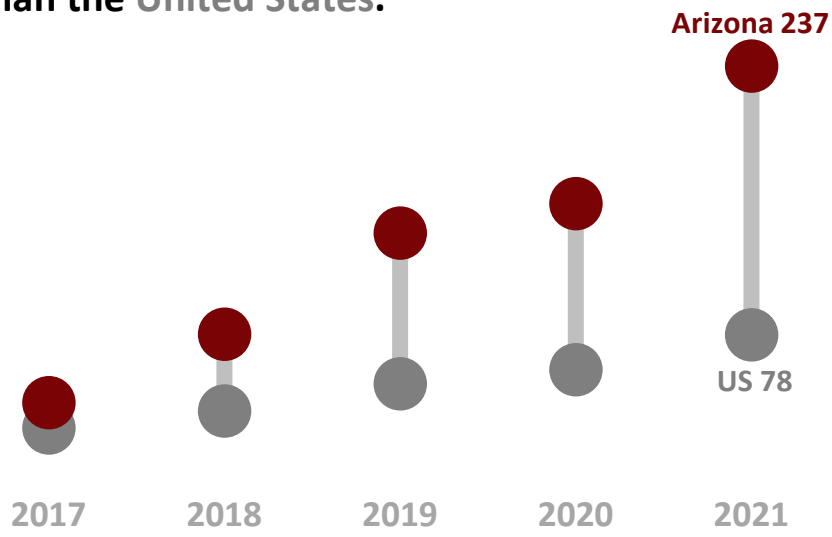

*Includes primary, secondary, and early latent syphilis only.

**Rates calculated per 100,000 using finalized population denominators of the most recent year available.

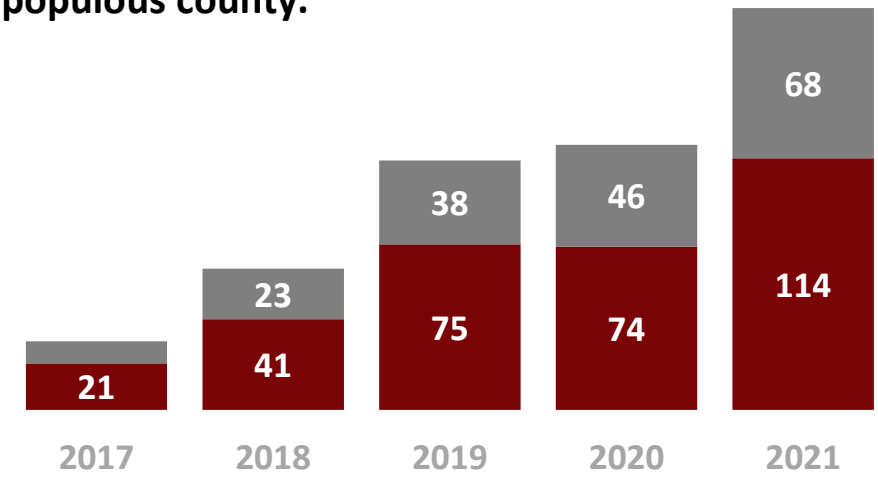
## The number of congenital syphilis cases has increased since 2017*.




## Arizona has a higher rate** of congenital syphilis than the United States.

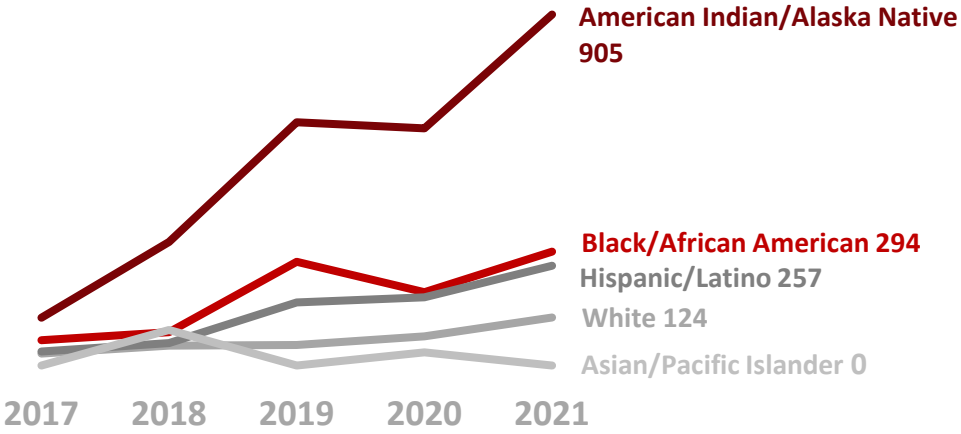



## Cases are increasing Statewide. 63% of cases occur in Maricopa County, Arizona's most populous county.




## Congenital syphilis rates** disproportionately impact American Indian/Alaska Natives.

Racial and ethnic minority groups face barriers to accessing quality health services. Learn more by vising this CDC website.




*Stillbirths are a subset of congenital syphilis.

**Rates calculated per 100,000 live births. Congenital syphilis denominator based upon ADHS Vital Statistics Birth Population.

Note: Congenital syphilis cases are reported by year of birth, even if they are identified at a later date. Prior year case counts may be updated upon receipt of new information. Therefore, congenital syphilis case counts may vary.

## Appendix 2: Tables

### Table 1

**Sexually Transmitted Infections: Cases and Rates per 100,000 by County, Arizona, 2021***

| County | Chlamydia | | Gonorrhea | | New Syphilis** | | Congenital Syphilis | |
|---|---|---|---|---|---|---|---|---|
| | Cases | Rates | Cases | Rates | Cases | Rates | Cases | Rates |
| **Apache** | 515 | 755 | 222 | 334 | 86 | 130 | * | * |
| **Cochise** | 403 | 319 | 91 | 72 | 20 | 16 | 0 | 0 |
| **Coconino** | 929 | 630 | 202 | 137 | 91 | 62 | * | * |
| **Gila** | 166 | 310 | 73 | 137 | 50 | 93 | * | * |
| **Graham** | 146 | 374 | 28 | 72 | 8 | 21 | 0 | 0 |
| **Greenlee** | 38 | 396 | 9 | 94 | 0 | 0 | 0 | 0 |
| **La Paz** | 53 | 315 | 24 | 143 | 13 | 77 | * | * |
| **Maricopa** | 28,541 | 633 | 14,021 | 311 | 2,418 | 54 | 114 | 232 |
| **Mohave** | 487 | 225 | 215 | 99 | 13 | 6 | * | * |
| **Navajo** | 663 | 615 | 309 | 287 | 124 | 115 | 7 | 536 |
| **Pima** | 5,977 | 565 | 2,135 | 202 | 424 | 40 | 25 | 249 |
| **Pinal** | 1,784 | 406 | 739 | 168 | 102 | 23 | 8 | 172 |
| **Santa Cruz** | 191 | 394 | 70 | 144 | 7 | 14 | * | * |
| **Yavapai** | 478 | 198 | 70 | 29 | 25 | 10 | * | * |
| **Yuma** | 1,146 | 553 | 238 | 115 | 75 | 36 | 9 | 303 |
| **Arizona** | 41,517 | 570 | 18,446 | 253 | 3,456 | 47 | 182 | 237 |

*Case counts under 6 and associated rates are excluded.

**Includes Primary, Secondary, and Early Latent Syphilis.

**Table 2**

**Chlamydia Cases and Rates per 100,000 by Age Group, Arizona 2019-2021**

| | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| **Age Group*** | **N** | **Rate** | **N** | **Rate** | **N** | **Rate** |
| **10-14** | 181 | 38 | 182 | 39 | 136 | 29 |
| **15-19** | 9,645 | 2,031 | 8,152 | 1,729 | 8,510 | 1,798 |
| **20-24** | 15,830 | 3,206 | 13,588 | 2,778 | 14,836 | 2,990 |
| **25-29** | 8,387 | 1,617 | 7,173 | 1,383 | 8,274 | 1,590 |
| **30-34** | 4,156 | 887 | 3,687 | 777 | 4,418 | 899 |
| **35-39** | 2,262 | 492 | 1,989 | 432 | 2,334 | 503 |
| **40-44** | 1,223 | 290 | 925 | 219 | 1,330 | 307 |
| **45-49** | 694 | 160 | 548 | 128 | 677 | 159 |
| **50-54** | 409 | 98 | 339 | 82 | 495 | 118 |
| **55-59** | 236 | 53 | 215 | 49 | 267 | 61 |
| **60-64** | 109 | 26 | 97 | 23 | 126 | 29 |
| **65+** | 76 | 6 | 69 | 5 | 97 | 7 |
| **Total** | 43,208 | 601 | 36,964 | 515 | 41,500 | 570 |
| | **N** | **%** | **N** | **%** | **N** | **%** |
| **Under 25** | 25,667 | 59 | 21,935 | 59 | 23,499 | 57 |
| **Under 30** | 34,054 | 79 | 29,108 | 79 | 31,773 | 77 |

*Ages 0-9 not shown.

**Table 3**

**Chlamydia Cases by Age Group and County, Arizona 2021**

| Age Group** | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Apache** | * | 86 | 129 | 107 | 85 | 53 | 28 | 6 | 8 | 6 | * | * | 513 |
| **Cochise** | * | 113 | 134 | 75 | 39 | 14 | 9 | 6 | 6 | * | * | 0 | 406 |
| **Coconino** | * | 219 | 375 | 158 | 84 | 41 | 33 | 12 | * | * | * | * | 928 |
| **Gila** | 0 | 30 | 46 | 37 | 25 | 13 | 8 | * | * | * | * | 0 | 166 |
| **Graham** | 0 | 33 | 52 | 31 | 14 | 8 | * | * | 0 | 0 | * | 0 | 146 |
| **Greenlee** | 0 | * | 16 | 8 | 6 | * | * | 0 | 0 | 0 | * | 0 | 38 |
| **La Paz** | 0 | 12 | 13 | 8 | 9 | * | * | * | * | 0 | 0 | 0 | 53 |
| **Maricopa** | 92 | 5,604 | 10,131 | 5,893 | 3,053 | 1,614 | 916 | 508 | 362 | 208 | 79 | 70 | 28,530 |
| **Mohave** | * | 140 | 169 | 81 | 45 | 23 | 17 | * | * | * | 0 | * | 487 |
| **Navajo** | 9 | 141 | 185 | 116 | 108 | 50 | 24 | 9 | 13 | * | * | * | 663 |
| **Pima** | 18 | 1,257 | 2,300 | 1,079 | 568 | 334 | 193 | 88 | 65 | 31 | 26 | 17 | 5,976 |
| **Pinal** | 6 | 424 | 588 | 339 | 216 | 104 | 51 | 24 | 17 | 7 | 7 | 0 | 1,783 |
| **Santa Cruz** | * | 44 | 74 | 43 | 15 | * | 6 | * | * | 0 | 0 | 0 | 190 |
| **Yavapai** | * | 151 | 174 | 77 | 41 | 17 | 9 | * | 0 | * | * | * | 478 |
| **Yuma** | * | 253 | 450 | 222 | 110 | 53 | 30 | 7 | 12 | * | 0 | * | 1,146 |
| **Arizona** | 136 | 8,510† | 14,836 | 8,274 | 4,418 | 2,334 | 1,330 | 677 | 495 | 267 | 126 | 97 | 41,500† |

*Denotes count <6.

**Ages 0-9 not shown.

†Sum rounded to nearest tens unit due to non-zero addend less than 6.

**Table 4**

**Gonorrhea Cases and Rates per 100,000 by Age Group, Arizona 2019-2021**

| | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| **Age Group*** | **N** | **Rate** | **N** | **Rate** | **N** | **Rate** |
| **10-14** | 39 | 8 | 53 | 11 | 49 | 10 |
| **15-19** | 1,826 | 384 | 2,090 | 443 | 2,210 | 467 |
| **20-24** | 3,827 | 775 | 3,970 | 812 | 4,504 | 908 |
| **25-29** | 3,434 | 662 | 3,438 | 663 | 3,838 | 738 |
| **30-34** | 2,361 | 504 | 2,535 | 534 | 3,048 | 620 |
| **35-39** | 1,511 | 329 | 1,707 | 371 | 1,831 | 395 |
| **40-44** | 836 | 198 | 936 | 221 | 1,189 | 275 |
| **45-49** | 578 | 134 | 611 | 143 | 724 | 170 |
| **50-54** | 395 | 94 | 385 | 93 | 469 | 112 |
| **55-59** | 255 | 58 | 258 | 59 | 311 | 71 |
| **60-64** | 106 | 26 | 113 | 26 | 157 | 36 |
| **65+** | 71 | 6 | 70 | 5 | 108 | 8 |
| **Total** | 15,239 | 212 | 16,166 | 225 | 18,438 | 253 |
| | **N** | **%** | **N** | **%** | **N** | **%** |
| **Under 25** | 5,703 | 37 | 6,127 | 38 | 6,771 | 37 |
| **Under 30** | 9,137 | 60 | 9,565 | 59 | 10,609 | 58 |

*Ages 0-9 not shown.

**Table 5**

**Gonorrhea Cases by Age Group and County, Arizona 2021**

| Age Group** | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Apache** | * | 14 | 31 | 36 | 58 | 40 | 20 | 11 | 7 | * | * | 0 | 222 |
| **Cochise** | 0 | 14 | 17 | 23 | 17 | 7 | * | 0 | * | * | * | * | 91 |
| **Coconino** | 0 | 21 | 54 | 45 | 32 | 23 | 18 | * | * | * | * | 0 | 202 |
| **Gila** | 0 | 11 | 14 | 16 | 14 | 8 | 7 | * | * | 0 | 0 | 0 | 73 |
| **Graham** | 0 | * | 6 | * | 9 | * | * | * | 0 | 0 | 0 | 0 | 28 |
| **Greenlee** | 0 | * | * | * | * | * | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| **La Paz** | 0 | 0 | * | * | 10 | * | * | 0 | * | 0 | 0 | 0 | 24 |
| **Maricopa** | 37 | 1,671 | 3,432 | 2,977 | 2,296 | 1,348 | 884 | 571 | 359 | 238 | 114 | 88 | 14,015 |
| **Mohave** | 0 | 24 | 33 | 47 | 39 | 24 | 24 | * | 9 | 6 | * | * | 215 |
| **Navajo** | * | 28 | 59 | 58 | 64 | 54 | 21 | * | 13 | * | * | * | 309 |
| **Pima** | * | 247 | 581 | 396 | 331 | 218 | 146 | 80 | 55 | 46 | 19 | 13 | 2,140† |
| **Pinal** | * | 109 | 164 | 157 | 132 | 70 | 41 | 29 | 14 | 7 | 9 | 0 | 740† |
| **Santa Cruz** | * | 6 | 25 | 18 | 7 | 8 | * | * | 0 | * | 0 | 0 | 70 |
| **Yavapai** | 0 | 9 | 23 | 9 | 6 | 9 | * | 6 | * | * | * | 0 | 70 |
| **Yuma** | * | 54 | 60 | 45 | 30 | 17 | 13 | 6 | * | * | * | * | 238 |
| **Arizona** | 49 | 2,210 | 4,504 | 3,838 | 3,050† | 1,831 | 1,189 | 724 | 469 | 311 | 157 | 108 | 18,440† |

*Denotes count <6.

**Ages 0-9 not shown.

†Sum rounded to nearest tens unit due to non-zero addend less than 6.

**Table 6**

**New[§] Syphilis Cases and Rates per 100,000 by Age Group, Arizona 2019-2021**

| | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| **Age Group**** | **N** | **Rate** | **N** | **Rate** | **N** | **Rate** |
| **10-14** | * | * | 0 | 0 | * | * |
| **15-19** | 104 | 22 | 104 | 22 | 123 | 26 |
| **20-24** | 404 | 82 | 422 | 86 | 446 | 90 |
| **25-29** | 520 | 100 | 518 | 100 | 679 | 131 |
| **30-34** | 432 | 92 | 485 | 102 | 678 | 138 |
| **35-39** | 319 | 69 | 366 | 80 | 483 | 104 |
| **40-44** | 213 | 50 | 227 | 54 | 349 | 81 |
| **45-49** | 168 | 39 | 170 | 40 | 228 | 54 |
| **50-54** | 130 | 31 | 163 | 39 | 200 | 48 |
| **55-59** | 109 | 25 | 126 | 29 | 152 | 34 |
| **60-64** | 49 | 12 | 62 | 14 | 69 | 16 |
| **65+** | 38 | 3 | 36 | 3 | 47 | 3 |
| **Total** | 2,490[†] | 35 | 2,679 | 37 | 3,460[†] | 47 |
| | **N** | **%** | **N** | **%** | **N** | **%** |
| **Under 25** | 509 | 20 | 526 | 20 | 571 | 17 |
| **Under 30** | 1,029 | 41 | 1,044 | 39 | 1250 | 36 |

[§]Includes Primary, Secondary, and Early Latent Syphilis.

*Denotes count <6.

**Ages 0-9 not shown.

[†]Sum rounded to nearest tens unit due to non-zero addend less than 6.

**Table 7**

**New[§] Syphilis Cases by Age Group and County, Arizona 2021**

| Age Group** | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Apache** | 0 | 0 | * | 17 | 25 | 23 | 10 | * | * | 0 | 0 | * | 86 |
| **Cochise** | 0 | * | * | * | * | * | * | * | 0 | * | * | 0 | 20 |
| **Coconino** | 0 | * | 7 | 16 | 15 | 23 | 14 | * | * | * | 0 | * | 91 |
| **Gila** | * | * | 6 | 14 | 12 | 9 | * | * | 0 | * | * | 0 | 50 |
| **Graham** | 0 | 0 | * | * | * | * | * | 0 | 0 | 0 | 0 | 0 | 8 |
| **Greenlee** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **La Paz** | 0 | 0 | * | * | * | * | * | 0 | * | * | 0 | 0 | 13 |
| **Maricopa** | * | 88 | 322 | 484 | 477 | 310 | 229 | 160 | 154 | 113 | 50 | 30 | 2,420[†] |
| **Mohave** | 0 | * | * | * | * | * | * | * | 0 | * | 0 | 0 | 13 |
| **Navajo** | 0 | 6 | 14 | 25 | 28 | 17 | 16 | 6 | 6 | * | * | * | 124 |
| **Pima** | 0 | 13 | 49 | 74 | 75 | 64 | 46 | 36 | 24 | 22 | 12 | 9 | 424 |
| **Pinal** | 0 | * | 16 | 18 | 22 | 14 | 12 | 9 | * | * | * | * | 102 |
| **Santa Cruz** | 0 | * | * | * | 0 | * | * | 0 | 0 | 0 | * | 0 | 7 |
| **Yavapai** | 0 | 0 | * | * | * | * | * | * | * | * | 0 | 0 | 25 |
| **Yuma** | 0 | * | 14 | 16 | 14 | 11 | 7 | * | * | * | 0 | * | 75 |
| **Arizona** | * | 123 | 446 | 679 | 678 | 483 | 349 | 228 | 200 | 152 | 69 | 47 | 3,460[†] |

[§]Includes Primary, Secondary, and Early Latent Syphilis.

*Denotes count <6.

**Ages 0-9 not shown.

[†]Sum rounded to nearest tens unit due to non-zero addend less than 6.

**Table 8**

**Syphilis Cases by Stage, Arizona 2021**

| | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| **Stage*** | **N** | **%** | **N** | **%** | **N** | **%** |
| **Primary** | 554 | 14 | 628 | 14 | 935 | 15 |
| **Secondary** | 743 | 18 | 814 | 18 | 1,046 | 17 |
| **Early Latent** | 1,190 | 29 | 1,237 | 28 | 1,475 | 23 |
| **Late Latent/Unknown Duration** | 1,448 | 36 | 1,631 | 37 | 2,692 | 43 |
| **Congenital**** | 113 | 3 | 120 | 3 | 182 | 3 |
| **Total** | 4,048 | | 4,430 | | 6,330 | |

*Stage is an indication of where a case is at in their infection. Primary and secondary cases are symptomatic and infectious (they can spread the infection to others). Early latent cases were infected sometime within the past year and were symptomatic and infectious sometime within the last year. Late latent/unknown duration cases were infected over a year ago and can no longer spread the infection to others.

**Congenital syphilis case reporting is an ongoing process; prior year case counts may be updated upon receipt of new information. Therefore, congenital syphilis case counts may vary.

## Appendix 3: Background

## Arizona Population Density and STI Population

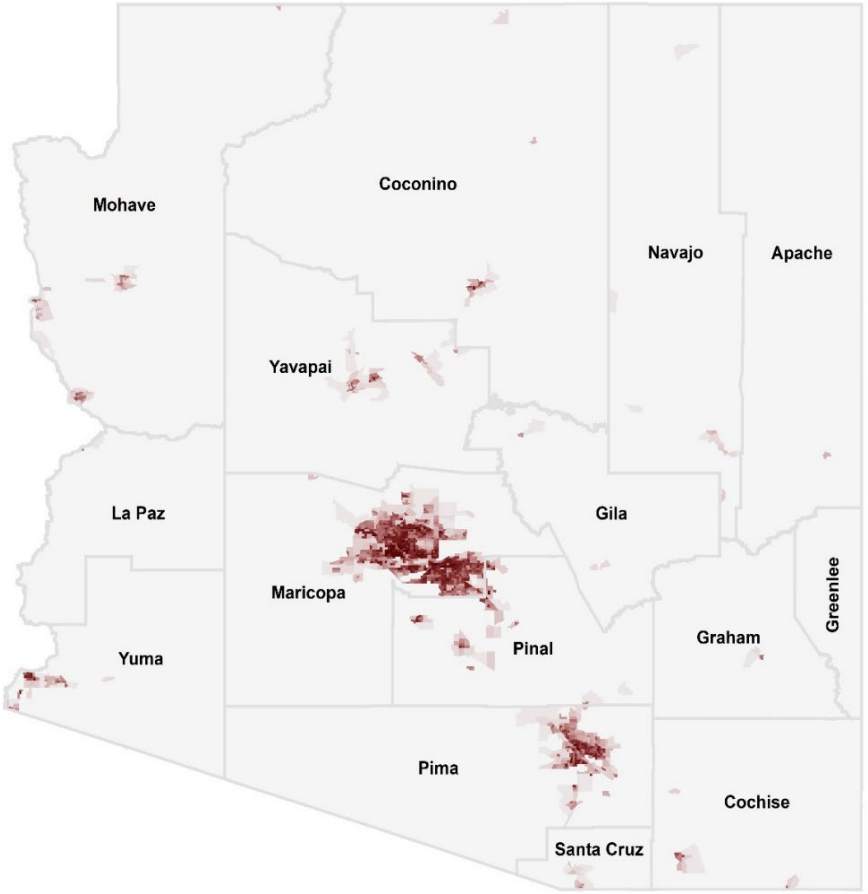
Arizona is comprised of 15 counties and is home to 22 federally recognized tribes. The majority of Arizona counties are geographically large; however, the county population varies widely. In 2021, 62% of the state's population resided in Maricopa County and 15% resided in Pima County.

**Table 9**

**STI Population vs AZ Population, Arizona 2021**

| County | AZ STI Population N | AZ STI Population % | AZ Population N | AZ Population % |
|---|---|---|---|---|
| **Apache** | 825 | 1% | 66,411 | 1% |
| **Cochise** | 514 | 1% | 126,463 | 2% |
| **Coconino** | 1,227 | 2% | 147,434 | 2% |
| **Gila** | 292 | 0% | 53,525 | 1% |
| **Graham** | 182 | 0% | 39,025 | 1% |
| **Greenlee** | 47 | 0% | 9,593 | 0% |
| **La Paz** | 92 | 0% | 16,820 | 0% |
| **Maricopa** | 45,094 | 71% | 4,507,419 | 62% |
| **Mohave** | 718 | 1% | 216,527 | 3% |
| **Navajo** | 1,103 | 2% | 107,748 | 1% |
| **Pima** | 8,561 | 13% | 1,058,318 | 15% |
| **Pinal** | 2,633 | 4% | 439,128 | 6% |
| **Santa Cruz** | 271 | 0% | 48,468 | 1% |
| **Yavapai** | 574 | 1% | 241,173 | 3% |
| **Yuma** | 1,467 | 2% | 207,318 | 3% |
| **Total** | 63,600 | | 7,285,370 | |

**Population Density, Arizona 2020**

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1. Arizona Office of Economic Opportunity. 2021 Arizona Population Estimates. https://www.azcommerce.com/media/gmtnexac/july1_2021_arizona_population_estimates.pdf.