



RHODE ISLAND

HIV, Sexually Transmitted Infections, Viral Hepatitis, and Tuberculosis

Surveillance Report | 2023



Dear Rhode Islanders:

I'm pleased to introduce our *2023 Rhode Island HIV, Sexually Transmitted Infections, Viral Hepatitis, and Tuberculosis Surveillance Report*. The elimination of HIV and viral hepatitis and the prevention and control of sexually transmitted infections (STIs) and tuberculosis (TB) are priorities for the Rhode Island Department of Health (RIDOH). As this report details, these conditions disproportionately affect some populations in Rhode Island. RIDOH maintains a strong surveillance program to track these trends and tailor prevention and control efforts.

HIV: While this is a 2023 report, I would like to offer an update on 2024 HIV data. An above average number of new HIV diagnoses were observed in 2024. RIDOH noted this increase in real time and worked to enhance prevention efforts. We estimate 76% of people living with HIV are engaged in care and 93% of those engaged in care have achieved viral suppression.

Rhode Island continues to surpass national averages in the HIV care continuum, but more work needs to be done to prevent ongoing transmission. RIDOH launched the *Rhode Island PrEP Champions Network* to coincide with World AIDS Day 2024, creating a network of clinics that prescribe pre-exposure prophylaxis (PrEP) medication for HIV prevention. We encourage you to learn more about PrEP and the *Rhode Island PrEP Champions Network* at health.ri.gov/prep.

STIs: Leading up to the COVID-19 pandemic, Rhode Island observed annual increases in STI rates among all groups, especially young people and other vulnerable populations. New STI diagnosis rates are consistently high among adolescents, age 15-24. In 2024, RIDOH partnered with the Rhode Island Healthy Schools Coalition to launch the *Right to Know* app (righttoknowapp.com), which provides adolescents and young adults with accurate information about sexual and reproductive health.

Since the COVID-19 pandemic, total STI rates have started to rebound, with total syphilis and gonorrhea rates exceeding pre-pandemic levels in 2023. Preliminary 2024 data indicate similar trends. In 2020, Rhode Island had its first report of congenital syphilis (CS) in more than 10 years. Additional cases have been reported annually since. In response to this, RIDOH has coordinated several CS prevention campaigns. Program efforts are focused on timely treatment and follow up of women of reproductive age diagnosed with syphilis to reduce CS incidence and negative outcomes. Street outreach related to reproductive health is now integrated into RIDOH's harm reduction work to address CS and improve maternal health.

Viral hepatitis: A Hepatitis B and Hepatitis C (HBV/HCV) surveillance system was established in late 2020 with grant funding through the Centers for Disease Control and Prevention (CDC). RIDOH prioritizes all acute HBV and HCV cases to identify contacts, link patients to medical care, and classify cases for CDC reporting purposes.

Tuberculosis: Reports of active TB were higher than expected in 2023, and preliminary 2024 data indicate a similar trend. RIDOH continues its directly observed therapy program to provide medication to all active TB cases to prevent further spread.

Tracking and analyzing rates of these illnesses is complex work that requires time and significant coordination. The lag between 2023 and March 2025 is typical when assessing trends in this field. The data included here represent the most accurate, comprehensive, up-to-date picture we have of HIV, STIs, viral hepatitis, and TB in Rhode Island.

Structural challenges, factors influencing health, and obstacles to fair access to care continue to be significant issues in Rhode Island, contributing to differences in health outcomes. It's essential to avoid labeling or blaming any specific group, to support those at highest risk, and to ensure all communities remain vigilant.

To learn more about the work of the Center for HIV, Hepatitis, STD, and TB Epidemiology and access resources, please visit health.ri.gov/chhste.

Sincerely,



Jerome Larkin, MD
Director of Health
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01 | PROGRAM HIGHLIGHTS 2023: CENTER FOR HIV, HEPATITIS, STD, AND TB EPIDEMIOLOGY



Promoted Healthy Behaviors

- Prompted **24,608** visits to Rhode Island Department of Health sexual health web pages
- Prompted **97,656** impressions on Facebook and Instagram awareness campaigns
- Distributed more than **600,000** sterile syringes
- Distributed more than **500,000** condoms
- Educated, tested, or presumptively treated **67** partners of syphilis cases



Engaged People in Medical Care

- Conducted **4,243** tuberculosis medication home and virtual visits
- Linked **11** people living with HIV and not currently in care back to care
- Interviewed and confirmed **78%** of new HIV diagnoses were already in care
- Treated **92%** of pregnant people with syphilis based on their stage of infection



Disease Tracking

- Reported and processed more than:
 - **76,000** STI lab results
 - **48,000** viral hepatitis lab results
 - **10,000** HIV-related lab results
 - **6,400** tuberculosis lab results
- Managed nearly **2,800** prevalent HIV cases in Rhode Island
- Conducted weekly data analyses to prevent and respond to disease outbreaks



Increased Access to Screening and Testing

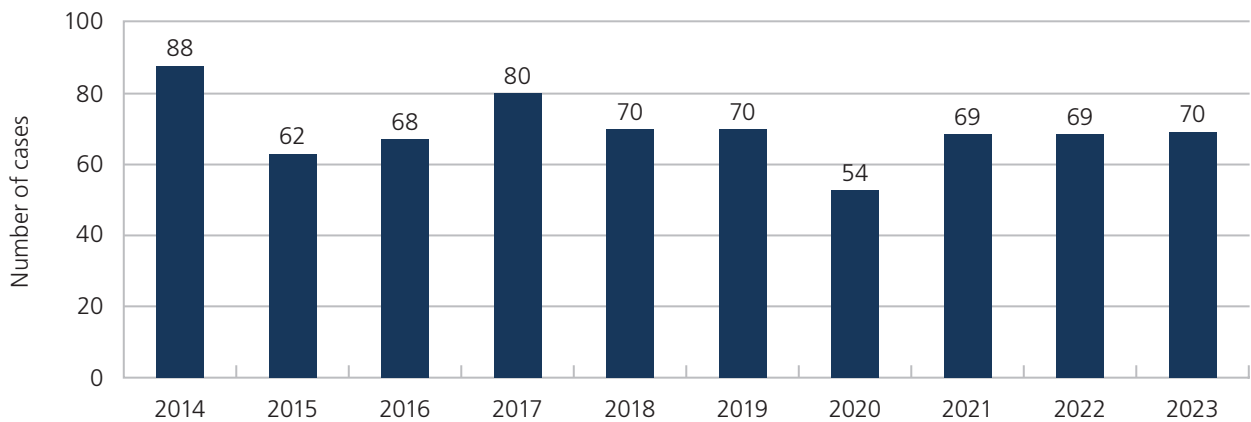
- Tested **163** people through testing123ri.com
- Conducted **1,692** rapid HIV tests
- Conducted **1,053** rapid hepatitis C tests
- Distributed **78** self-test HIV kits

Thank you to all our state agency and community partners!

02 | HIV/AIDS

The human immunodeficiency virus (HIV) is a pathogen that can spread through sexual contact, needle sharing, and to a child through pregnancy, birth, or breastfeeding. While HIV is not a curable disease, people living with HIV who are in medical care and are routinely taking their medications can achieve an undetectable HIV viral load and have a normal life expectancy. If left untreated, HIV infection can lead to acquired immunodeficiency syndrome, or AIDS. Because the immune system is greatly weakened for people diagnosed with AIDS, those living with AIDS have an increased susceptibility to certain infections and cancers that can potentially lead to serious illnesses and death.

FIGURE 1
Number of Newly Diagnosed Cases of HIV, Rhode Island, 2014-2023



Source: Rhode Island Department of Health

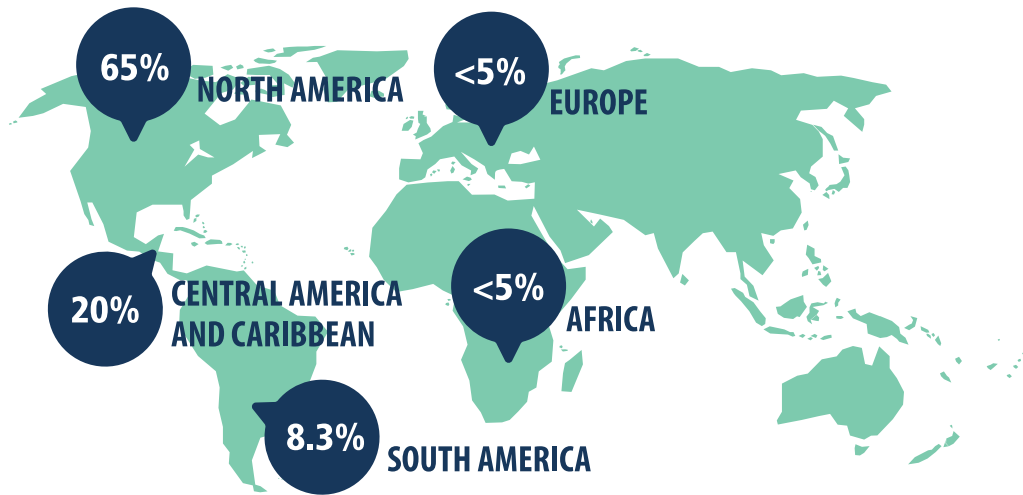
Over the last 10 years, there has been an overall yearly reduction in the number of newly diagnosed HIV cases in Rhode Island. After the 2020 dip due to the COVID-19 pandemic, annual HIV case counts in 2021-2023 were comparable to pre-pandemic levels.

HIV/AIDS Deaths

Between 1983 and 2023, a total of 2,050 deaths have occurred among Rhode Island residents diagnosed with HIV/AIDS. However, only 184 (9.0%) of those deaths occurred from 2019-2023, and deaths decreased yearly in this 5-year period. Between 2010 and 2017, the national age-adjusted rate of HIV-related deaths fell by nearly half.² This reduction in deaths underscores the impact of improved treatment and access to care for people living with HIV.

FIGURE 2

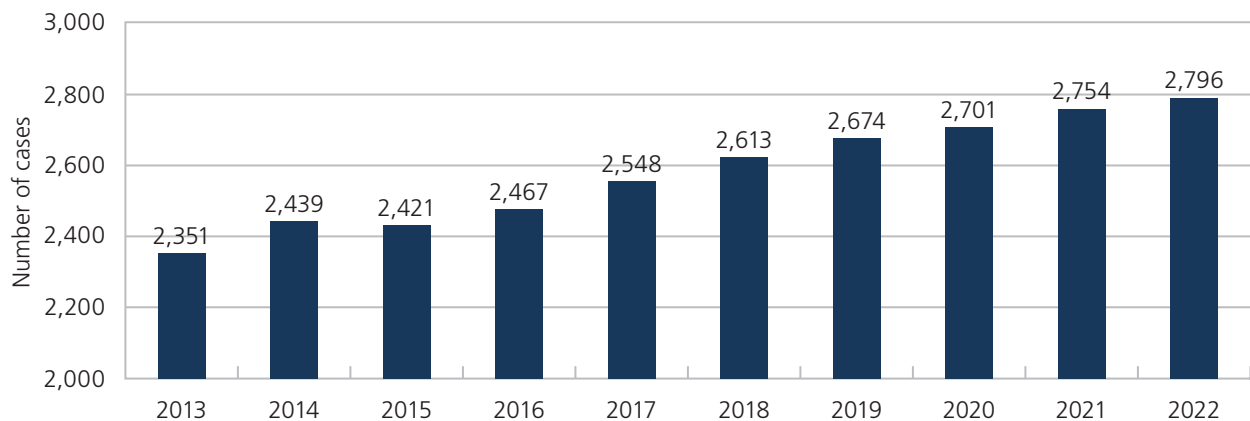
Country of Birth for Newly Diagnosed Cases, Rhode Island, 2023



People born outside the United States make up about 14.8% of the total Rhode Island population. These people living with HIV infection in Rhode Island are a diverse group with at least 26 countries of birth represented in newly diagnosed cases between 2019-2023. In 2023, 31.4% of newly diagnosed HIV cases were born outside the United States, most commonly in the Caribbean and Central and South America.

FIGURE 3

Estimated Number of People Diagnosed and Living with HIV, Rhode Island, 2013-2022

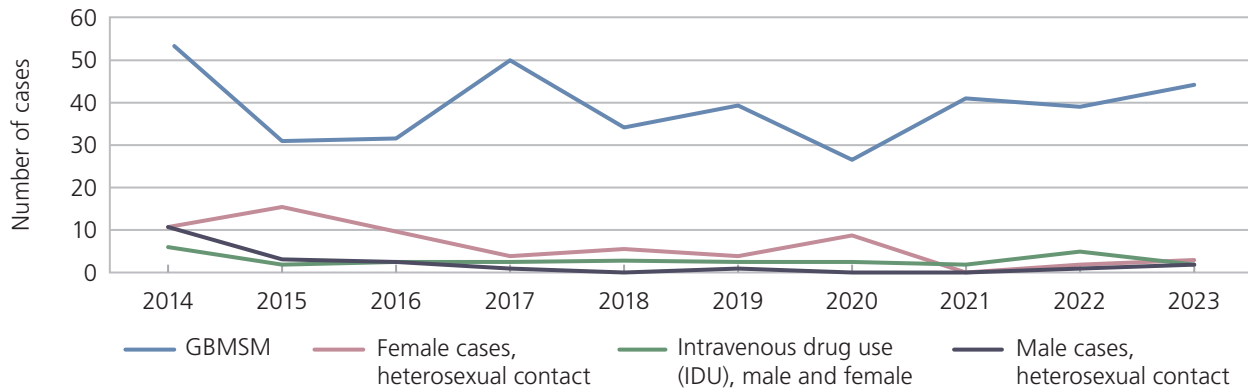


Source: Rhode Island Department of Health

There were 2,796 Rhode Islanders diagnosed with HIV through 2021 and alive through the end of 2022, the most recent year with death data used for this analysis. It's also estimated that about 13% of people who are HIV-infected do not know their status,¹ indicating that the numbers above are an underestimate of all Rhode Islanders living with HIV. Due to advances in HIV treatment, people living with HIV are living longer lives and represent a growing segment of Rhode Island's population. The numbers above account for the migration of people living with HIV who move into and out of Rhode Island.

FIGURE 4a

Number of Newly Diagnosed Cases of HIV, by Mode of Exposure, Rhode Island, 2014-2023

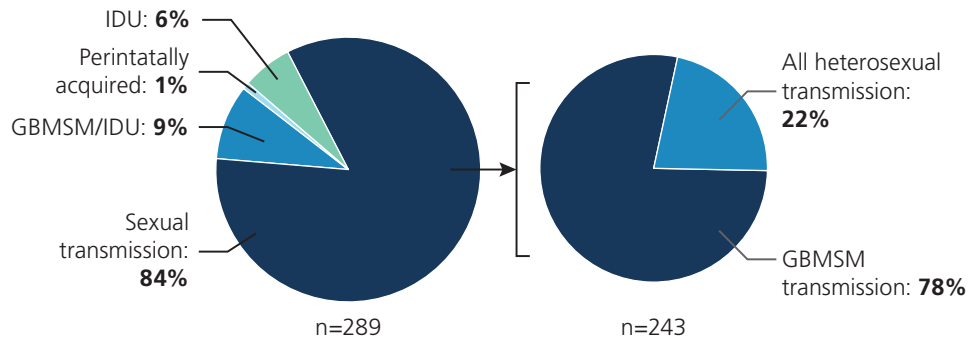


Source: Rhode Island Department of Health
People of unknown or unreported sexual orientation and cases where mode of exposure could not be determined are not included in this figure.

In the last 10 years, among people with known mode of exposure, 65% of newly diagnosed cases of HIV were among gay, bisexual, or other men who have sex with men (GBMSM). During this same time, the number of newly diagnosed cases of HIV among heterosexual males and females and among people who inject drugs has remained low. In 2023, there were more than 2.5 times as many cases of HIV among GBMSM compared to females, male heterosexuals, and people who inject drugs combined.

FIGURE 4b

Snapshot: Mode of HIV Exposure, Rhode Island, 2019-2023



Source: Rhode Island Department of Health
Note: Between 2019-2023, there were 43 cases of newly diagnosed HIV for which a risk could not be determined.

From 2019-2023, the main mode of HIV exposure among newly diagnosed HIV cases was sexual contact (84%), followed by GBMSM/IDU (9%) and IDU (6%). Most people (78%) among those with sexual contact as mode of exposure were GBMSM. From 2019-2023, there were fewer than 5 cases of mother-to-child transmission.

Intravenous Drug Use

HIV infection associated with intravenous drug use (IDU) has decreased substantially in the last 20 years. In 2023, 6 newly diagnosed HIV cases were attributed to IDU and fewer than 5 were attributed to GBMSM/IDU. In the last 5 years, 5.1% of newly diagnosed HIV cases were associated with IDU.

HIV Cluster Detection and Response

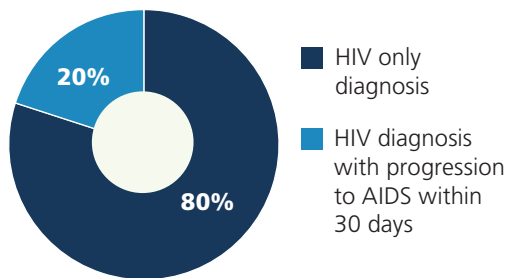
In collaboration with the Centers for Disease Control and Prevention (CDC) and Brown University, the Rhode Island Department of Health (RIDOH) has been using molecular methods to identify possible emerging HIV transmission networks to help reduce the spread of HIV in the state. The tools involve determining genomic similarity among the various HIV strains circulating in Rhode Island. The outcome of this work has helped prioritize HIV prevention and screening activities. You can learn more about this project through these published reports:

- (i) Novitsky et al. Empirical Comparison of Analytical Approaches for Identifying Molecular HIV-1 Clusters. *Scientific Reports* 2020;10:18547. PMID: 33122765 PMCID: PMC7596705
- (ii) Novitsky et al. Longitudinal Typing of Molecular HIV Clusters in a Statewide Epidemic. *AIDS* 2021;35:1711-1722. PMID 34033589
- (iii) Novitsky et al. Not All Clusters Are Equal: Dynamics of Molecular HIV-1 Clusters in a Statewide Rhode Island Epidemic (in press, *AIDS*)

Source: Rhode Island Department of Health

FIGURE 5

Percentage of Newly Diagnosed Cases of HIV, by Disease Progression at Diagnosis, Rhode Island, 2019-2023

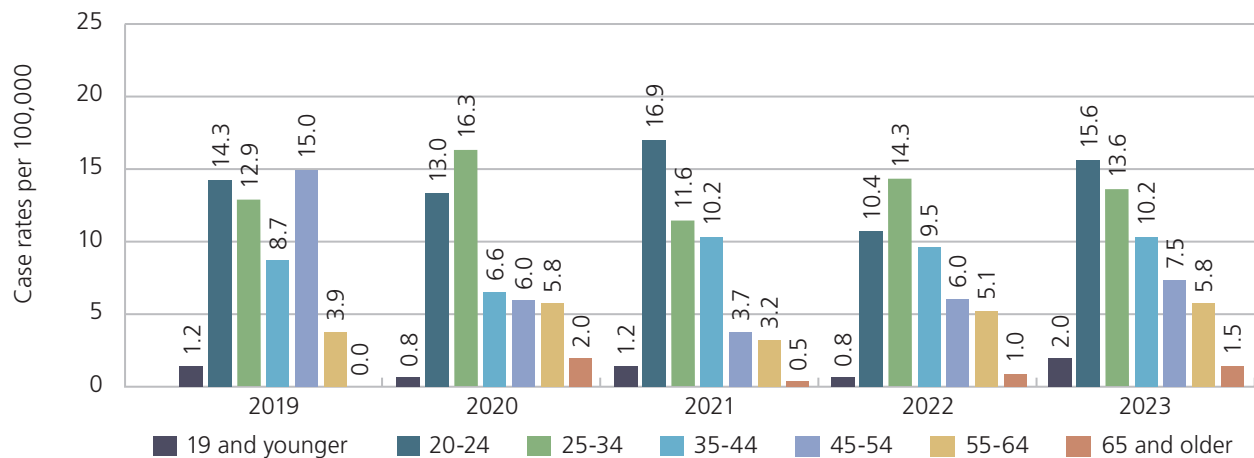


From 2019-2023, about 20% of people newly diagnosed with HIV in Rhode Island had a concurrent HIV stage 3 (AIDS) diagnosis. The average time from untreated HIV infection to development of stage 3 infection is 8 years. During this time, undiagnosed people living with HIV can benefit from treatment that would improve their health and reduce the chances of HIV transmission to others.

Source: Rhode Island Department of Health

FIGURE 6

Rates of Newly Diagnosed Cases of HIV, by Age, Rhode Island, 2019-2023



Source: Rhode Island Department of Health

In the last 5 years, the rates of newly diagnosed HIV cases were highest among Rhode Islanders in their 20s, 30s, and 40s. Rates among people age 20-24 and 25-34 have remained consistently high compared to other groups.

03 | RHODE ISLAND HIV CARE CONTINUUM

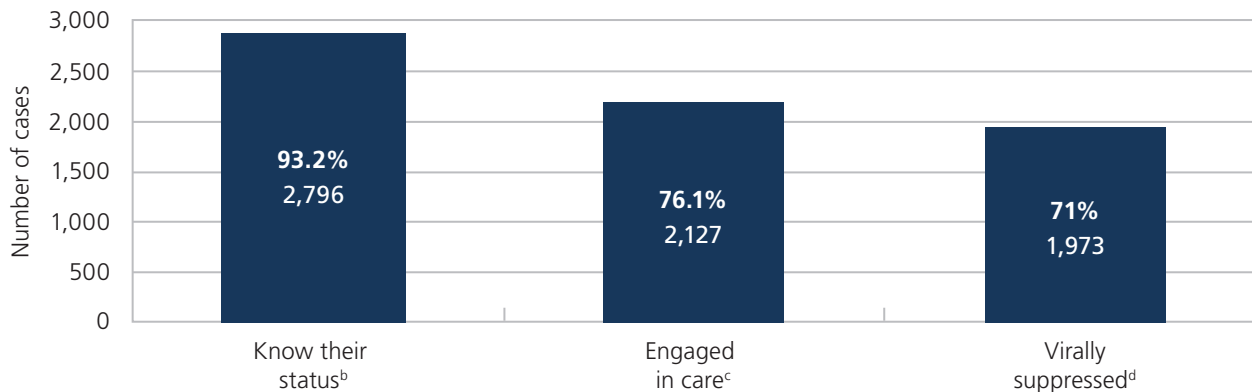
The International Association of Providers of AIDS Care (IAPAC) Fast-Track Cities Initiative is a global partnership with local municipalities, the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Human Settlements Program (UN-Habitat), and Paris, France. Rhode Island has joined this initiative to achieve the UNAIDS 95-95-95 targets:

1. 95% of all people living with HIV in Rhode Island will know their HIV status
2. 95% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART)
3. 95% of all people receiving ART will achieve viral suppression

The HIV Care Continuum is a visual representation of the 95-95-95 care status of people diagnosed with HIV who live in Rhode Island. According to the CDC, an estimated 1.2 million people age 13 and older were living with HIV in the United States at the end of 2022. Of those 1.2 million people, an estimated 87% were diagnosed with HIV, 66% had received HIV medical care, and 57% had achieved viral suppression.

Rhode Island is currently surpassing these national averages due to its comprehensive approach to re-engagement and retention in care for people living with HIV. In Rhode Island among all people living with HIV, 93.2% know their HIV status, 76.1% were engaged in care, and 71% had achieved viral suppression. Of those engaged in medical care in Rhode Island, 93% achieved viral suppression.

FIGURE 7
Rhode Island HIV Care Continuum,^a 2022



Source: Rhode Island Department of Health

^a The HIV care continuum is based on people diagnosed through 2021 and alive at the end of 2022 with their most recent residence in Rhode Island.

^b The number of people diagnosed with HIV ("know their status") reflects people diagnosed through 2021 and alive at the end of 2022 with their most recent residence in Rhode Island.

^c "Engaged in care" is defined as at least one care visit during the calendar year 2022, the most recent year with available data.

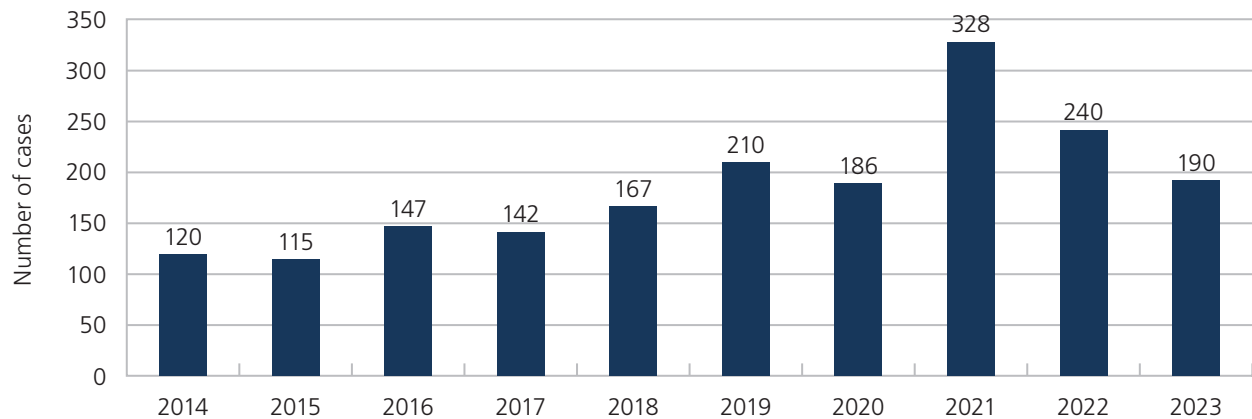
^d A viral load (VL) test result of < 200 copies/mL represents HIV viral suppression. VL test results are from the most recent test during the specified year (2022). Based on surveillance data from June 2024.

04 | INFECTIOUS SYPHILIS

Syphilis is an infection caused by bacteria that spreads through sexual contact. While syphilis is a curable disease, people can become re-infected if their partners are not treated. Untreated syphilis can lead to serious long-term health outcomes, including cardiac and neurological problems. Untreated syphilis in pregnant women can result in stillbirths, infant deaths, and babies born with congenital syphilis.

FIGURE 8

Number of Infectious Syphilis Cases, Rhode Island, 2014-2023



Source: Rhode Island Department of Health

Infectious syphilis is defined as a primary, secondary, or early latent stage syphilis infection within the past year, when people are most likely to transmit the infection to others. These data represent diagnosed cases based on positive test results and patient history. From 2014-2023, there was a 58.3% increase in reported infectious syphilis cases, from 120 cases in 2014 to 190 cases in 2023. In 2021, infectious syphilis case reports spiked to 328 total cases. The decrease in 2020 cases may represent less testing due to restrictions imposed during the COVID-19 pandemic, and the increase in 2021 may represent clinic re-openings and the return to pre-pandemic testing availability.

Congenital Syphilis (CS)

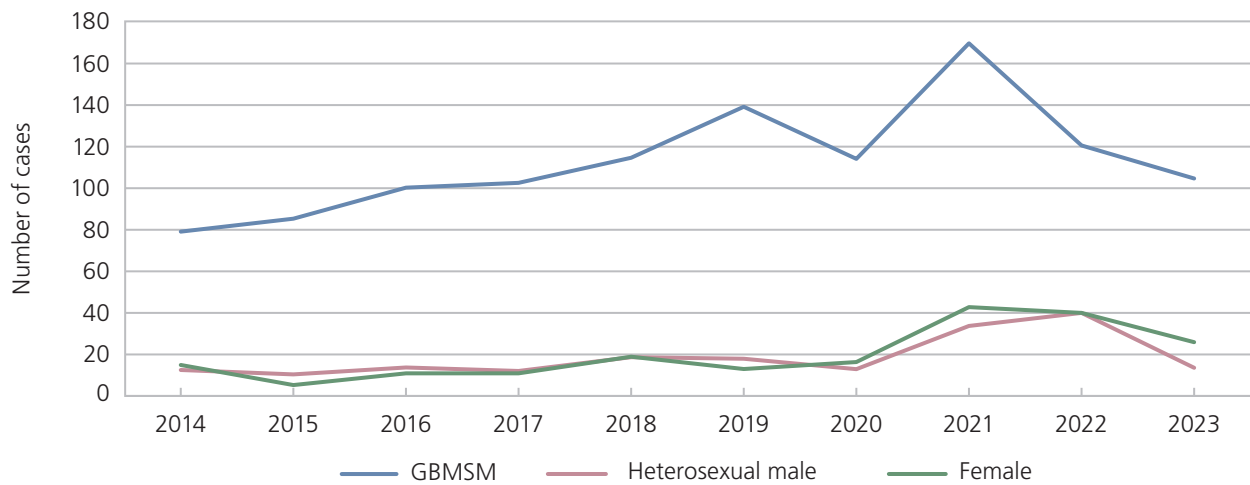
From 2020-2023, RIDOH received 10 reports of congenital syphilis (CS)—the first reports in more than 10 years. All cases suspected of meeting the surveillance case definition of CS are thoroughly investigated by a supervising disease intervention specialist, public health nurse, and the surveillance manager or epidemiologist. Based on CDC case definitions, CS cases may be classified as meeting maternal criteria, infant criteria, stillbirth criteria, or a combination.

Adverse Outcomes

Adverse outcome syphilis includes those with late clinical, neurological, otic, or ocular manifestations. Neurosyphilis can occur at any stage of syphilis infection. From 2021-2023, RIDOH received 74 reports of adverse outcome syphilis among people in all stages of infection. All cases of suspected neurosyphilis are thoroughly investigated by RIDOH staff, who ensure appropriate treatment is administered.

FIGURE 9

Number of Infectious Syphilis Cases, by Sex and Sexual Orientation, Rhode Island, 2014-2023

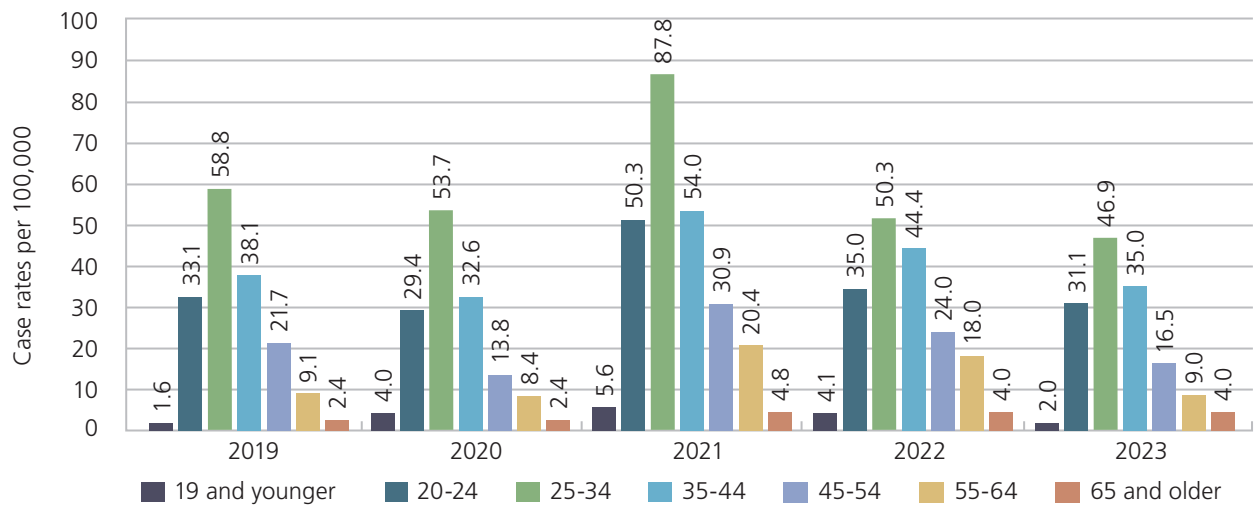


Source: Rhode Island Department of Health

In 2023, most reported infectious syphilis cases were among males. Mirroring national trends, GBMSM are disproportionately affected by infectious syphilis in Rhode Island. The incidence of infectious syphilis among females in Rhode Island has increased recently compared to past years.

FIGURE 10

Rates of Infectious Syphilis Cases, by Age, Rhode Island, 2019-2023



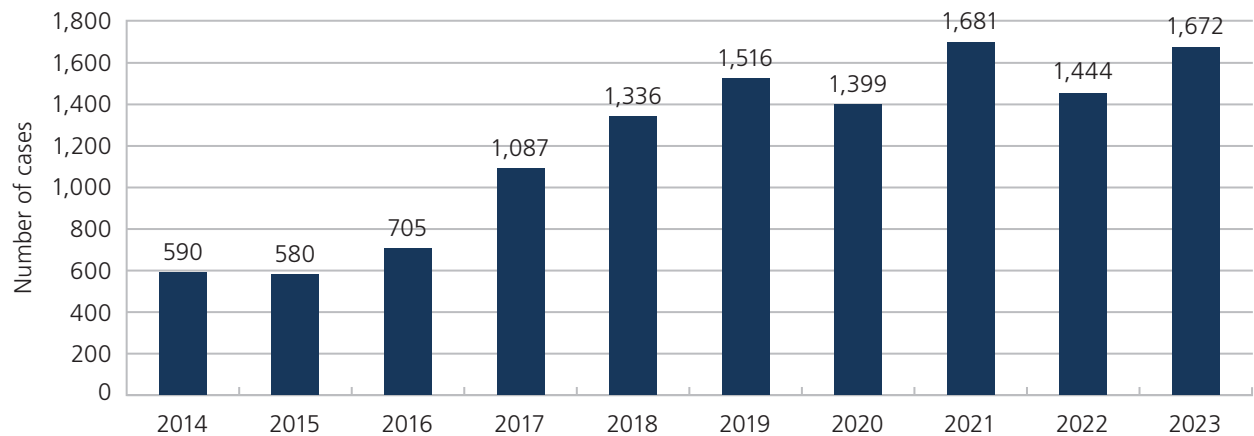
Source: Rhode Island Department of Health

From 2019-2023, people in their 20s and 30s had the highest rates of infectious syphilis in Rhode Island. In 2021, more cases were observed in every age group compared to past years.

05 | GONORRHEA

Gonorrhea is an infection caused by bacteria that spreads through sexual contact. While gonorrhea is treatable, there are increasing concerns about strains of gonorrhea in the United States that are resistant to standard medications. If left untreated, gonorrhea can have reproductive health consequences for women. Pregnant people can transmit gonorrhea to their newborn babies, resulting in health problems for the child.

FIGURE 11
Number of Gonorrhea Cases, Rhode Island, 2014-2023



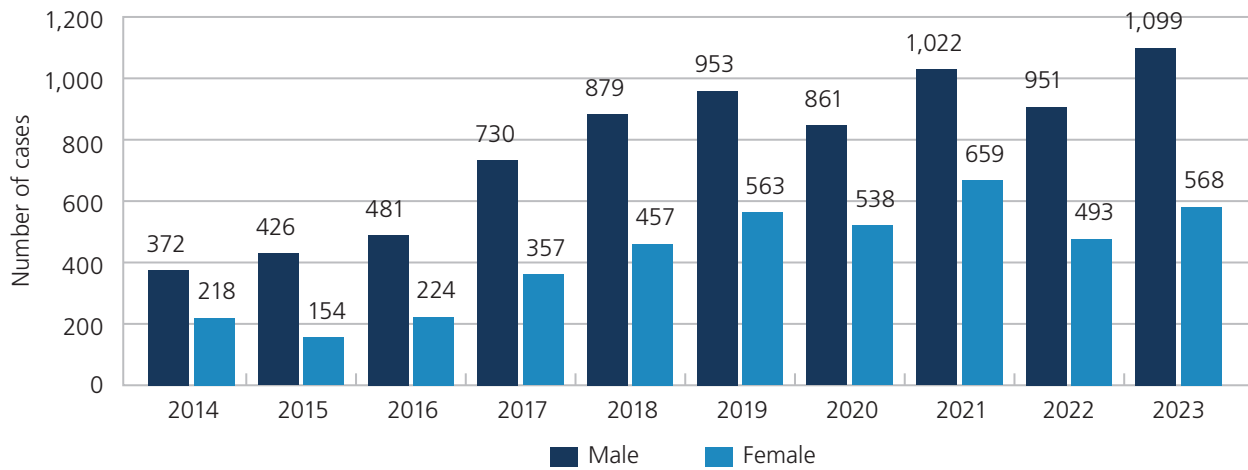
Source: Rhode Island Department of Health

In the last 10 years, rates of gonorrhea have increased by 183.4% in Rhode Island, from 590 cases in 2014 to 1,672 cases in 2023.



FIGURE 12

Number of Gonorrhea Cases, by Sex, Rhode Island, 2014-2023

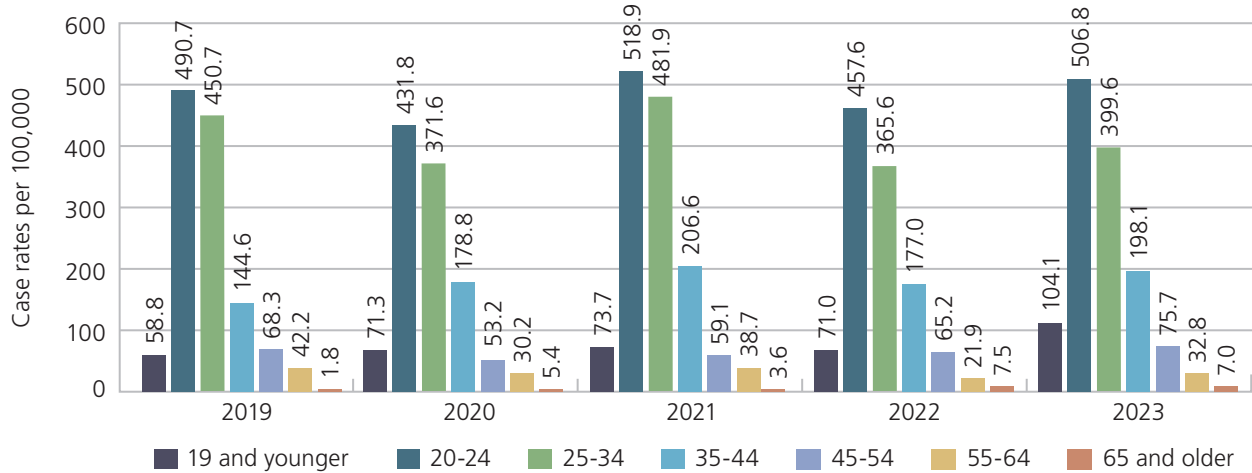


Source: Rhode Island Department of Health

In the last 10 years, more gonorrhea cases have been observed in males than in females. This trend may be attributed to cases among GBMSM as well as men who have sex with women only.³ In 2023, there were 5 cases that could not be classified as male or female because of incomplete case reports.

FIGURE 13

Rates of Gonorrhea Cases, by Age, Rhode Island, 2019-2023



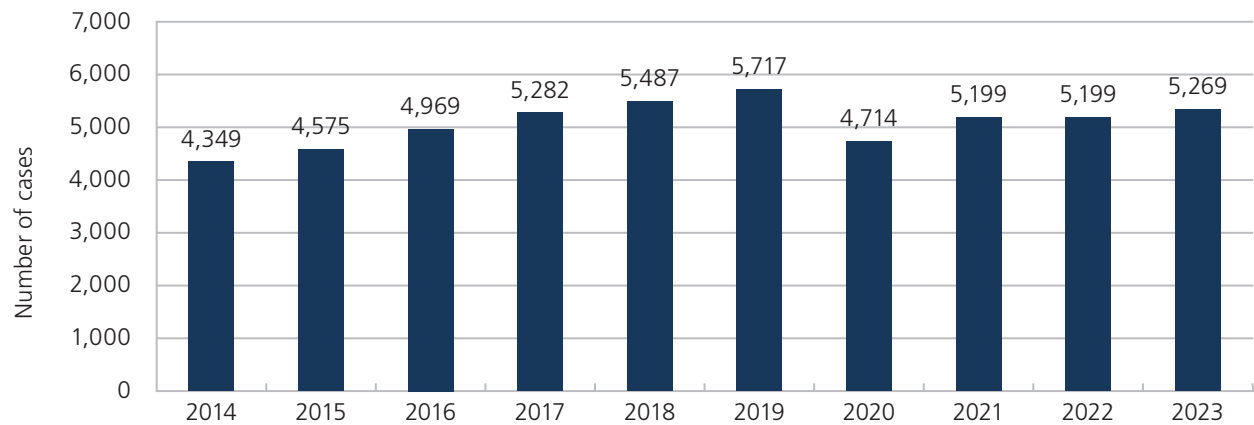
Source: Rhode Island Department of Health

In the last 5 years, case rates for gonorrhea have consistently been highest among populations age 20-29 and 30-39.

06 | CHLAMYDIA

Chlamydia is an infection caused by bacteria that spreads through sexual contact. While chlamydia is treatable, people can get re-infected if their partners are not treated. In women, untreated chlamydia can cause pelvic inflammatory disease (PID), ectopic pregnancy, and infertility. In men, in rare cases, chlamydia can spread to the testicles and epididymis (tubes that carry sperm from the testicles), causing them to become painful and swollen.

FIGURE 14
Number of Chlamydia Cases, Rhode Island, 2014-2023



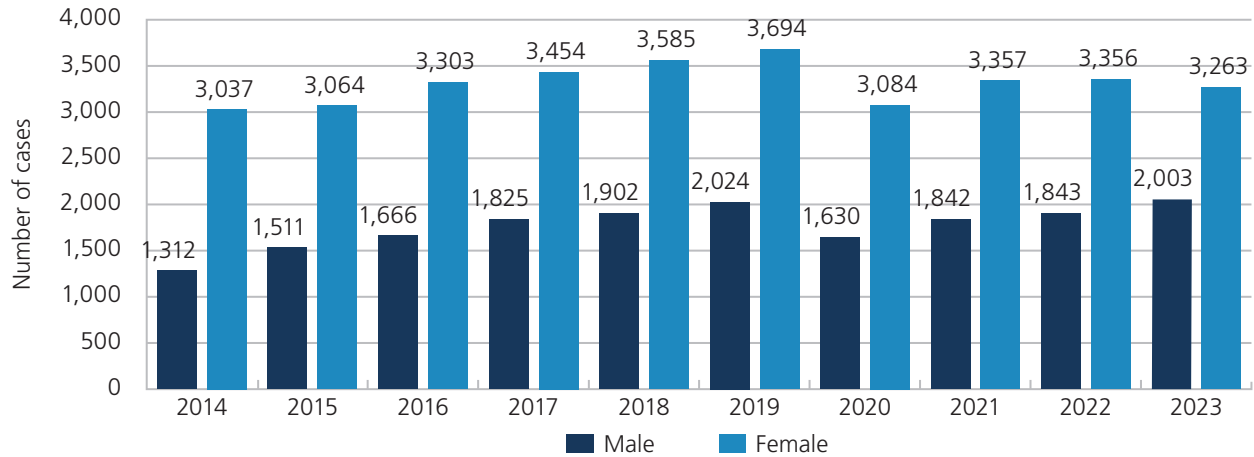
Source: Rhode Island Department of Health

In the last 10 years, the number of chlamydia cases has increased by 21% from 4,349 cases in 2014 to 5,269 cases in 2023. In 2019, Rhode Island observed a spike in chlamydia incidence, with 5,717 cases reported.



FIGURE 15

Number of Chlamydia Cases, by Sex, Rhode Island, 2014-2023

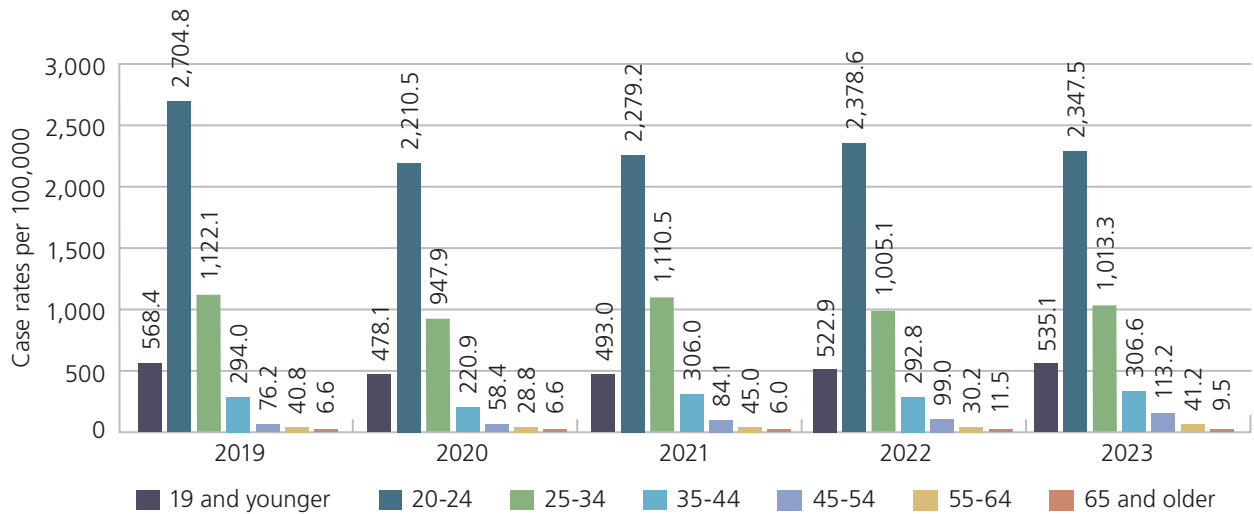


Source: Rhode Island Department of Health

Most chlamydia cases in the last 10 years have been diagnosed in females. This difference is likely due to 2 factors. First, women generally access routine healthcare and subsequent screening more often than men. Second, men who have chlamydia are often asymptomatic. In 2023, there were 3 cases that could not be classified as male or female because of incomplete case reports.

FIGURE 16

Rates of Chlamydia Cases, by Age, Rhode Island, 2019-2023



Source: Rhode Island Department of Health

From 2019-2023, the highest rates of chlamydia were observed in people age 20-24, followed by those age 25-34.

07 | VIRAL HEPATITIS

The term “hepatitis” refers to inflammation of the liver. When the liver is inflamed or damaged, its functions can be adversely affected. Hepatitis can be caused by heavy alcohol use, toxins, some medications, and several viruses.

The most common types of viral hepatitis in the United States are hepatitis A, hepatitis B, and hepatitis C. Importantly, Hepatitis C Virus (HCV) is the most common blood-borne infection in the United States. Based on a CDC report released in 2020, it’s estimated that 2.4 million people in the United States are living with HCV.⁴ Chronic HCV infection increases the risk for hepatic fibrosis, cirrhosis, and hepatocellular carcinoma and is the most common reason to need a liver transplant.

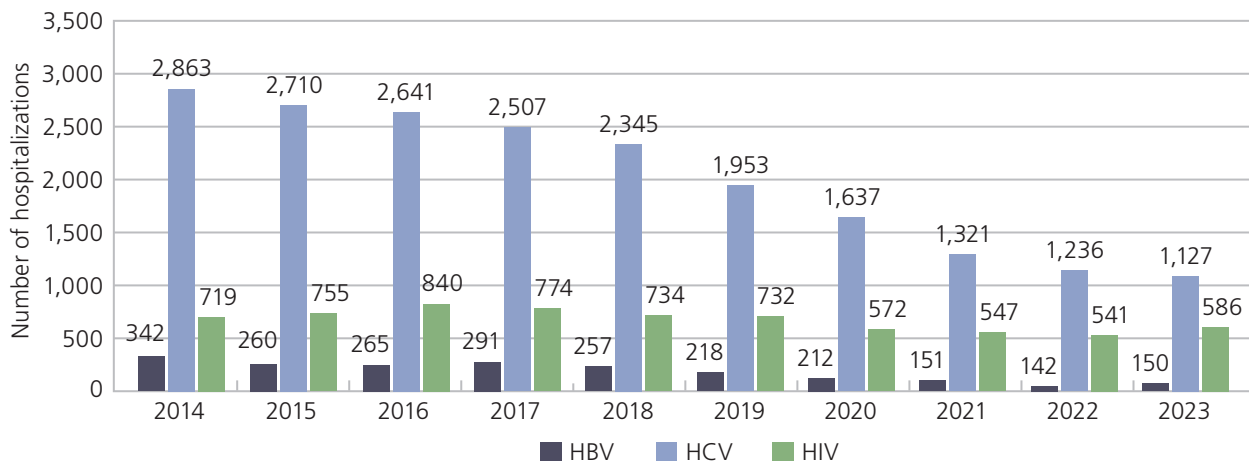
An estimated 16,603 to 22,660 people in Rhode Island—approximately 2% of Rhode Islanders—have been infected with HCV at some time.⁵ Roughly 20% of those infected with HCV will clear their infection without any treatment. The other 80% are at risk of developing chronic disease.

The CDC released universal hepatitis C screening guidelines in 2020. They recommend that all adults age 18 and older get screened at least once in their lifetime, and all pregnant people get screened during pregnancy.⁶ The CDC further recommends one-time screening, regardless of age or setting, for people living with HIV, people who inject drugs and/or share needles, people who get transfusions or transplants, and other populations.

The bars in Figure 17 show the number of hospitalizations in Rhode Island with any discharge diagnosis of Hepatitis B Virus (HBV), HCV, and HIV. A discharge diagnosis of HCV remained consistently higher than HIV and HBV hospitalizations during the past decade.

FIGURE 17

Number of Inpatient Hospitalizations with Any Discharge Diagnosis of HBV, HCV, or HIV, Rhode Island, 2014-2023

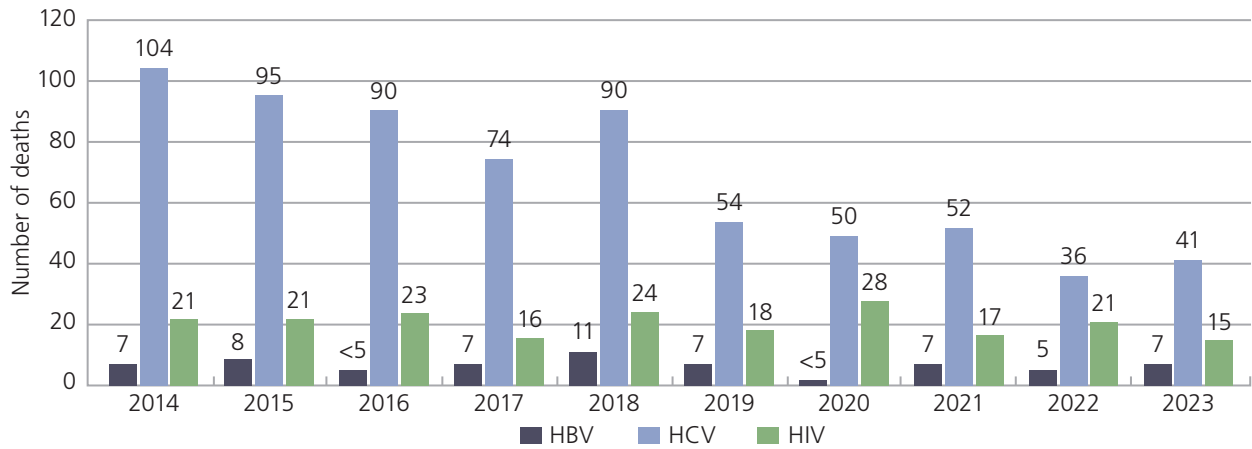


Source: Rhode Island Department of Health

In Rhode Island, the yearly number of inpatient hospitalizations with a discharge diagnosis of HCV has declined significantly in the last 10 years, from more than 2,800 instances in 2014 to fewer than 1,200 in 2023.

FIGURE 18

Number of Deaths Associated with HBV, HCV, and HIV, Rhode Island, 2014-2023



Source: Rhode Island Department of Health

In Rhode Island, like nationally, the yearly number of deaths attributed to HCV in recent years surpassed the number of deaths attributed to HIV and 59 other nationally notifiable infectious diseases, combined.⁷

Hepatitis Treatment

Over the past few years, there have been advances in treatment options and improvements in healthcare access for people living with HCV infection. An increase in the availability of direct-acting antiviral (DAA) medication, which are more effective, safer, and better tolerated than previous HCV therapies, will improve cure rates for people living with HCV and reduce the morbidity and mortality associated with HCV.

FIGURE 19

Acute Hepatitis B Infection, 2022-2023

Total cases	6
Average rate per 100,000	0.27

Acute Hepatitis C Infection, 2022-2023

Total cases	39
Average rate per 100,000	1.77

08 | TUBERCULOSIS

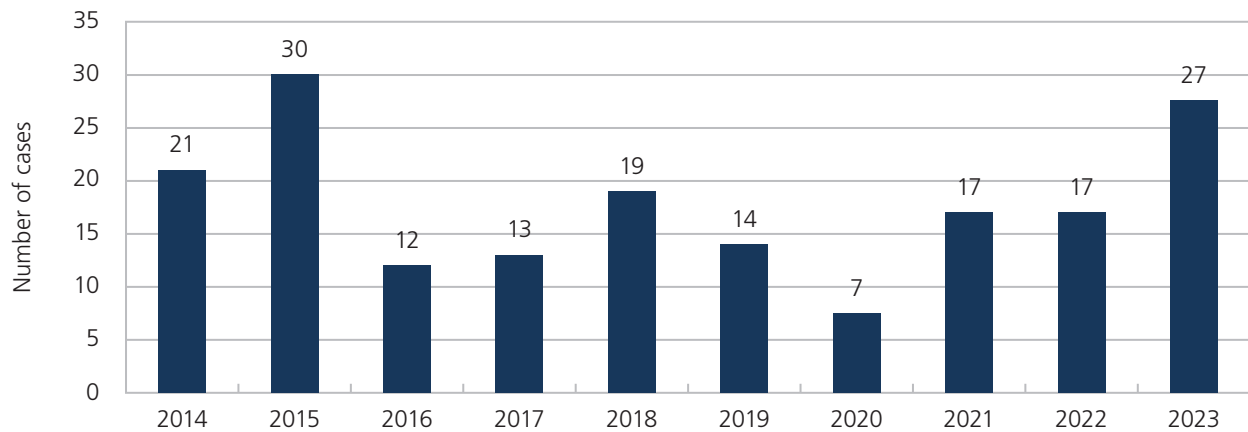
Tuberculosis (TB) is a disease caused by a bacterium called *Mycobacterium tuberculosis*. TB can spread from one person to another through the air when someone speaks or coughs.

Active TB can reside within the lungs (pulmonary) or outside the lungs (extrapulmonary). Common symptoms of active TB disease are fever, cough, and weight loss. Diagnosis may involve chest imaging and sputum and/or tissue collection for smear, nucleic acid amplification (NAAT), and/or culture testing. Drug susceptibility testing is often performed to determine the best course of treatment.

Latent TB infection (LTBI) is the presence of *M. tuberculosis* in the body without signs and symptoms and/or radiographic or bacteriologic evidence of TB disease. Approximately 5-10% of infected people will develop TB disease if not treated. HIV infection, injection drug use, low body weight, and other medical conditions are risk factors associated with progression from LTBI to TB disease.

FIGURE 20

Number of Diagnosed Cases of Active Tuberculosis, Rhode Island, 2014-2023



Source: Rhode Island Department of Health

Rhode Island is a low-incidence state for active tuberculosis diagnoses. Over the last 10 years the reported number of active TB cases has remained relatively low, peaking at 30 cases in 2015 and 27 cases in 2023. From 2022-2023 there was a 58.8% increase in cases reported, from 17 to 27.

FIGURE 21

Demographic Characteristics of Active Tuberculosis Cases, 2023 (n=27)

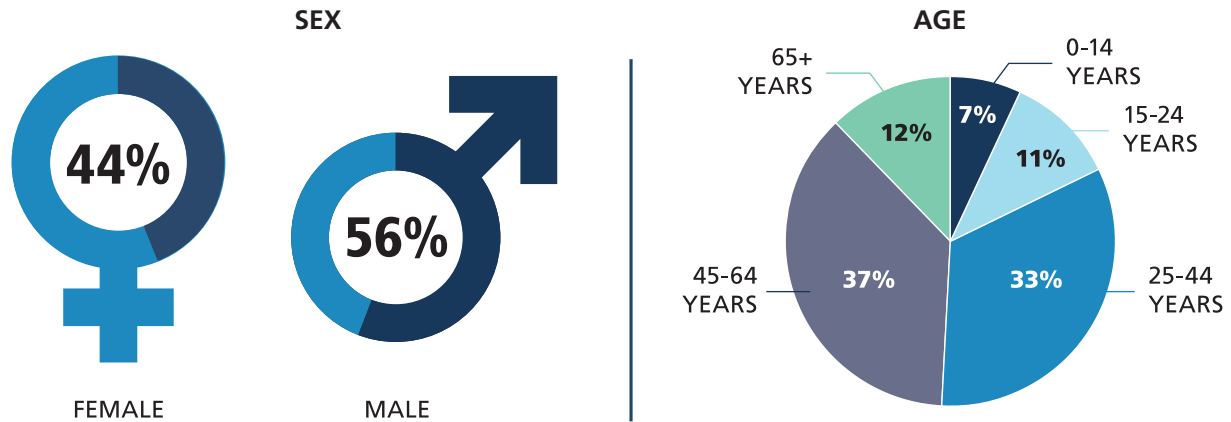
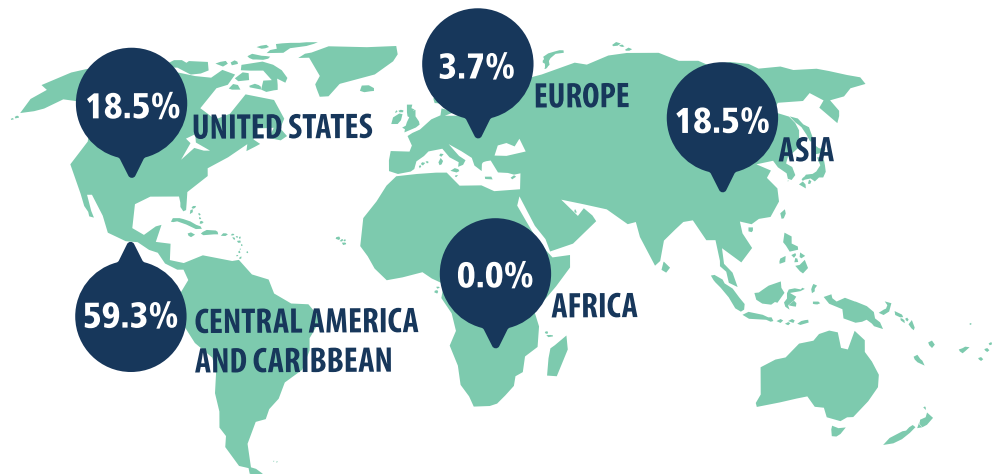


FIGURE 22

Country of Birth of Active Tuberculosis Cases, 2023 (n=27)



CLINICAL CHARACTERISTICS, 2023

Proportion of TB cases with:

pulmonary disease	89%
positive sputum smear	83%
positive sputum culture	56%

Tuberculosis Drug Resistance

TB drug resistance can occur when people are infected with a drug resistant strain of TB, get suboptimal TB medication regimens, or get incomplete treatment. Multi-drug resistant TB (MDR-TB) and extensively-drug resistant TB (XDR-TB) are rare and more severe kinds of TB that are also resistant to first-line and second-line medications such as fluoroquinolones. It's important to diagnose and treat MDR-TB appropriately to prevent further transmission of drug-resistant disease. There were no cases of MDR-TB in 2023.

Source for all data on this page: Rhode Island-National Electronic Disease Surveillance System (NEDSS) Base System

FIGURE 23

Demographic Characteristics of Active Tuberculosis Cases, Rhode Island, 2014-2023

Total Number of Cases	177	
Race/Ethnicity		
Non-Hispanic White	22	12.4%
Non-Hispanic Black	27	15.3%
Hispanic or Latino	73	41.2%
Asian	49	27.7%
Am Indian/AK Native	0	0.0%
HI Native/Pacific Islander	<5	0.6%
Sex		
Female	80	45.2%
Male	97	54.8%
County of Residence		
Bristol	<5	2.3%
Kent	8	4.5%
Newport	7	4.0%
Providence	152	85.9%
Washington	6	3.4%

Country of Origin		
United States	27	15.3%
Not United States	150	84.8%
Age Group		
0-4	<5	0.6%
5-14	5	2.8%
15-24	19	10.7%
25-44	53	29.9%
45-64	54	30.5%
65+	45	25.4%
Site of Disease		
Pulmonary	107	60.5%
Extra-pulmonary	52	29.4%
Both	18	10.2%
Clinical Characteristics		
Sputum Smear (+)	64	36.2%
HIV (+)	8	4.5%
MDR-TB	<5	1.7%

Source: Rhode Island Department of Health

Contact Investigation

All infectious cases of active disease are interviewed within 3 days of diagnosis by a RIDOH community nurse health coordinator. The primary objective of patient interviews is to elicit contacts in the community who may have been exposed to the patient during the infectious period and who may require testing and/or treatment. Contacts may include household members, workplace colleagues, healthcare workers, transportation contacts (bus driver, rideshare/Uber, etc.), or others deemed potentially at-risk.

Latent TB Infection (LTBI)

In Rhode Island, it's estimated that about 18,000-20,000 people are living with latent TB infection (LTBI).⁸ It's important to identify LTBI cases and promote initiation and completion of treatment to reduce the number of people who have LTBI that become active TB cases. LTBI has been reportable in Rhode Island since 2010. LTBI cases prioritized for active follow up and treatment completion include contacts of active cases, and immigrants, refugees, and international parolees.

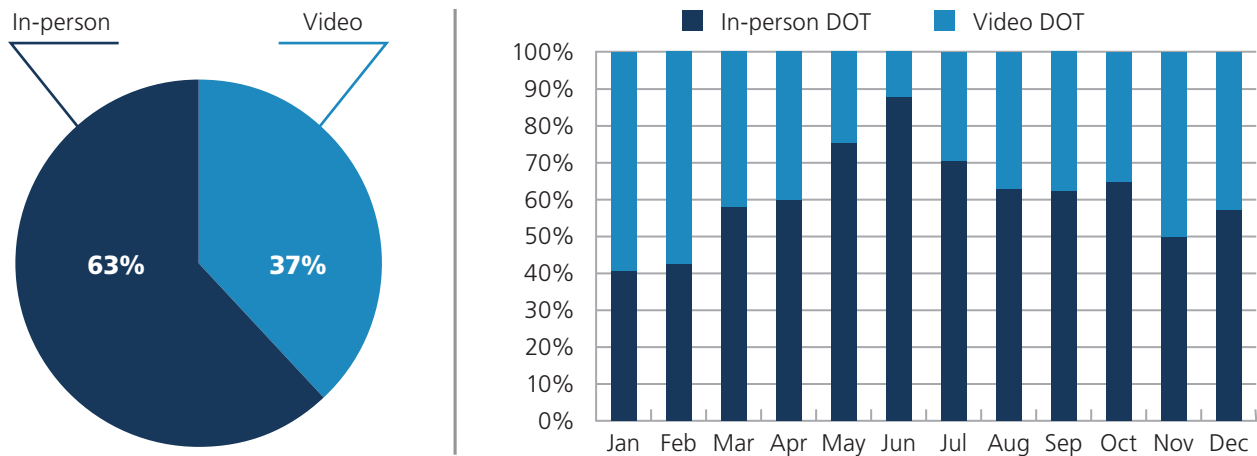
TB Directly Observed Therapy (DOT) Program

RIDOH has 2 overarching goals to prevent TB transmission in Rhode Island.

1. Treat all active cases to ensure all patients are cured and to **prevent transmission to others**.
2. Assure adherence to therapy, which can take up to 9 months or longer, to **prevent the development of antibiotic-resistant strains of TB**.

To achieve these goals and assure patients adhere to their medications, RIDOH has a policy of universal directly observed therapy (DOT) through RIDOH staff visits to patients' homes or internet-based video submission for the duration of treatment. In 2023, the DOT program had an average monthly medication administration success rate of 95.6%.

FIGURE 24
Method of DOT Administration, 2023

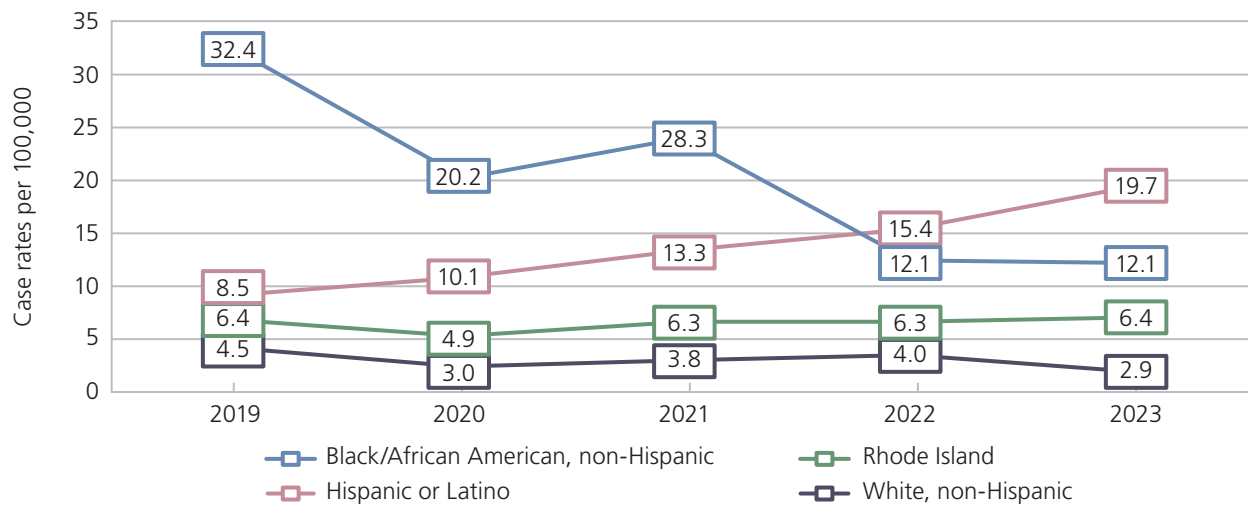


09 | RACIAL AND ETHNIC GROUPS

According to the CDC, acknowledging the inequities in sexually transmitted infection (STI) and HIV rates by race and ethnicity is one of the first steps to address these disparities. The factors contributing to these health inequities are complex and can include poverty, income inequality, access to healthcare, stigma, and discrimination. Another contributing factor is that in communities where STI prevalence is higher, people face a greater chance of encountering an infected partner than those in lower-prevalence settings.

FIGURE 25

Rates of Newly Diagnosed Cases of HIV, by Racial and Ethnic Group, Rhode Island, 2019-2023

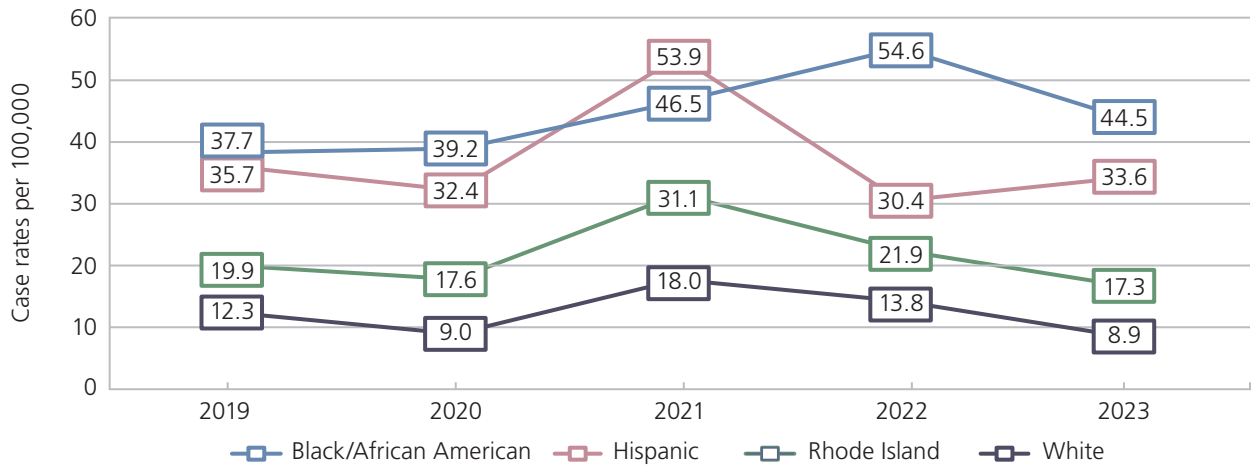


Source: Rhode Island Department of Health

While HIV diagnoses have decreased overall in the last 10 years, disparities in HIV rates among racial and ethnic groups in Rhode Island persist. In 2023, the rates of HIV were about 4 times higher among the Black/African-American population and nearly 7 times higher among the Hispanic/Latino population compared to the non-Hispanic White population. Since 2019, the rate of newly diagnosed HIV among the Black/African-American population has dropped by 63% and increased among the Hispanic/Latino population by 132%.

FIGURE 26

Rates of Infectious Syphilis, by Racial and Ethnic Group, Rhode Island, 2019-2023

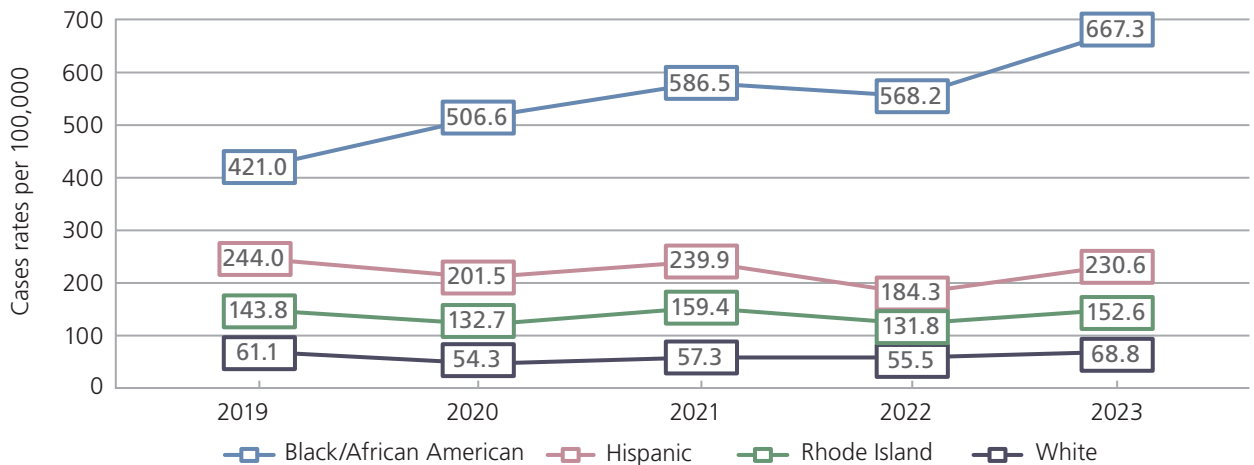


Source: Rhode Island Department of Health

Infectious syphilis rates in Rhode Island disproportionately affect communities of color. 2019-2023 rates were highest among the Black/African-American and Hispanic populations.

FIGURE 27

Rates of Gonorrhea, by Racial and Ethnic Group, Rhode Island, 2019-2023

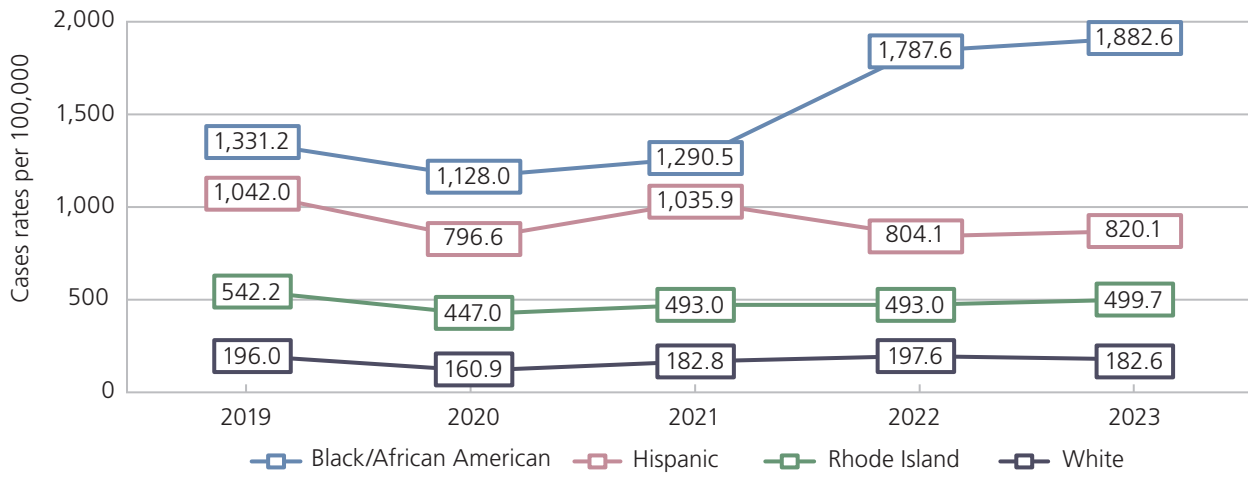


Source: Rhode Island Department of Health

Gonorrhea rates in Rhode Island disproportionately affect communities of color. 2019-2023 rates were highest among the Black/African-American population.

FIGURE 28

Rates of Chlamydia, by Racial and Ethnic Group, Rhode Island, 2019-2023



Source: Rhode Island Department of Health

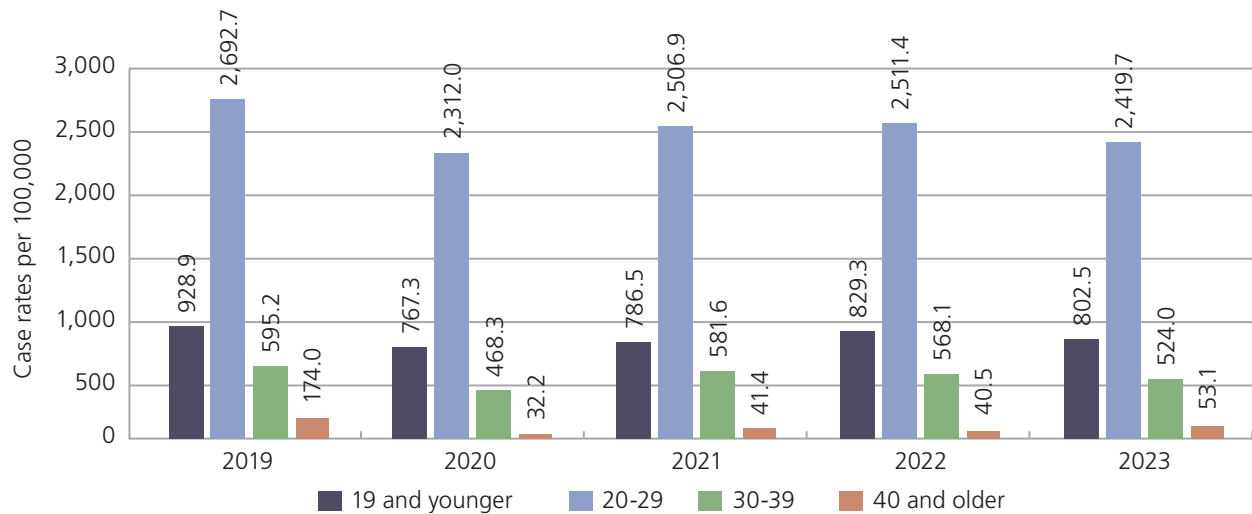
Chlamydia rates in Rhode Island disproportionately affect communities of color. 2019-2023 rates were highest among the Black/African-American population.



10 | FEMALES

According to the CDC, in addition to the biological factors that put females at a higher risk of STIs, females may be less likely to negotiate safer sexual practices, such as condom use, than males. These social factors can significantly affect a female's sexual and reproductive health and, subsequently, the health of her newborn baby.

FIGURE 29
Rates of Chlamydia in Females, by Age, Rhode Island, 2019-2023



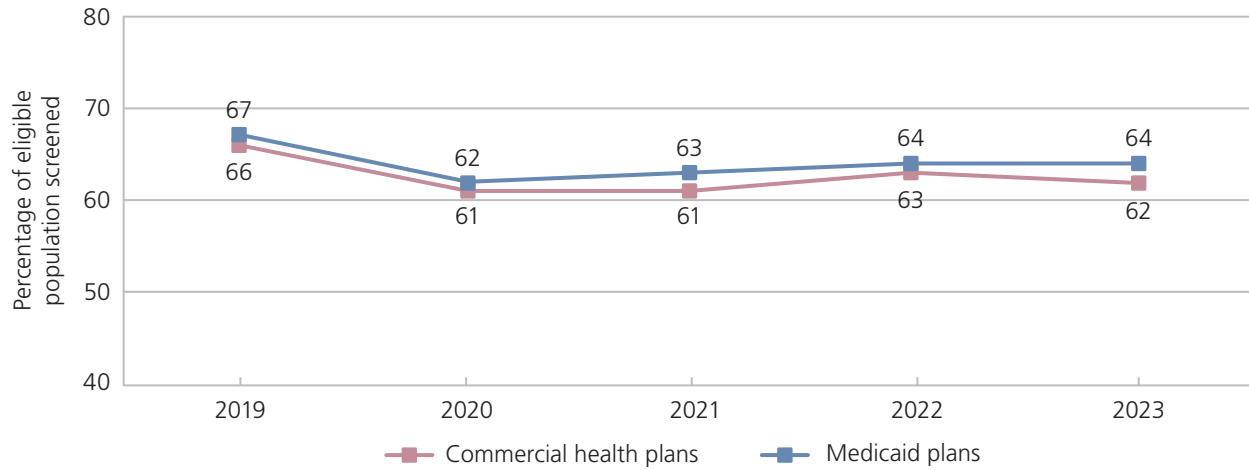
Source: Rhode Island Department of Health

Over the last 5 years, rates of chlamydia in females have remained highest in the 20-29 age group, followed by the 19 and younger age group. In 2023, the rate of chlamydia among females in their 20s was more than 3 times higher than any other age group.



FIGURE 30

Screening for Chlamydia in Females Age 16-24, by Insurance Plan, Rhode Island, 2019-2023



Source: Rhode Island Department of Health

Through the Healthcare Effectiveness and Data Information Set (HEDIS), insurance claims data are used to calculate yearly estimates of the percentage of sexually active females, age 16-24, who are screened for chlamydia. The data above for commercial health plans was collected from Blue Cross Blue Shield of Rhode Island, UnitedHealthcare, Neighborhood Health Plan of Rhode Island, and Tufts Health. The data for Medicaid plans was collected from UnitedHealthcare, Neighborhood Health Plan of Rhode Island, and Tufts Health.

HIV Risk Factors and Females

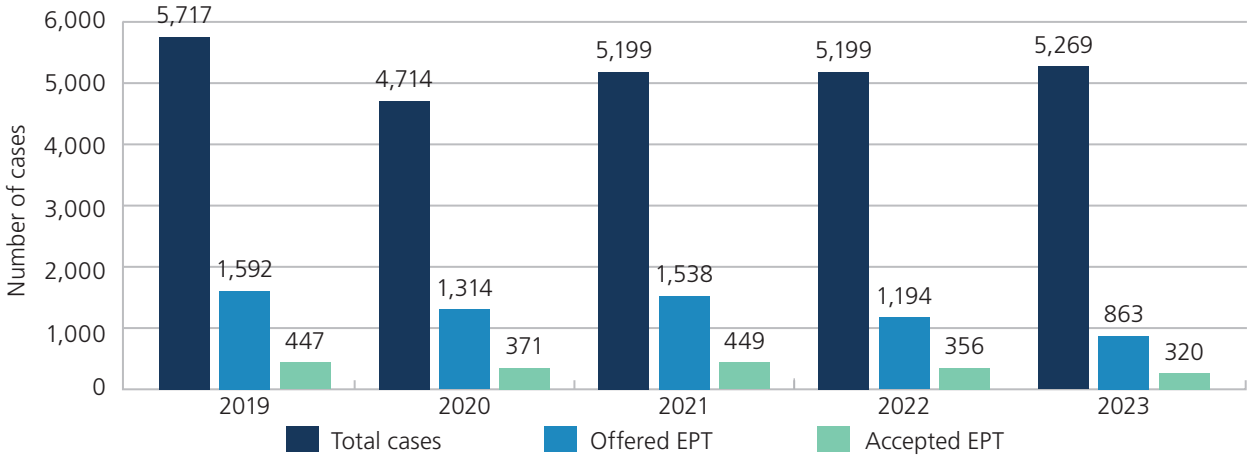
Characteristics of the 56 females who were newly diagnosed with HIV in Rhode Island from 2019-2023 include:

- Born outside of the United States: 38%
- Injected prescription drugs in their lifetime: 11%
- Had sex with someone known to be HIV positive: 14.3%
- Had sex with someone who injects drugs: 12.5%
- Had sex while high or intoxicated: 25%
- Had history of incarceration: 14.3%
- Forced to have sex: 12.5%

Learn more about epidemiological patterns of HIV diagnoses among women in Rhode Island through this published report: Bhattarai L, MacAskill M, Brown E, Bertrand T, Chan PA, Bornschein S. Epidemiological Patterns of HIV Diagnoses Among Women in Rhode Island: An Overview. *RI Med J* (2023). 2023 Dec 1;106(11):62-64. PMID: 38015789.

FIGURE 31

Expedited Partner Therapy Offered and Accepted for Partners of Cases of Chlamydia, Rhode Island, 2019-2023



Source: Rhode Island Department of Health
Offer and acceptance of EPT based on provider report on the RIDOH STD Confidential Case Report Form

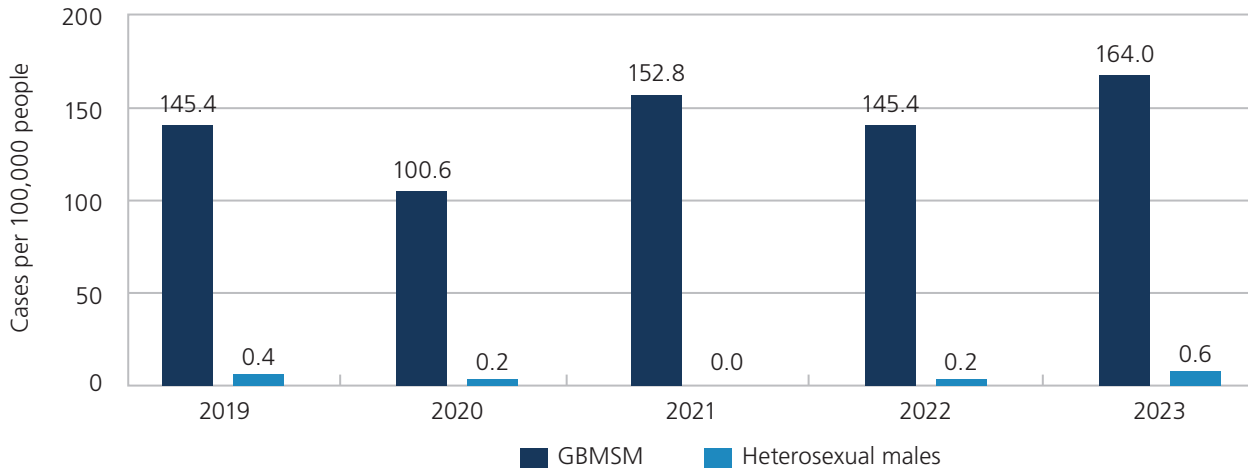
Legislation permitting Expedited Partner Therapy (EPT) was approved in Rhode Island in 2006. This legislation allows healthcare professionals to prescribe prescription drugs for a patient’s sexual partners without evaluating or testing those partners. The CDC recommends EPT as a useful option to facilitate partner management, particularly for treatment of male partners of women with chlamydial infection. From 2019-2023, an average of 25% of total chlamydia cases were offered EPT for their partners. Among those offered, an average of 31% accepted the prescription for their partners.



11 | GAY, BISEXUAL, AND OTHER MEN WHO HAVE SEX WITH MEN (GBMSM)

According to the CDC, the relatively high incidence of STIs among GBMSM may be related to multiple factors, including personal behaviors and sexual network characteristics.^{9,10} The number of lifetime or recent sex partners, rate of partner exchange, and frequency of condomless sex each influence someone’s probability of exposure to STIs.¹¹ However, GBMSM network characteristics such as high prevalence of STIs, interconnectedness and concurrency of sex partners, and possibly limited access to healthcare also affect the risk of getting an STI.^{10,12} Furthermore, experiences of stigma—verbal harassment, discrimination, or physical assault based on attraction to men—are associated with increased sexual risk behavior among GBMSM.

FIGURE 32
Rates of Newly Diagnosed Cases of HIV in Males, by Mode of Sexual Exposure, Rhode Island, 2019-2023

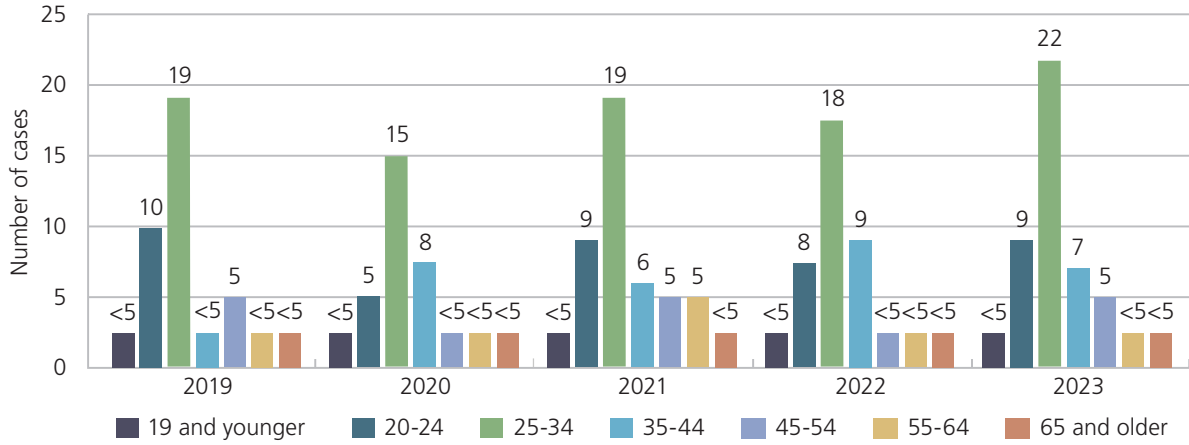


Source: Rhode Island Department of Health

In the last 5 years, the rates of newly diagnosed cases of HIV among GBMSM have been substantially higher than among heterosexual men. In the GBMSM population, the rate of HIV cases in 2023 was 272 times higher than the rate of HIV cases among heterosexual men.

FIGURE 33

Newly Diagnosed Cases of HIV in GBMSM, by Age, Rhode Island, 2019-2023



Source: Rhode Island Department of Health

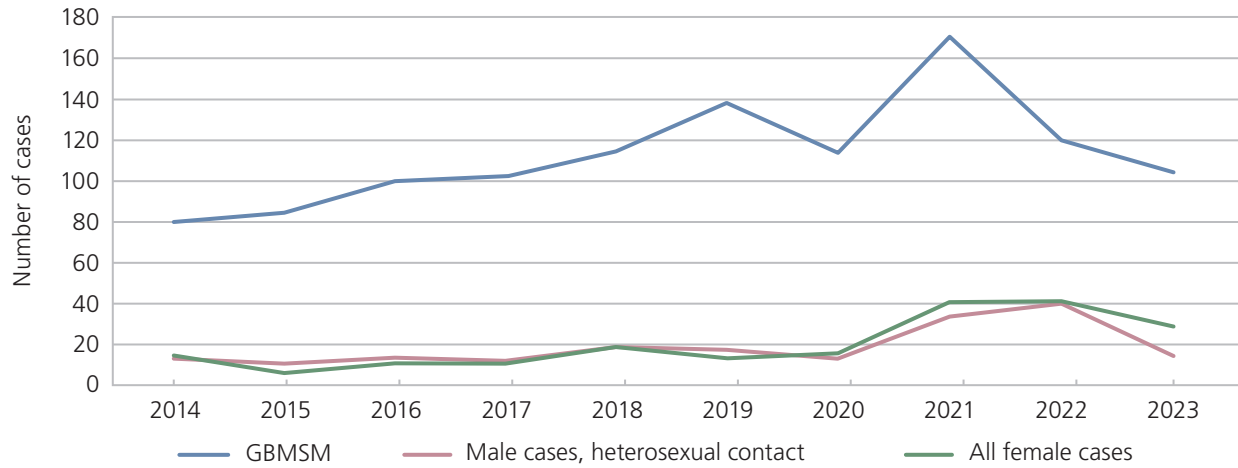
From 2019-2023, there has been an increase in the number of newly diagnosed HIV cases in GBMSM in their 20s and 30s. Like other areas in the United States, young gay and bisexual Black/African-American and Hispanic/Latino men in Rhode Island have been increasingly affected by HIV.

Gonorrhea

Data collected from case report forms show that in 2023, 27% of male gonorrhea cases reported having male partners, 15% reported having female partners only, and 58% of reports among males did not include the gender of sexual partners.

FIGURE 34

Cases of Infectious Syphilis in Males, by Sexual Orientation, Rhode Island, 2014-2023



Source: Rhode Island Department of Health

In 2023, the number of infectious syphilis cases in the GBMSM population was more than 3 times higher than in the heterosexual male and female populations. This trend has been observed consistently over the last 10 years.

FIGURE 35

HIV Co-Infection Among GBMSM with Infectious Syphilis, 2019-2023

Year	Syphilis cases identifying as GBMSM	GBMSM infectious syphilis cases co-infected with HIV	Percent GBMSM infectious syphilis cases co-infected with HIV
2019	139	50	36%
2020	114	62	54%
2021	171	45	26%
2022	122	38	31%
2023	105	27	26%

Source: Rhode Island Department of Health

A substantial percentage of GBMSM diagnosed with infectious syphilis in recent years are also living with HIV. Of the 105 GBMSM (identified by case report or patient interview) who had infectious syphilis in 2023, 27 people (26%) had an HIV-positive status. HIV-positive men who are co-infected with infectious syphilis are more likely to spread HIV to their sexual partners than HIV-positive men who do not have infectious syphilis.

12 | GENDER-DIVERSE POPULATIONS

Background

According to the CDC, transgender and gender-diverse people often experience high rates of stigma and socioeconomic and structural barriers to care that negatively affect healthcare usage and increase susceptibility to HIV and sexually transmitted infections. As defined by the CDC, people who are transgender have a gender identity that differs from the sex they were assigned at birth. Transgender and gender-diverse people may face challenges of stigma, discrimination, social rejection, exclusion, and insensitivity to their specific health needs by healthcare professionals.¹³ In addition, transgender and gender-diverse people of color face systemic racism.

Case Reporting and Surveillance in Rhode Island

Capturing and counting the number of transgender people diagnosed with HIV, syphilis, gonorrhea, and chlamydia is based on case report forms submitted by healthcare professionals. These case report forms include discrete variables for sex at birth and current sex to classify the gender of cases into the categories of "transgender," "male," "female," or "other." Additional prompts to capture gender-diverse populations include a Gender Identity/Transgender Information section with the categories "ever transgender," "additional gender identity," "cisgender," "FTM," "MTF," and "other."

FIGURE 36

Reported Cases of Selected Diseases Among Transgender and Non-Binary People, Rhode Island, 2021-2023

Disease	Case Counts
HIV	<5
Infectious syphilis	12
Latent or unknown duration syphilis	11
Gonorrhea	38
Chlamydia	57

Key National Facts

- While the estimated overall HIV prevalence for adults in the United States is less than 0.5%, the HIV prevalence among transgender people is 9.2%. The HIV prevalence for transgender women is 14.1% and for transgender men is 3.2%.
- HIV diagnoses among transgender adults and adolescents increased 9% in the United States from 2015-2019.
- In 2019, 46% of transgender women and 41% of transgender men who received an HIV diagnosis in the United States were Black or African American.¹⁴

Gender Identity is Independent of Sexual Orientation

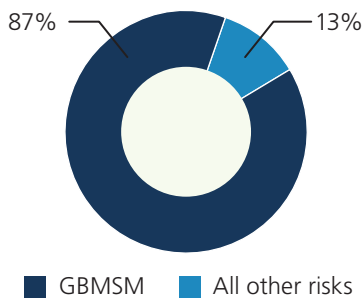
Sexual orientation and identities among transgender people are diverse. People who are transgender or gender diverse might have sex with cisgender men, cisgender women, or other transgender and gender-diverse people.

13 | YOUTH AND YOUNG ADULTS

According to the CDC, prevalence estimates suggest that young people (age 15–24) accounted for nearly half (48.2%) of reported cases of STIs in 2023.¹⁵ Compared with older adults, sexually active young people are at higher risk of getting STIs due to a combination of behavioral, biological, and cultural reasons. The higher prevalence of STIs among adolescents may also reflect multiple barriers to accessing quality STI prevention services, including inability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality.

FIGURE 37

Percentage of Young Adult (Age 18-24) Male Newly Diagnosed Cases of HIV, by Risk, Rhode Island, 2019-2023



From 2019-2023, among young adults with newly diagnosed HIV, there were 9 female cases and 54 male cases. Among the 54 young adult male cases, 89% were GBMSM (n=48).

Overall, males outnumbered females in the number of newly diagnosed cases of HIV among young adults (18-24) in Rhode Island by a ratio of 6:1.

Source: Rhode Island Department of Health

FIGURE 38

Rates of Chlamydia in Young Adults versus Overall Population, Rhode Island, 2019-2023

Year	Rate among young adults age 15-24 (cases per 100,000)	Rate among Rhode Island population (cases per 100,000)
2019	2,295.8	542.2
2020	1,901.3	447.0
2021	1,963.4	493.0
2022	2,031.6	474.5
2023	2,030.3	480.9

Source: Rhode Island Department of Health

FIGURE 39

Rates of Gonorrhea in Young Adults versus Overall Population, Rhode Island, 2019-2023

Year	Rate among young adults age 15-24 (cases per 100,000)	Rate among Rhode Island population (cases per 100,000)
2019	348.4	143.8
2020	338.1	132.7
2021	385.5	159.4
2022	343.9	131.1
2023	418.2	152.6

Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) is an anonymous and voluntary, self-administered survey conducted every 2 years among random samples of high school students in Rhode Island. Its purpose is to monitor risk behaviors related to the major causes of mortality, disease, injury, and social problems among youth in the United States.

FIGURE 40

Sexual Risk Behavior Among High School Students, Rhode Island, 2023

Question	Statewide	Grade 9	Grade 12
Ever had sex	31.5%	18.4%	46.4%
Were currently sexually active	23.2%	12.8%	35.7%
Used a condom at last intercourse	56.3%	59.9%	51.8%

Source: CDC Youth Risk Behavior Survey, Rhode Island, 2023

"Used a condom at last intercourse" is a question only asked of participants who reported being currently sexually active (defined as having intercourse in the past 90 days)

In 2023, Rhode Island twelfth graders reported more sexual risk-taking behavior than ninth graders. Twelfth graders are more likely to have ever had sex and be currently sexually active, but a smaller percentage reported they used a condom during their last sexual intercourse.

FIGURE 41

Sexual Risk Behavior, by Sexual Orientation, Percentage of Rhode Island High School Youth Responding "Yes", Rhode Island, 2023

Question	Heterosexual	Gay, Lesbian, Bisexual
Ever had sex	30.1%	37.4%
Were currently sexually active	22.5%	26.7%
Used a condom at last intercourse	64.5%	38.4%

Source: CDC Youth Risk Behavior Survey, Rhode Island, 2023

"Used a condom at last intercourse" is a question only asked of participants who reported being currently sexually active (defined as having intercourse in the past 90 days)

The Rhode Island high school students participating in the 2023 YRBS self-identified as follows:

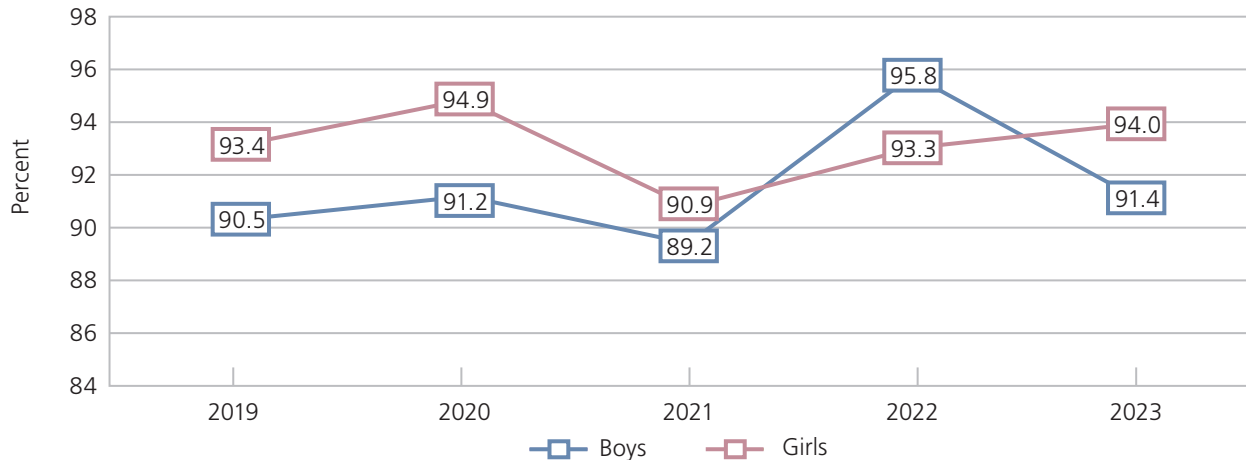
- heterosexual (69%)
- gay or lesbian (4%)
- bisexual (12%)
- not sure (5%)
- other identity (5%)

Gay, lesbian, and bisexual youth generally reported higher sexual activity and risk behaviors than heterosexual youth.

Human Papilloma Virus (HPV)

FIGURE 42

HPV Vaccination Percentages Among Boys and Girls Age 13-17, Rhode Island, 2019-2023



Source: Rhode Island Department of Health

RIDOH began distributing human papilloma virus (HPV) vaccine for girls in 2006 and for boys in 2010. In 2023, the vaccination coverage rate among boys was 91.4% and among girls 94.0%. HPV is transmitted through contact with infected skin, usually through sexual contact. HPV vaccine protects those who get it from HPV infection, which can cause warts in the genital area or lead to abnormal cells on the cervix, vulva, anus, penis, mouth, and throat, sometimes leading to cancer. The vaccine is most effective when given before young people engage in sexual activity.



14 | PEOPLE WHO INJECT DRUGS

Infectious diseases are a health risk for people who inject drugs. These health risks include transmission of HIV, viral hepatitis, and other bloodstream infections.¹⁶ It's estimated that 4.07% of the Rhode Island population used illicit drugs other than cannabis in the past month.¹⁷

Rhode Island prioritizes the health of people who use drugs through community-based harm reduction services. Harm reduction services include evidence-based public health interventions such as education and counseling, syringe exchange, HIV and hepatitis C testing, and linkage to care. Interventions are available in a variety of settings including drop-in sites, street outreach, mobile vans, home-delivered services, and vending machines. In 2023, RIDOH provided funds to these organizations to offer harm reduction services:

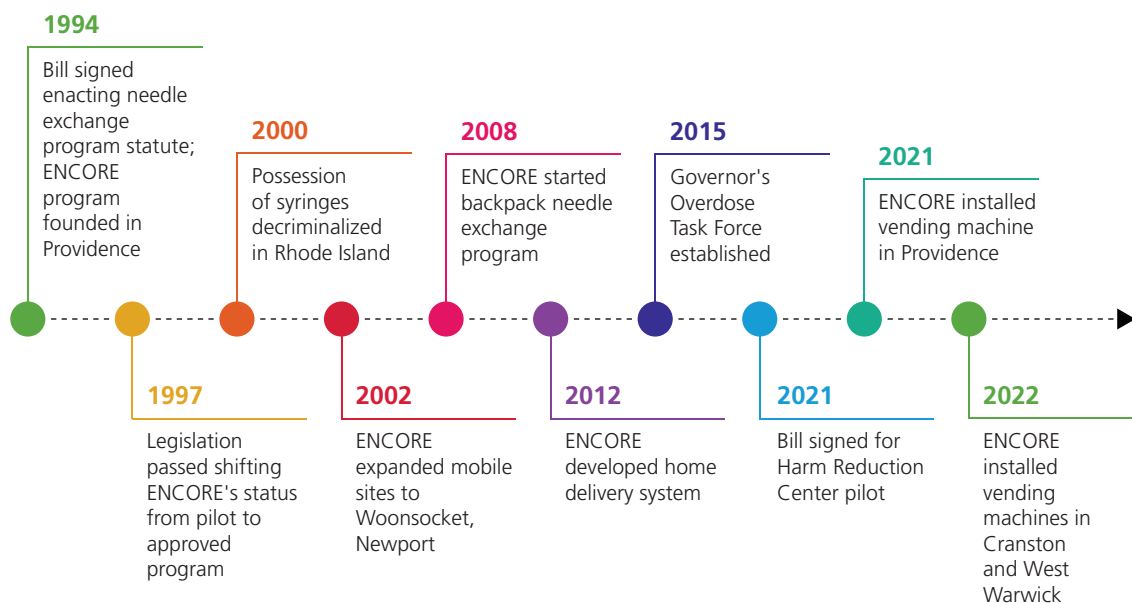
- AIDS Care Ocean State (ACOS)
- Project Weber/RENEW (PWR)
- Parent Support Network of Rhode Island (PSN)
- Community Care Alliance (CCA)

The Rhode Island Department of Corrections and Rhode Island Public Transit Authority are collaborating harm reduction state agency partners.

History and Success of Harm Reduction Services in Rhode Island

In Rhode Island, the low incidence of HIV among people who injected drugs from 2006-2023 is attributed to harm reduction services that discouraged needle sharing and led to the disruption in HIV transmission. In 2001, 37% of new AIDS diagnoses were among people who injected drugs compared with 9% of new HIV diagnoses in 2023.* In 2021, the ENCORE (Education, Needle Exchange, Counseling, Outreach, and Referral) program, started by AIDS Care Ocean State in 1994, began the harm reduction vending machine initiative to increase low-barrier access to supplies.

*HIV diagnoses were not reportable by name until 2006. AIDS diagnoses are the available data for risk categories before June 2006.



Harm Reduction Clients and Encounters

From 2021-2023, both the number of unique harm reduction clients and encounters with them increased by 74% and 99% respectively.

FIGURE 43

Number of Unique Clients Accessing Harm Reduction Services by Year

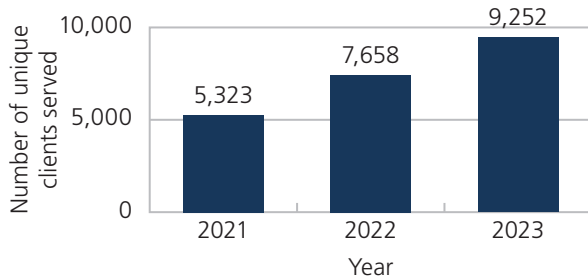
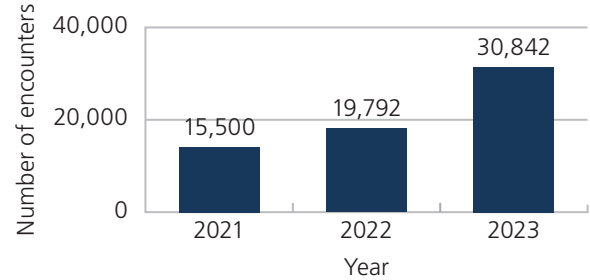


FIGURE 44

Number of Harm Reduction Encounters by Year



Source: Harm Reduction Dataset, Center for Health Promotion and Center for HIV, Hepatitis, STD, and TB Epidemiology

The most requested harm reduction supplies in 2023 included sterile needles (533,433), naloxone kits (47,440), and condoms (35,558).



Harm Reduction Vending Machines

In 2021, RIDOH collaborated with ACOS to increase access to harm reduction supplies through vending machines installed in a variety of locations. These locations include Kennedy Plaza, community health centers, a substance use treatment site, prison settings, and probation offices. In addition to supplies to prevent HIV and hepatitis C, the vending machines provide rain ponchos, personal hygiene kits, and wound kits. Syringe disposal containers are co-located with every vending machine that dispenses them. A total of 15,167 items were distributed through vending machines in 2023.

Composition of Harm Reduction Clients

Drug use in Rhode Island disproportionately affects people of color. Harm reduction organizations generally serve a higher proportion of people who identify as Hispanic or non-Hispanic Black compared to Rhode Island's general population. In 2023, 15.7% of unique clients identified as non-Hispanic Black compared to 6.1% of the Rhode Island population, and 16.1% of unique clients identified as Hispanic compared to 16.7% of the Rhode Island population.

Source: Harm Reduction Dataset, Center for Health Promotion and Center for HIV, Hepatitis, STD, and TB Epidemiology

Harm Reduction and Maternal/Child Health

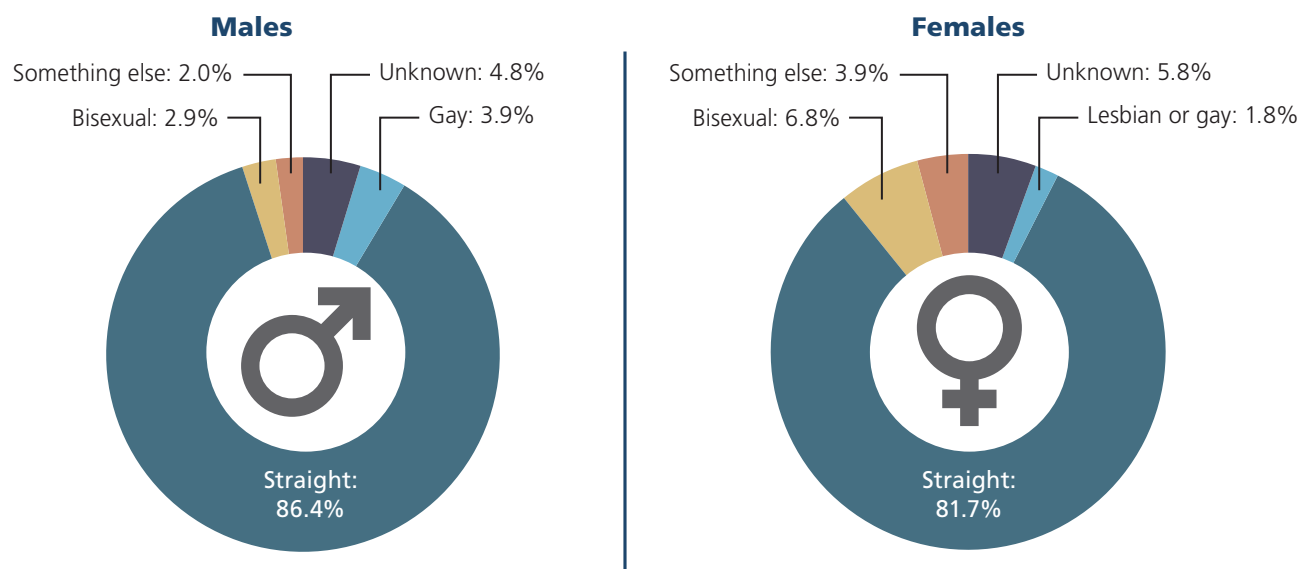
In 2023, RIDOH expanded harm reduction services to address a growing number of babies born with congenital syphilis to mothers who were unhoused and using drugs. Partner harm reduction agencies provided referrals and counseling to prenatal care, condoms, and early pregnancy kits through street outreach and vending machines to women of child-bearing age.

15 | STI BEHAVIORAL RISK FACTORS AMONG ADULTS

There are many behavioral risk factors that put a sexually active person at risk for getting an STI. These behavioral factors include, but are not limited to, condom use, number of sexual partners, alcohol/substance use in combination with sex, and type of sexual practices (oral, vaginal, anal). STI rate trends are often associated with changes in these behavioral risk factors. Findings from the Rhode Island Behavioral Risk Factor Surveillance System (BRFSS), conducted by RIDOH in collaboration with the CDC, provide insights into these behaviors. Highlights follow from the most recent survey, administered in 2023.

FIGURE 45

Breakdown of Adult (Age 18-64) Sexual Orientation, Rhode Island, 2023



Source: Rhode Island Behavioral Risk Factor Surveillance System, 2023

FIGURE 46

Sexual Activity of Adults (Age 18-64) in the Past Year, Rhode Island, 2022


Out of 100 Rhode Islanders in the past 12 months:





Source: Rhode Island Behavioral Risk Factor Surveillance System, 2022

FIGURE 47

Characteristics of Adults (Age 18-64) with Multiple Sex Partners, Rhode Island, 2022

53% 
used a
condom at last
sexual intercourse

52% 
received an
STI test within the past
12 months

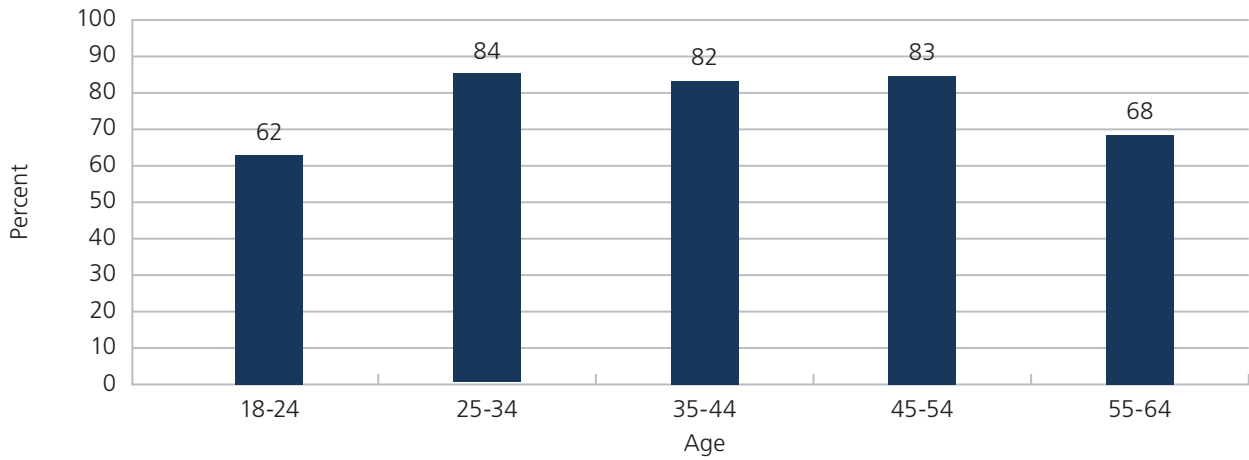
60% 
have ever
received an HIV test

This question reads, "Have you been tested for a Sexually Transmitted Infection or venereal disease in the past 12 months?"

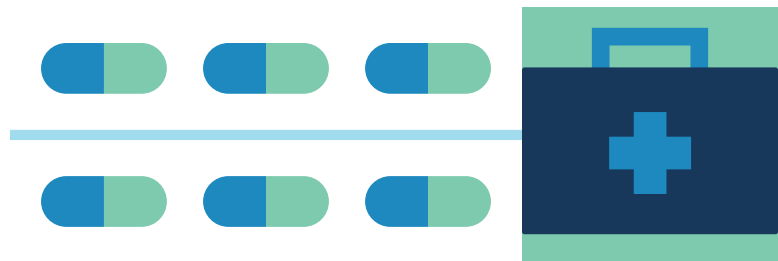
Source: Rhode Island Behavioral Risk Factor Surveillance System, 2022

FIGURE 48

Percentage of People Who Have Had Sex in the Past 12 Months, by Age Group, Rhode Island, 2022



Source: Rhode Island Behavioral Risk Factor Surveillance System, 2022



16 | NEWBORNS

Pregnant people diagnosed with HIV, syphilis, and hepatitis C can pass these infections to their newborns. While the number of babies born with these infections remains low in Rhode Island, the various health consequences of these infections can be severe. For example, health outcomes of congenital syphilis may include premature delivery, developmental disabilities, blindness, deafness, miscarriage, and stillbirth.

The prevention of mother-to-child transmission of HIV, syphilis, and hepatitis C includes screening and treatment of all people during pregnancy, and as appropriate, screening and treating of newborns. Early enrollment in prenatal care for all pregnant people is critical to ensure proper screening and treatment for both mothers and their newborns.

There are Rhode Island laws that require HIV and syphilis screening be incorporated into routine prenatal care. People diagnosed with HIV or syphilis during pregnancy get medical case management from RIDOH nursing staff to promote healthy outcomes for their newborns.



HIV

From 2010-2019, there were no cases of mother-to-child HIV transmission. From 2020-2023, there were fewer than 5 cases of mother-to-child HIV transmission.

Congenital Syphilis

In 2023, among the 10,282 births in Rhode Island, there were fewer than 5 congenital syphilis diagnoses based on maternal, infant, stillbirth, or a combination of criteria as defined by the CDC. Since 2020, 10 total cases have been reported. Before 2020, no cases of congenital syphilis were reported since 2009. Nationally, there has been a sharp rise in congenital syphilis. Congenital syphilis cases have more than tripled in recent years in the United States, with more than 2,000 cases reported in 2020 alone.¹⁸ This is the highest number reported in one year since 1994.



Hepatitis C

According to the CDC, increasing reported incidence of acute and chronic hepatitis C (HCV) infection among people age 20-39 over the past decade affects the number of pregnant women with HCV infection and infants who are exposed to HCV at birth. Based on review of clinical laboratory reports and follow-up with healthcare professionals from the perinatal program, in 2023, there were 32 newborns born to HCV-antibody positive mothers in Rhode Island.

17 | GEOGRAPHIC DISTRIBUTION OF HIV AND STIs IN RHODE ISLAND

While cases of HIV and STIs have been reported in every city and town in Rhode Island, higher case counts and concentrations of HIV/STIs are generally found in more urban settings. Below is a ranking of the Rhode Island municipalities with the highest number of cases of HIV and STIs.

FIGURE 49

Top 5 Ranking Municipalities, by Number of Cases of HIV, Rhode Island, 2019-2023

Municipality	Number of cases	Average rate (cases per 100,000)	Municipality population estimate*
Providence	124	13.0	190,934
Pawtucket	37	9.8	75,604
Cranston	33	8.0	82,934
Woonsocket	20	9.2	43,240
North Providence	15	8.8	34,114

* Municipality population estimates based on 2020 US Census

Source: Rhode Island Department of Health

FIGURE 50

Top 5 Ranking Municipalities, by Number of Cases of Syphilis, Rhode Island, 2019-2023

Municipality	Number of cases	Average rate (cases per 100,000)	Municipality population estimate*
Providence	423	44.6	190,934
Pawtucket	141	37.3	75,604
Cranston	89	21.7	82,934
Woonsocket	57	26.4	43,240
North Providence	51	34.0	34,114

* Municipality population estimates based on 2020 US Census

Source: Rhode Island Department of Health

FIGURE 51**Top 5 Ranking Municipalities, by Number of Cases of Gonorrhea, Rhode Island, 2023**

Municipality	Number of cases	Average rate (cases per 100,000)	Municipality population estimate*
Providence	712	372.9	190,934
Pawtucket	215	284.4	75,604
Cranston	121	145.9	82,934
Woonsocket	87	201.2	43,240
East Providence	77	163.3	47,139

* Municipality population estimates based on 2020 US Census

Source: Rhode Island Department of Health

FIGURE 52**Top 5 Ranking Municipalities, by Number of Cases of Chlamydia, Rhode Island, 2023**

Municipality	Number of cases	Average rate (cases per 100,000)	Municipality population estimate*
Providence	1,971	1,032.3	190,934
Pawtucket	649	858.4	75,604
Cranston	461	555.9	82,934
Woonsocket	261	603.6	43,240
Central Falls	188	832.5	22,583

* Municipality population estimates based on 2020 US Census

Source: Rhode Island Department of Health

For more information on the distribution of HIV and STIs in Rhode Island or for additional municipality information, please refer to **Appendix: Geographic Burden of HIV and STIs in Rhode Island** or contact the Center for HIV, Hepatitis, STD, and TB Epidemiology at 401-222-2577.

18 | DATA SOURCES AND GLOSSARY OF TERMS

Behavioral Risk Factor Surveillance System (BRFSS): The BRFSS is a survey of non-institutionalized adults age 18 and older and is administered by telephone to a random-digit-dialed sample of cell phones and landlines. Data from the sample are weighted to obtain state population-level estimates. The BRFSS relies on information reported directly by the respondent, which may have a potential for bias. The RIDOH-specific system is referred to as the RI-BRFSS.

Deaths attributed to HIV, HBV, and HCV: RIDOH gets the vital status for cases of HIV by matching information from RIDOH's Center for Vital Records, the National Death Index, and the Social Security Death Master File. Matching against national datasets is subject to availability and typically occurs one year after traditional case surveillance data are available. Thus, the most current complete death data available for this report is from 2023. HBV- and HCV-associated deaths in Rhode Island may include non-Rhode Island residents.

Expedited Partner Therapy (EPT): For some chlamydia cases, a doctor may prescribe EPT for the patient's sexual partners when it's deemed unlikely the partner will be tested and treated. The CDC recommends EPT as a useful option to facilitate partner management, particularly for treatment of male partners of women with chlamydial infection.

Gay, Bisexual, and Other Men Who Have Sex with Men (GBMSM): For the purposes of this report, GBMSM includes all men who have sex with men. This classification indicates a sexual behavior that is a risk factor for transmitting HIV and other STIs and not how people self-identify in terms of their sexuality.

Healthcare Effectiveness and Data Information Set (HEDIS): HEDIS is a dataset managed by the National Committee for Quality Assurance used by healthcare plans to monitor performance for certain aspects of healthcare. For STIs, this includes insurance claim data used to calculate yearly estimates for the percentage of sexually active females, age 16-24, who are screened for chlamydia. Medicare data from UnitedHealthcare and Neighborhood Health Plan of Rhode Island are used to calculate chlamydia screening estimates for Rhode Island. Commercial health plan data is from Blue Cross & Blue Shield of Rhode Island and UnitedHealthcare. These 4 plans account for most health insurance providers in Rhode Island.

Hepatitis C incidence data: This data is based on positive test results received for Rhode Island residents who meet the CDC-defined case definitions.

HIV/AIDS and STI surveillance data: All HIV/AIDS and STI data are collected from case and laboratory reports received from healthcare professionals, laboratories, and other entities in accordance with the Rhode Island Rules and Regulations Pertaining to Reporting of Infectious, Environmental and Occupational Diseases [R23-10-DIS].

HIV prevalence data: This data include all people who were reported as residing in Rhode Island regardless of where they were first diagnosed. Prevalence estimates are based on multiple data sources. Vital status data received by RIDOH, the National Death Index, and Social Security Death Master File are used to identify people who are deceased. Routine interstate review for duplicates is carried out semi-yearly to identify cases who may have been reported in more than one jurisdiction and to ensure people are only counted once in the national dataset. Through a combination of duplicate review, ad-hoc record searches, and laboratory results, address information is updated on cases to better reflect current residence information, accounting for interstate and intrastate migration.

HPV vaccination data source: National Immunization Survey – Teen (NIS-Teen), 2018-2022, CDC.

Infectious syphilis: Infectious syphilis includes primary, secondary, and early latent stages.

National Electronic Disease Surveillance System (NEDSS) Base System (NBS): NBS is a CDC-developed system for managing reportable disease data and sending it to the CDC. The RIDOH-specific system is referred to as the RI-NBS.

New HIV diagnoses: New HIV diagnoses include only people who were first diagnosed in Rhode Island.

Population estimates for GBMSM: No standard estimate exists for the number of GBMSM who live in the United States or in each state. Research by Spencer Lieb et al and results from the BRFSS were used to estimate that 5% of the adult male population in Rhode Island identifies as gay or bisexual.⁹ Rates of disease for the GBMSM population were calculated using this estimate and data from the US Census.

Population-based rate calculations: Rates are expressed as cases per 100,000 population. All rates for 2023 are based on the 2021 American Community Survey. Past year rates are based on the US Census, except rates by municipality, which are based on the 2020 US Census.

Race/ethnicity: Surveillance data is routinely collected and analyzed for all racial and ethnic groups, including American Indian/Alaskan Native, Asian, Black/African American, Hispanic or Latino, Native Hawaiian/Pacific Islander, and White. People may be categorized as multi-race or other racial categories. The following conventions were used when reporting racial and ethnic data in this report:

1. People classified as Hispanic or Latino represent those who may have also identified as another racial group.
2. People classified as White or Black/African American represent only those who also identified as non-Hispanic.
3. Omission of certain racial/ethnic groups (American Indian/Alaskan Native, Asian, and Native Hawaiian/Pacific Islander) from this report has been done to protect the privacy and confidentiality of those populations that have small case counts and population sizes. For more information on these populations, contact RIDOH's Center for HIV, Hepatitis, STD, and TB Epidemiology at 401-222-2577.

STI incidence data: This data is based on positive test results of *C. Trachomatis*, *N. gonorrhoea*, and *T. pallidum* that meet CDC-defined case definitions for Rhode Island residents.

Transgender women: Transgender women (also known as trans women, transfeminine persons, or women of transgender experience) are women who were assigned male sex at birth (born with male anatomy).

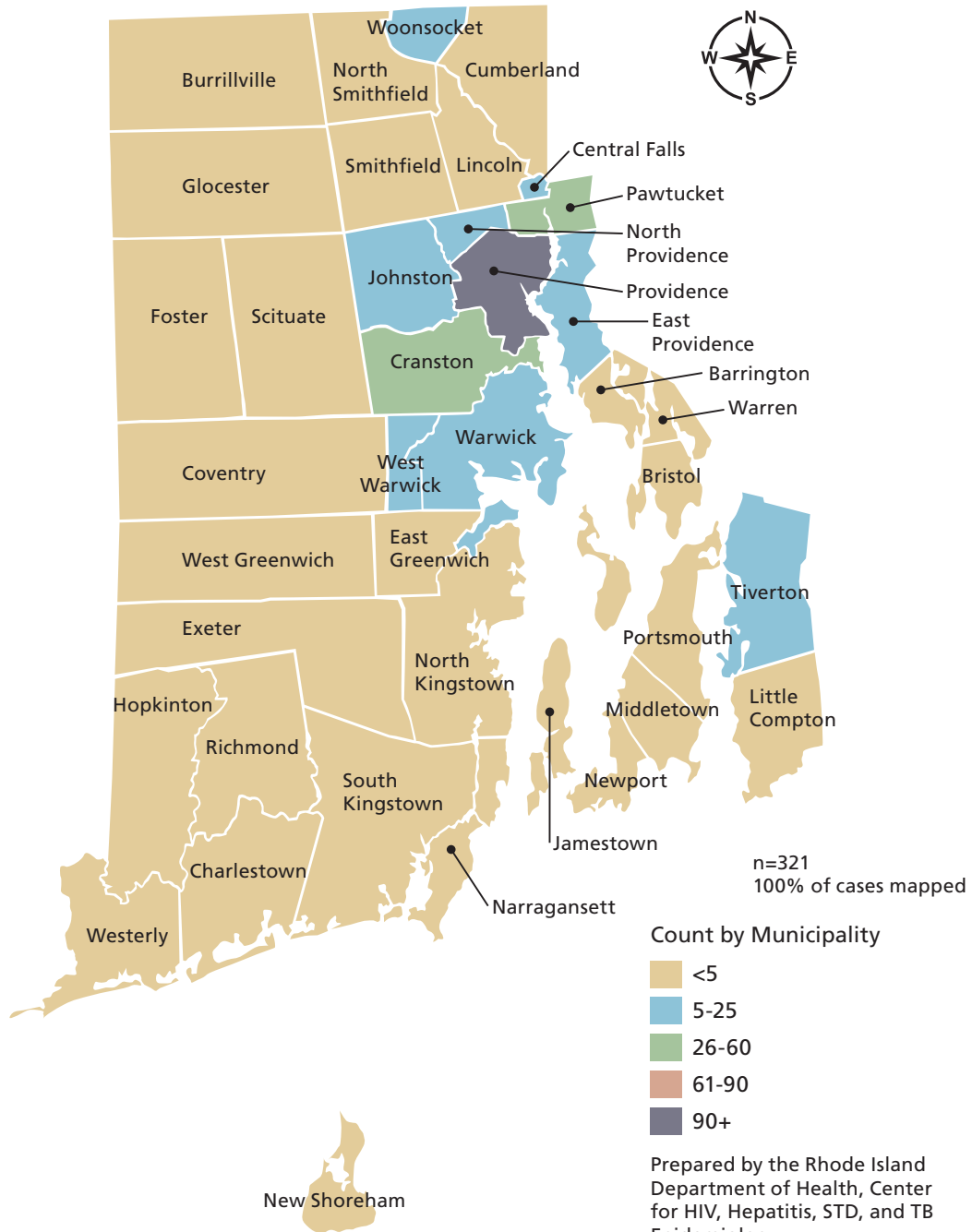
Transgender men: Transgender men (also known as trans men, transmasculine persons, or men of transgender experience) are men who were assigned female sex at birth (born with female anatomy).

Youth Risk Behavior Survey (YRBS): YRBS is a national, school-based survey funded by the CDC and conducted by state, territorial, and local education and health agencies and tribal governments.



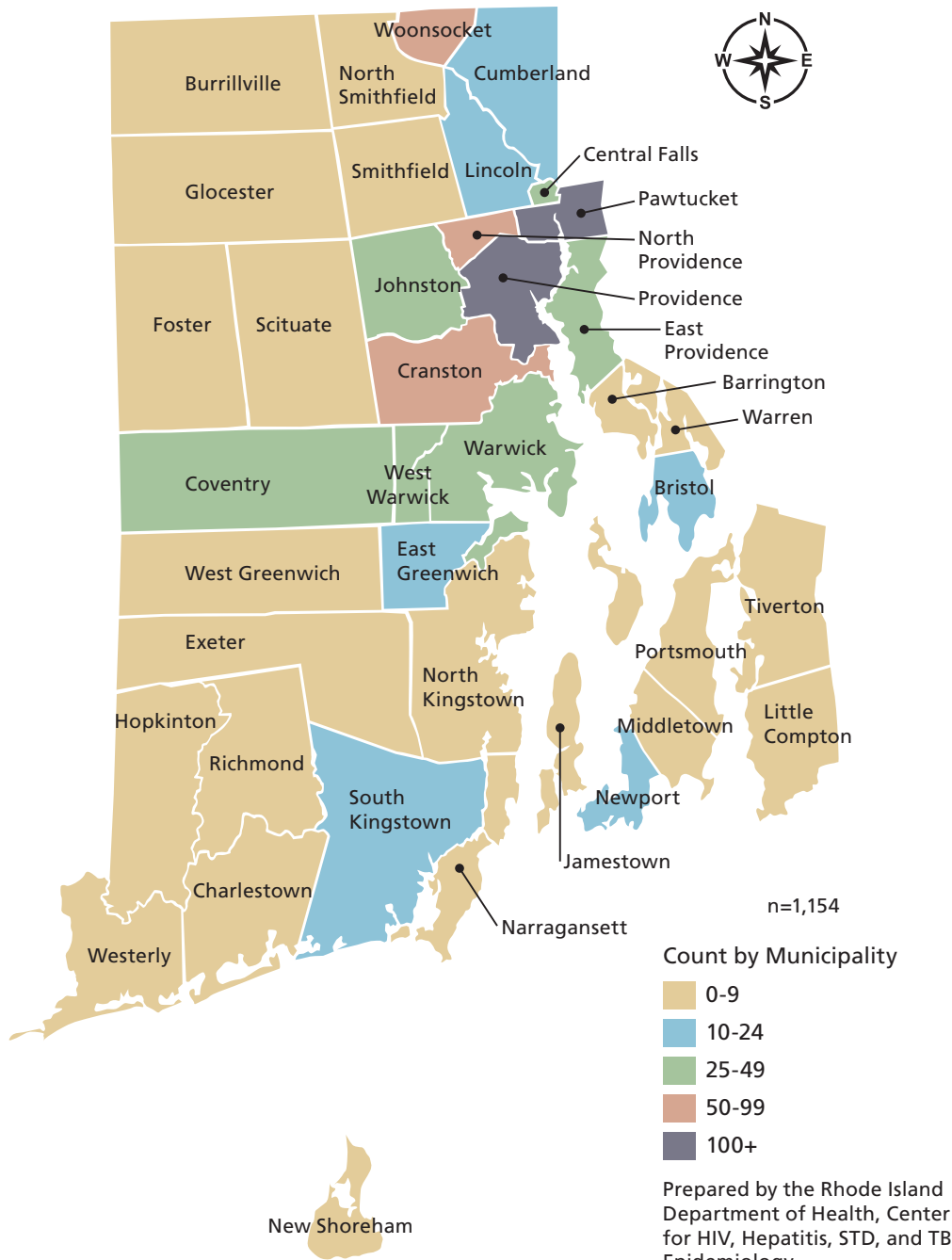
19 | APPENDIX: GEOGRAPHIC BURDEN OF HIV AND STIs IN RHODE ISLAND

Newly-Diagnosed Cases of HIV, by Municipality, Rhode Island 2019-2023



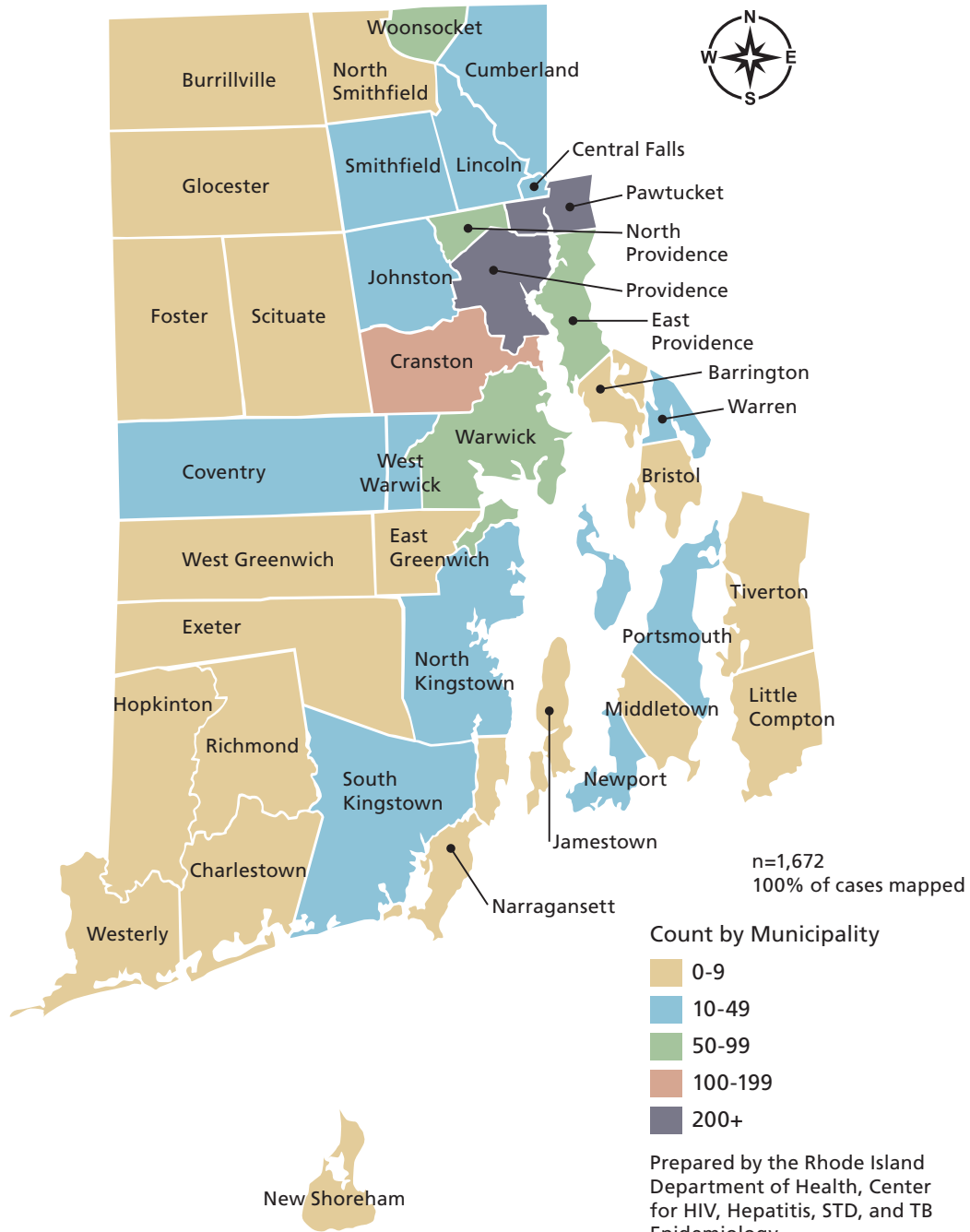
Map shown is not to scale or positional accuracy

Reported Cases of Infectious Syphilis, by Municipality, Rhode Island, 2019-2023



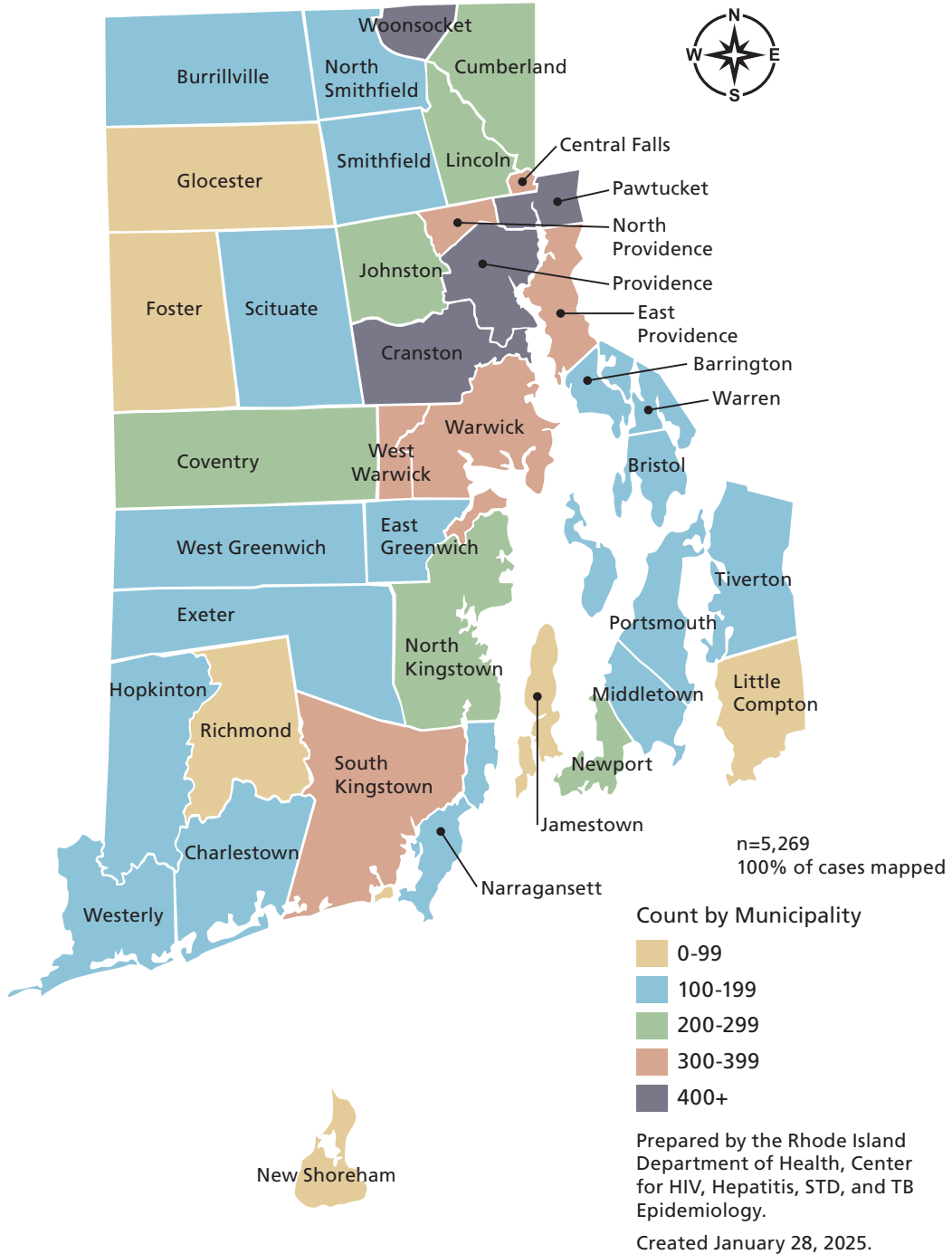
Map shown is not to scale or positional accuracy

Reported Cases of Gonorrhea, by Municipality, Rhode Island, 2023



Map shown is not to scale or positional accuracy

Reported Cases of Chlamydia, by Municipality, Rhode Island, 2023



Map shown is not to scale or positional accuracy

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