



# 2015

**RHODE ISLAND**

**HIV, SEXUALLY TRANSMITTED DISEASES, AND**

**HEPATITIS C SURVEILLANCE REPORT**



## Acknowledgments

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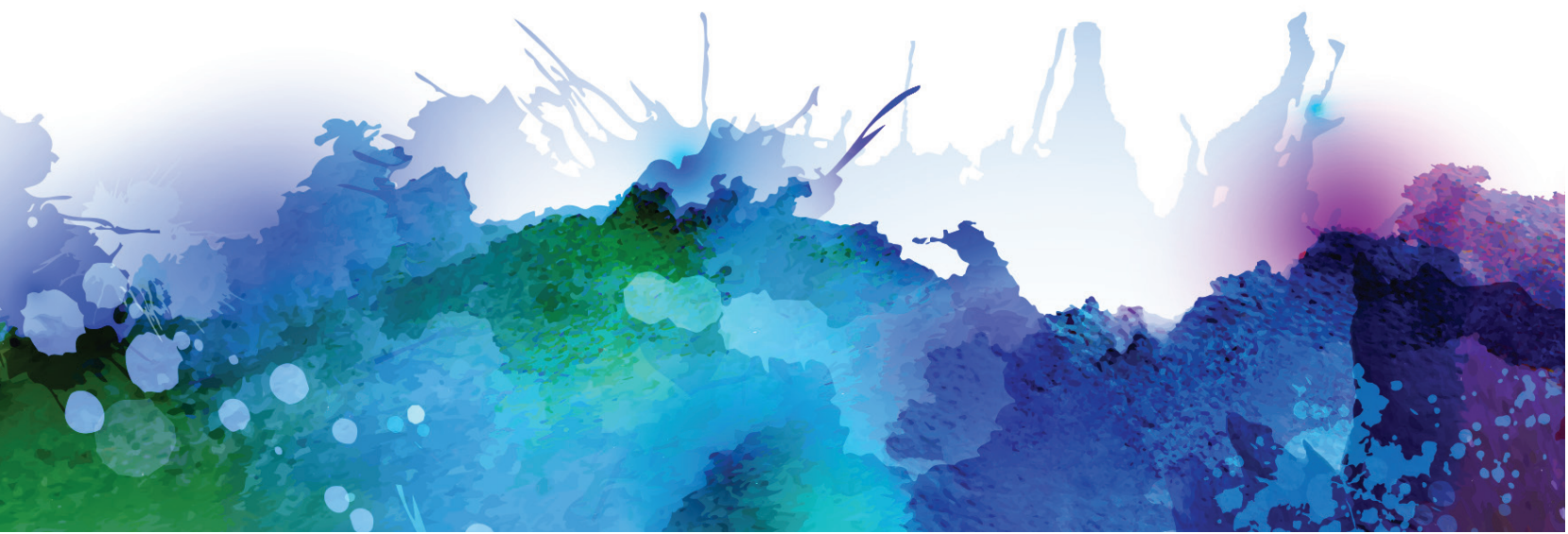
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# MESSAGE FROM THE DIRECTOR



Dear Reader:

As Rhode Island strives to build healthier communities, one of the most complex and challenging areas of public health is the prevention of the human immunodeficiency virus (HIV); acquired immune deficiency syndrome (AIDS); other sexually transmitted diseases (STDs), such as syphilis, gonorrhea, and chlamydia; and hepatitis C. Despite decades of efforts to reduce the burden of HIV and STDs in Rhode Island, these diseases remain a persistent public health problem, especially among many vulnerable populations.

Protecting the sexual health of Rhode Islanders is challenging because factors like social norms, evolving internet-based technologies, access to condoms and HIV/STD testing, school-based sexual health education, the relationship between doctors and their patients, and other social and environmental determinants of health all impact individuals. The information in this report guides our efforts as we work with our community partners and healthcare providers.

This report describes trends in HIV/AIDS and other STDs in Rhode Island in recent years. The good news is that trends in new HIV diagnoses have dropped significantly for babies born to mothers infected with HIV and for people who inject drugs. However, the 2015 data show an all-time high for the incidence of chlamydia, only minimal decreases in the incidence of syphilis and gonorrhea from a 10-year high in 2014, and continued increases in health disparities for HIV/AIDS and syphilis for gay, bisexual, and other men who have sex with men. Blacks/African Americans and Hispanics/Latinos remain disproportionately impacted by HIV/AIDS and other STDs. Also of special concern is the continued increase in the rates of STDs among youth and young adults, and the impact we know that STDs can have on the health and wellbeing of women and unborn children.

We need to reverse these trends. With that in mind, the Rhode Island Department of Health (RIDOH) continues to work toward the goals of the international 90-90-90 campaign, that Rhode Island was the first state to sign on to, joining countless other cities from around the world. This initiative has the following three goals to reach by 2020: 90% of Rhode Islanders living with HIV will know their HIV status, 90% of Rhode Islanders living with HIV will be engaged in medical care, and 90% of Rhode Islanders living with HIV will regularly take medications to achieve viral suppression.

In addition to addressing the social and environmental factors that we know are critical to engage persons newly diagnosed with HIV in care, we will continue to support, promote, and enhance prevention efforts like free condom distribution, the ENCORE needle exchange program, and free and anonymous STD testing. We know these strategies work and help to reduce the incidence of HIV and STDs in the state.

With the support and resources of many community partners at the state and local levels, we hope that together, we can reduce the burden of HIV/AIDS and STDs in Rhode Island. Thank you for your interest in helping to improve the sexual health of Rhode Islanders.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicole Alexander-Scott". The signature is fluid and cursive, with a large initial "N" and "A".

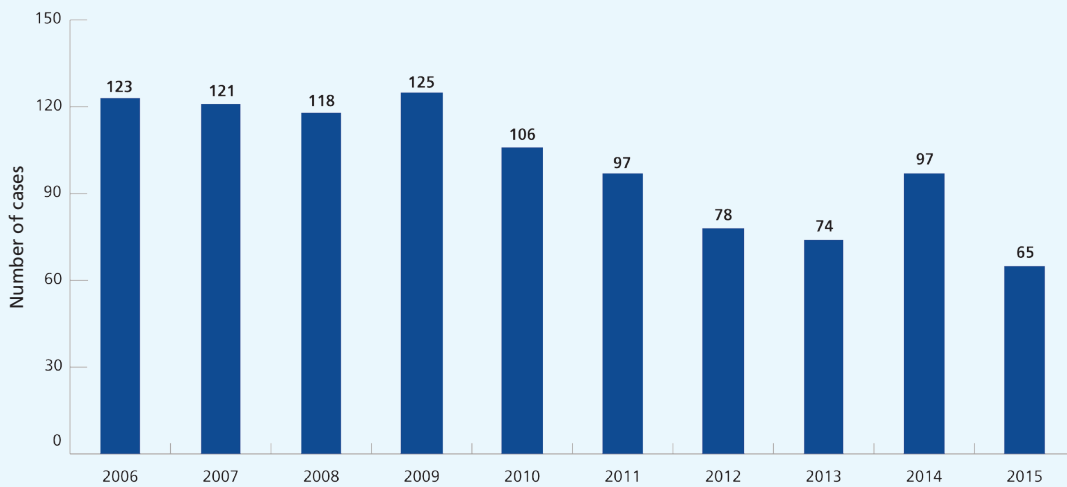
Nicole Alexander-Scott, MD, MPH  
Director, Rhode Island Department of Health

# 01 | HIV / AIDS

The human immunodeficiency virus (HIV) is a virus that can be spread through sexual contact, needle-sharing, and from a woman to her child through pregnancy, birth, and breastfeeding. While HIV is not a curable disease, people living with HIV who are in medical care and who are 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 weakened for people diagnosed with AIDS, those living with AIDS have an increased susceptibility to certain infections and cancers that can potentially result in death.

**FIGURE 1**  
**Number of Newly Diagnosed Cases of HIV,  
Rhode Island, 2006-2015**

Source: HIV Surveillance Program, Rhode Island Department of Health

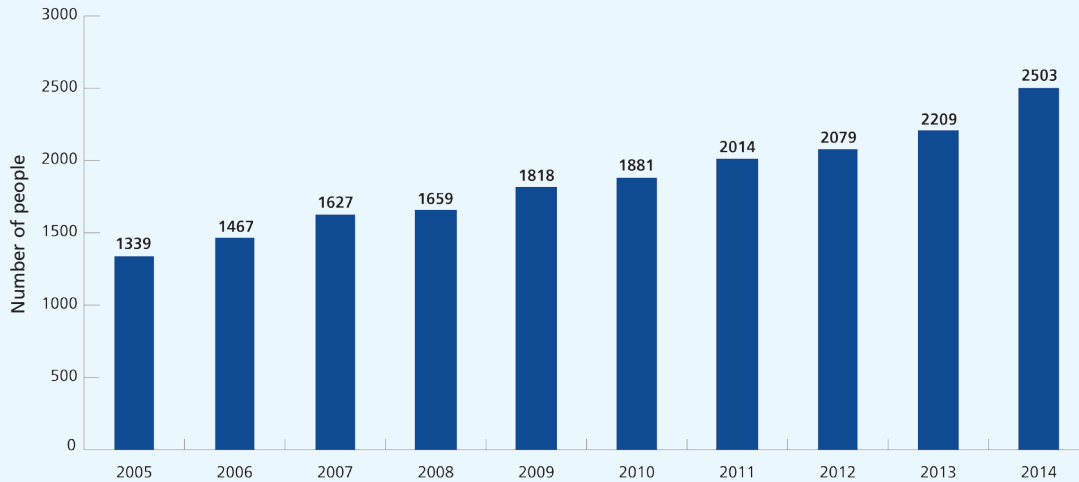


In the last 10 years, there has been an overall reduction in the number of newly diagnosed cases of HIV in Rhode Island. From 2013 to 2014, the number of newly diagnosed HIV infections increased by 33% from 74 to 97. While the reason for this increase is unclear, it may be related to higher rates of HIV testing and/or to behavior changes that impact HIV transmission dynamics. In 2015, diagnosed cases dropped again to a low of 65 new cases identified.

FIGURE 2

### Estimated Number of Persons Diagnosed and Living with HIV, Rhode Island, 2005-2014

Source: HIV Surveillance Program, Rhode Island Department of Health



The number of individuals living with HIV in Rhode Island is impacted by patients moving in and out of Rhode Island or to and from another country. Based on the most recently available address data, it is estimated that there were 2,503 Rhode Islanders diagnosed with and living with HIV through the end of 2014. It is also estimated that 11% of individuals who are HIV-infected do not know their status and so the numbers above may be an underestimate of all Rhode Islanders living with HIV. Due to advances in effective HIV medication, people who are HIV-positive are living longer lives and represent a growing segment of Rhode Island's population.

#### HIV/AIDS Deaths

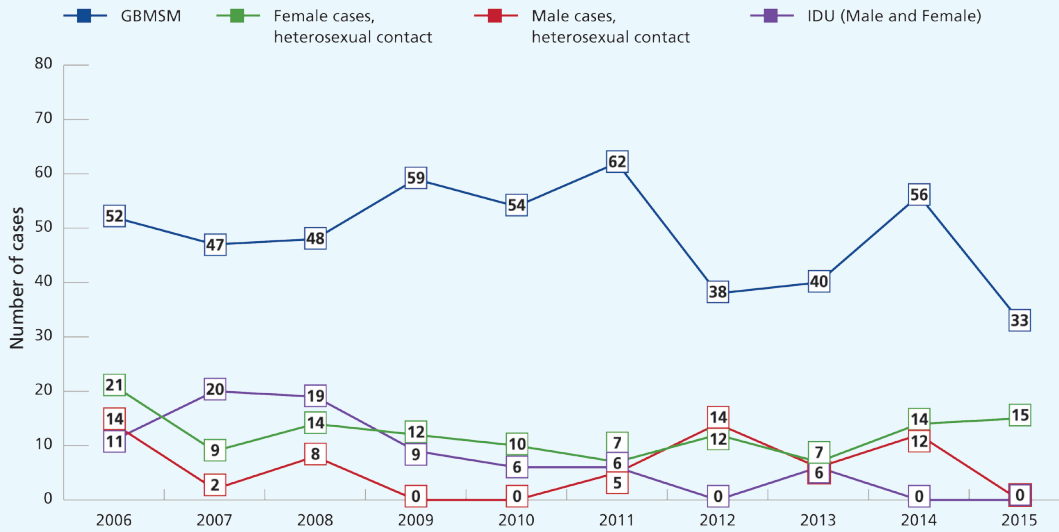
Since 1983, a total of 1,748 deaths have occurred among Rhode Island residents diagnosed with HIV/AIDS. However, only 186 (11%) of those deaths occurred from 2010-2014, and deaths decreased annually in this five-year period. This reduction in deaths underscores the impact of improved treatment and access to care for people living with HIV/AIDS.

Source: HIV Surveillance Program, Rhode Island Department of Health

**FIGURE 3**

**Number of Newly Diagnosed Cases of HIV, By Mode of Exposure, Rhode Island, 2006-2015**

Source: HIV Surveillance Program, Rhode Island Department of Health  
 Cases of which mode of exposure could not be determined are not included in this figure.  
 Cases less than five are expressed as zero.



More than 55% of newly diagnosed cases of HIV are in gay, bisexual, or other men who have sex with men (GBMSM). The number of newly diagnosed cases of HIV among heterosexual males and females, as well as persons who inject drugs, has remained low in the past 10 years. In 2015, there were at least twice as many cases of new HIV cases among GBMSM when compared to females, male heterosexuals, and injecting drug users.

**Intravenous Drug Use**

HIV infection associated with intravenous drug use (IDU) has decreased substantially in the last 20 years. In 2015, fewer than five newly diagnosed cases of HIV were attributed to IDU. In the last five years, less than 4% of newly diagnosed cases were attributed to IDU. A significant factor in the success of reducing IDU transmission is the ENCORE (Education, Needle Exchange, Counseling, Outreach, and Referral) Program that has been operating in Rhode Island since 1995.

Source: HIV Surveillance Program, Rhode Island Department of Health

**Mother-to-child HIV Transmission**

A Rhode Island public health success has been the virtual elimination of HIV among babies born to mothers who are HIV positive. This success is due in large part to the routine HIV testing of pregnant women as part of prenatal care. From 2011-2015, there were fewer than five reported cases of mother-to-child HIV transmission.

Source: HIV Surveillance Program, Rhode Island Department of Health

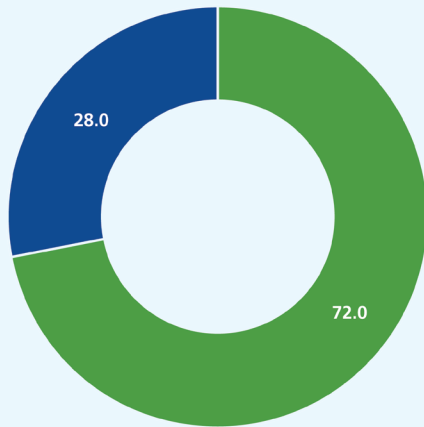


FIGURE 4

### Percentage of Newly Diagnosed Cases of HIV, By Disease Progression at Diagnosis, Rhode Island, 2011-2015

Source: HIV Surveillance Program, Rhode Island Department of Health

- HIV diagnosis with AIDS or progression to AIDS within 30 days
- HIV-only diagnosis



From 2011-2015, 28% of individuals newly diagnosed with HIV in Rhode Island also had a concurrent AIDS diagnosis. The average time from untreated HIV infection to development of AIDS is eight years. During this time, undiagnosed HIV-positive individuals cannot benefit from medical care that can slow the progression of the disease and reduce their HIV viral load. Because many people with HIV do not have any symptoms, undiagnosed HIV-positive individuals may unknowingly transmit HIV to others.

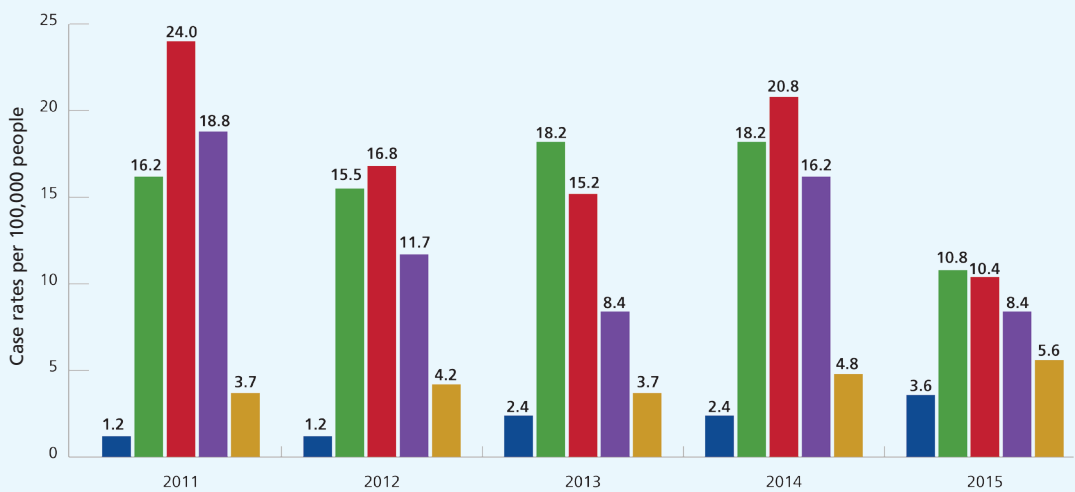
In the past five years, the rates of newly diagnosed HIV cases were highest among Rhode Islanders in their 20s, 30s, and 40s. Rates among individuals ages 20-29 and 30-39 have remained consistently high compared to other groups. Rates among people in their 40s substantially dropped between 2010 and 2013 but rose again in 2014. People in their 30s became the most-impacted age group in 2014. In 2015, the rates of new diagnoses were highest in those ages 20-29.

FIGURE 5

### Rates of Newly Diagnosed Cases of HIV, By Age, Rhode Island, 2011-2015

Source: HIV Surveillance Program, Rhode Island Department of Health

- 13-19
- 20-29
- 30-39
- 40-49
- 50+

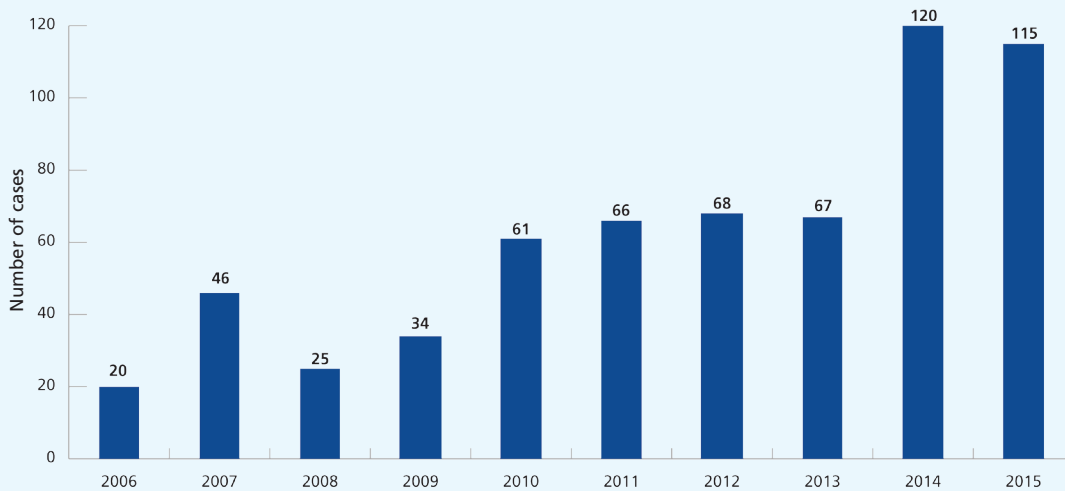


## 02 | INFECTIOUS SYPHILIS

Syphilis is a bacteria that is spread through sexual contact. Syphilis is a treatable disease, but 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 lead to stillbirths and infant deaths. Untreated babies may become developmentally delayed, experience seizures, and die. Once diagnosed, syphilis is easily curable with antibiotics.

**FIGURE 6**  
**Number of Infectious Syphilis Cases,  
Rhode Island, 2006-2015**

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health



Infectious syphilis is defined as infection within the past year (primary, secondary, or early-latent stages) when people are most likely to transmit disease to others. From 2006-2015, there was a 475% increase in infectious syphilis cases from 20 cases in 2006 to 115 cases in 2015. Although the number of cases remained relatively stable from 2010-2013, the number of cases increased by 79%, to 120 cases, in 2014. This increase is largely attributable to higher case counts observed among the GBMSM population.

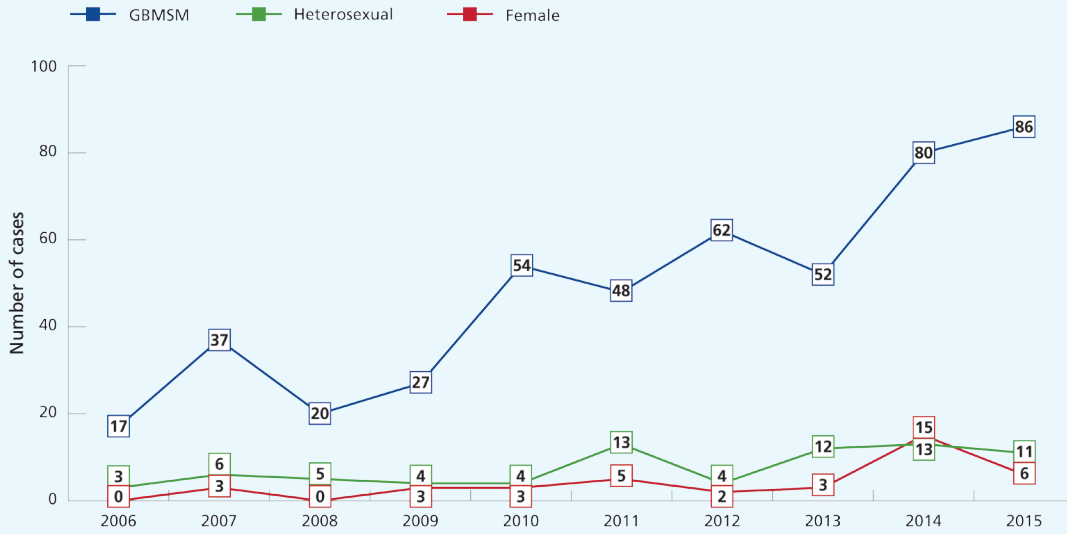
GBMSM are disproportionately affected by infectious syphilis in Rhode Island. This health disparity has increased significantly in the past 10 years. In 2015, there were about eight times as many cases of infectious syphilis among GBMSM as there were among heterosexual males and females.

From 2011-2015, people in their 20s, 30s, and 40s had the highest infectious syphilis rates in Rhode Island. There were no babies born with syphilis in Rhode Island in the last five years.

**FIGURE 7**

**Number of Infectious Syphilis Cases, By Sex and Sexual Orientation, Rhode Island, 2006-2015**

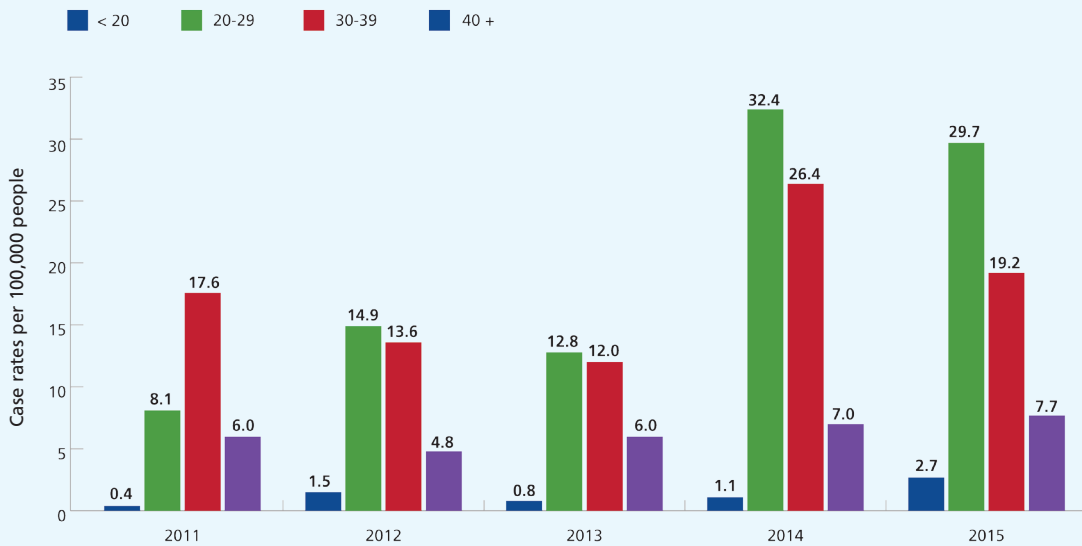
Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health



**FIGURE 8**

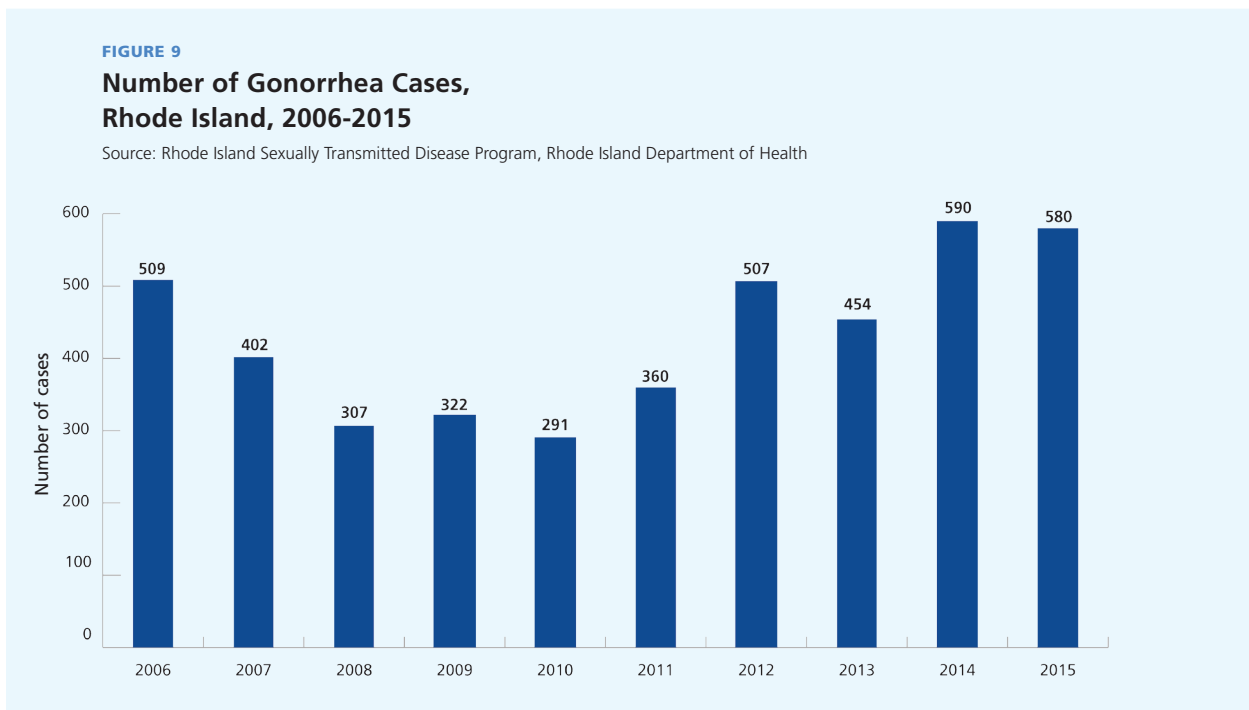
**Rates of Infectious Syphilis Cases, By Age, Rhode Island, 2011-2015**

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health  
 Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.



## 03 | GONORRHEA

Gonorrhea is a bacteria that is spread through sexual contact. While gonorrhea is treatable, there is a concern that there are strains of gonorrhea in the United States that are resistant to standard medications. If left untreated, gonorrhea can have reproductive health consequences for women and men. Pregnant women can transmit gonorrhea to their unborn babies, resulting in serious health problems for the child.



In the last 10 years, there was a high of 590 gonorrhea cases in 2014 and a low of 291 cases in 2010. On average, there were 432 gonorrhea cases per year. Since 2010, rates of gonorrhea have been trending upward in Rhode Island.

In 2006, more gonorrhea cases were seen in females than in males. Since 2007, the opposite is true: more cases have been seen in males than in females. This shift in the female-to-male ratio of gonorrhea cases is likely attributable to a rise in gonorrhea in the GBMSM population in recent years. In addition, the increase in extragenital testing that started in 2014 likely detects cases that may have been missed using only urine testing in males.

From 2011-2015, case rates for gonorrhea were consistently highest among people in their 20s. Case rates increased over the last five years for people in their 20s and 30s.

FIGURE 10

### Number of Gonorrhea Cases, By Sex, Rhode Island, 2006-2015

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health

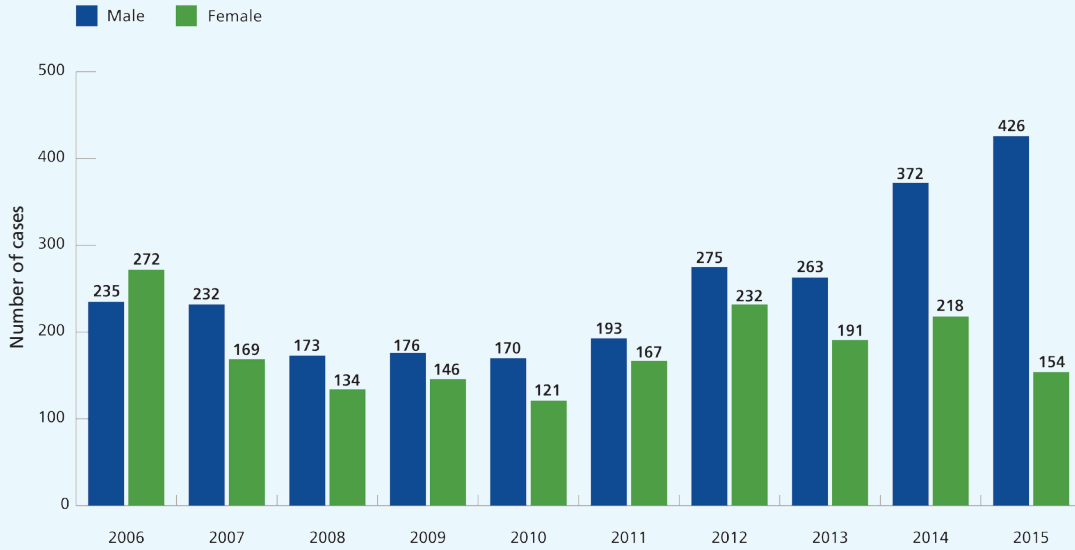
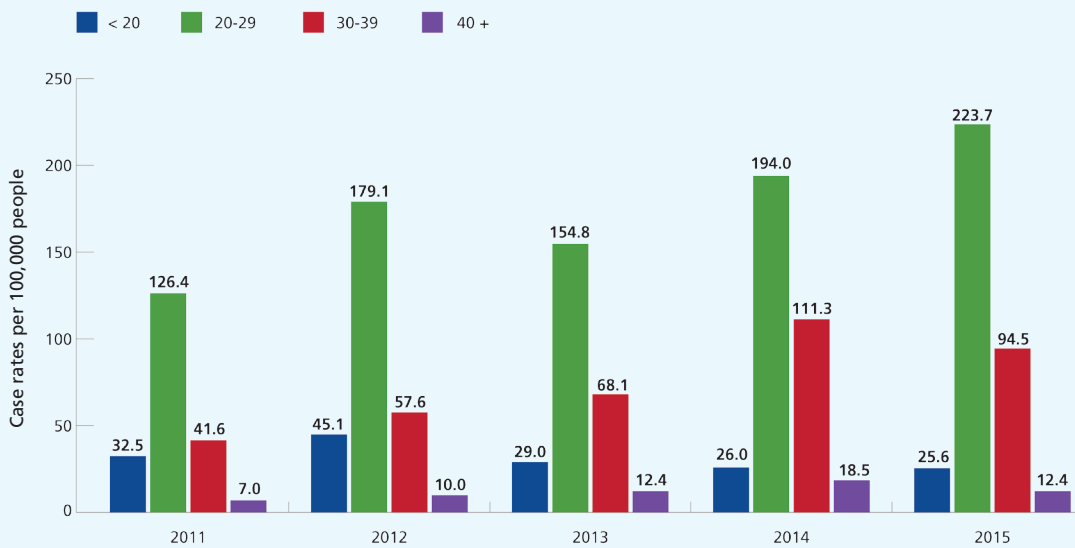


FIGURE 11

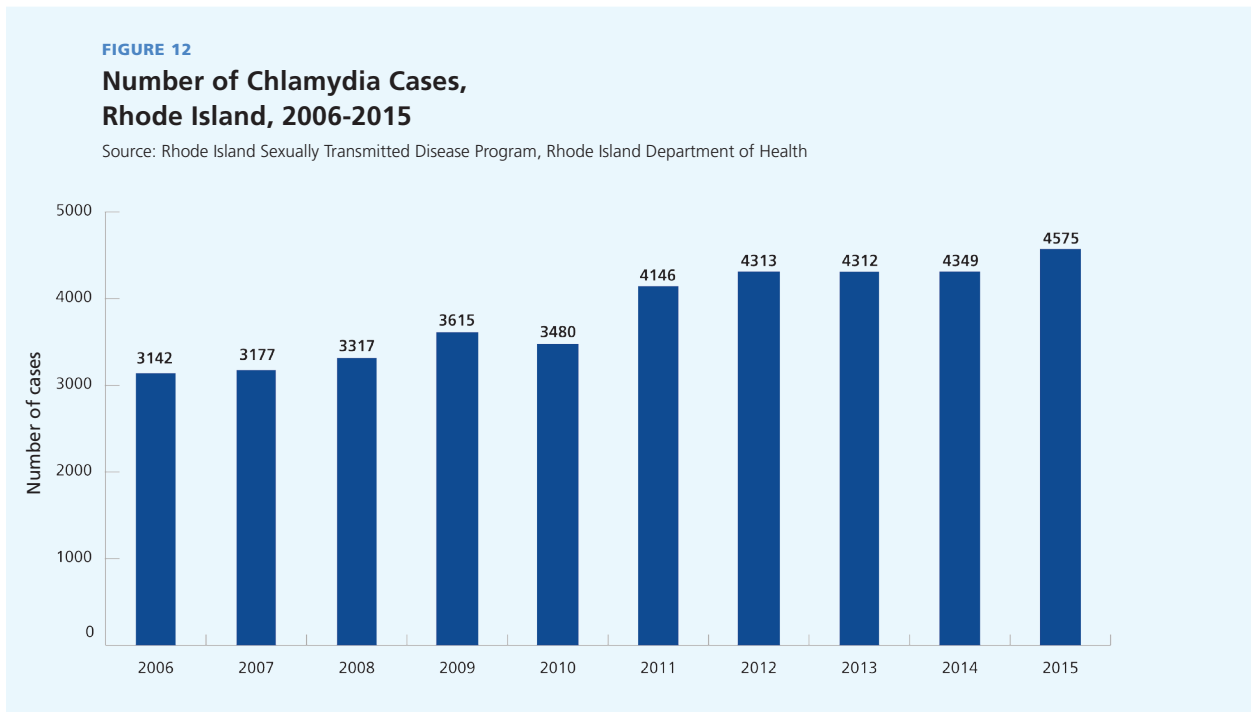
### Rates of Gonorrhea Cases, By Age, Rhode Island, 2011-2015

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health  
Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.



# 04 | CHLAMYDIA

Chlamydia is a bacteria that is spread through sexual contact. Chlamydia is treatable, but people can get re-infected if their partners are not treated. Untreated chlamydia can lead to serious health problems, especially among women, including pelvic inflammatory disease, ectopic pregnancy, and infertility.



In the last 10 years, the number of chlamydia cases has increased by 33% from 3,142 cases in 2006 to 4,575 cases in 2015.

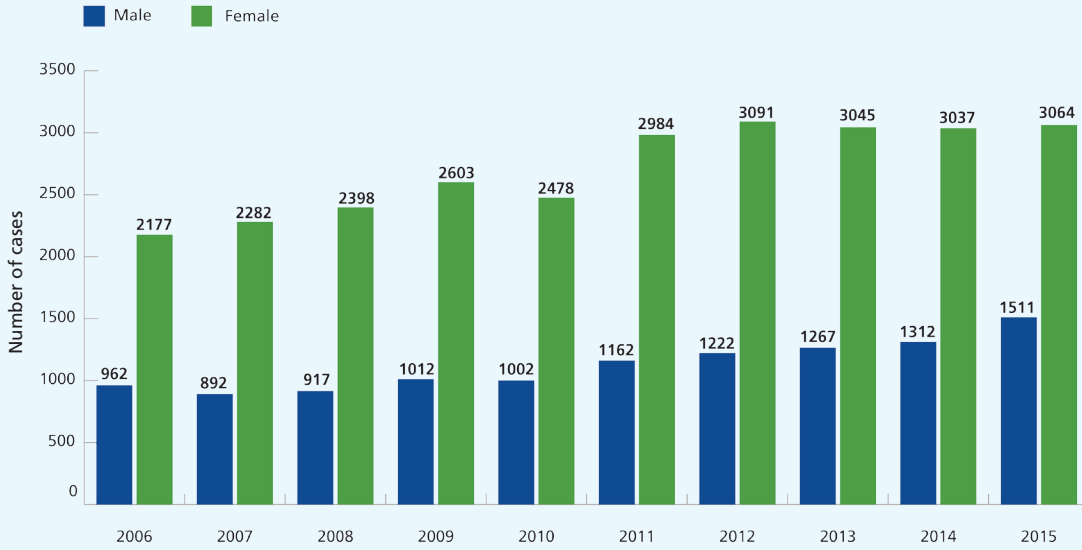
The majority of chlamydia cases in the last 10 years have been diagnosed in females. In 2015, twice as many cases were seen in females than in males, which is similar to trends from previous years. This difference is likely due to two factors. First, women generally access routine healthcare more frequently than men do so they are screened for chlamydia more frequently. Second, many men who have chlamydia are not diagnosed and treated because their infections are often asymptomatic.

From 2011-2015, the highest rates of chlamydia were in people in their 20s, followed by people younger than 20 and people in their 30s. Rates for people in their 20s have increased over the last five years.

**FIGURE 13**

**Number of Chlamydia Cases, By Sex, Rhode Island, 2006-2015**

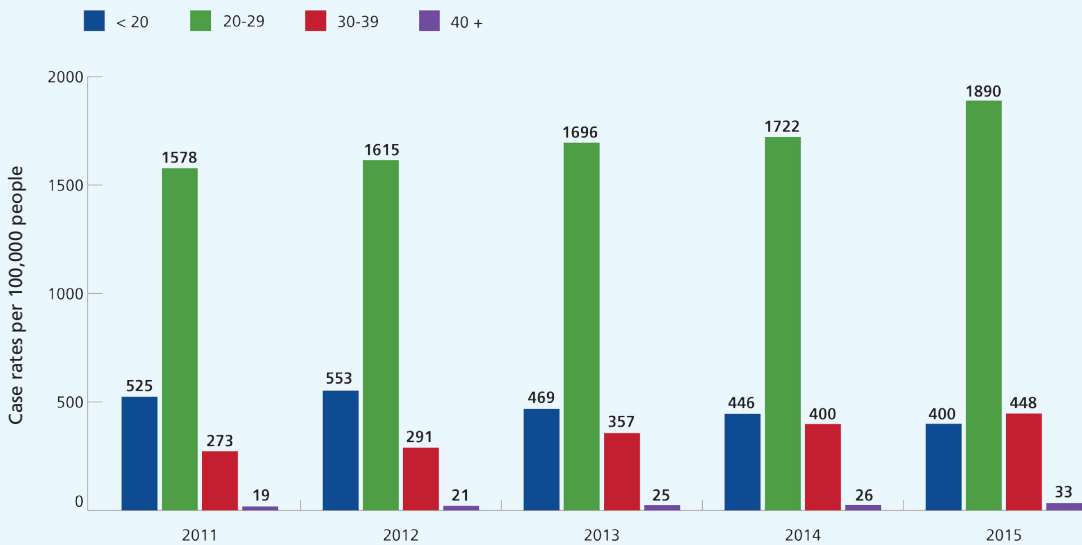
Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health



**FIGURE 14**

**Rates of Chlamydia Cases, By Age, Rhode Island, 2011-2015**

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health  
Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.



# 05 | HEPATITIS C

Hepatitis C (HCV) is the most common blood-borne infection in the United States. It is estimated that 3.2 million Americans are chronically infected. Chronic HCV infection increases the risk for hepatic fibrosis, cirrhosis, and hepatocellular carcinoma and is the most common reason for needing a liver transplant.<sup>1</sup>

An estimated 16,603 to 22,660 people in Rhode Island (approximately 2% of Rhode Islanders) have been infected with HCV. Roughly 20% of those infected with HCV will resolve their infection. The remaining 80% are at risk of developing chronic disease.

Individuals born between 1945 and 1965, known as baby boomers, bear a disproportionate share of the HCV disease burden across the nation. Baby boomers may have been exposed in the past through medical procedures, needle-sharing, or sexual contact. HCV was not identified and understood during the 1970s when many of these infections occurred. The length of time since infection combined with an aging baby boomer cohort has led to an increase in hospitalizations and an increase in deaths among those infected with HCV.

Patients in the United States with chronic HCV are estimated to have a hospitalization rate three times that of persons without HCV infection.<sup>2</sup> From 2005 to 2014 (the most recent data available), the number of hospitalizations at Rhode Island acute-care hospitals ranged from 112,715 to 132,455 per year. HCV diagnoses increased in the past 10 years, from 20 in 2005 to 122 in 2014, while HIV diagnoses decreased and hepatitis B (HBV) diagnoses remained stable.

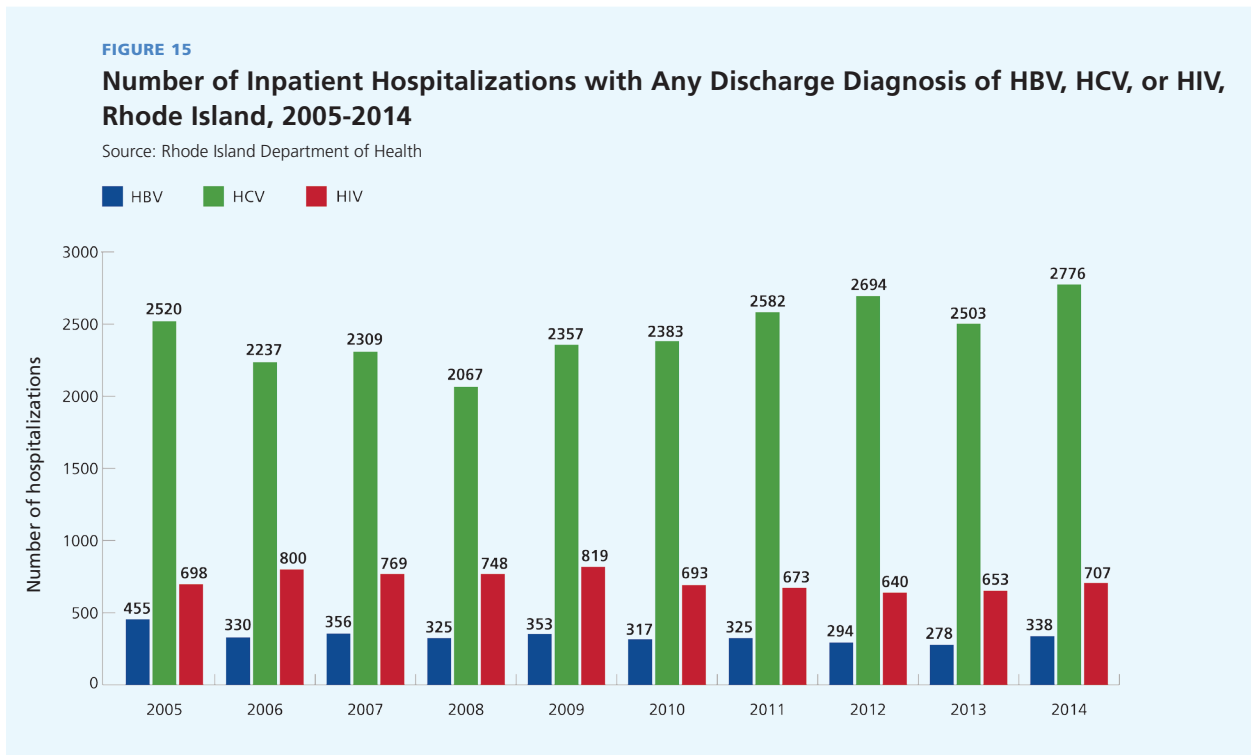
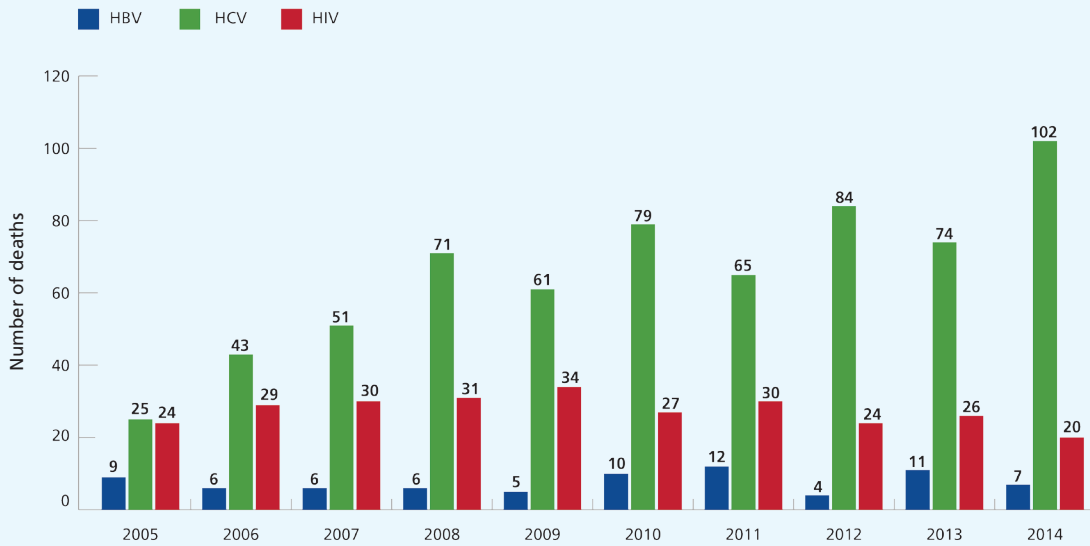




FIGURE 16

### Number of Deaths Associated with HBV, HCV, and HIV, Rhode Island, 2005-2014

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health

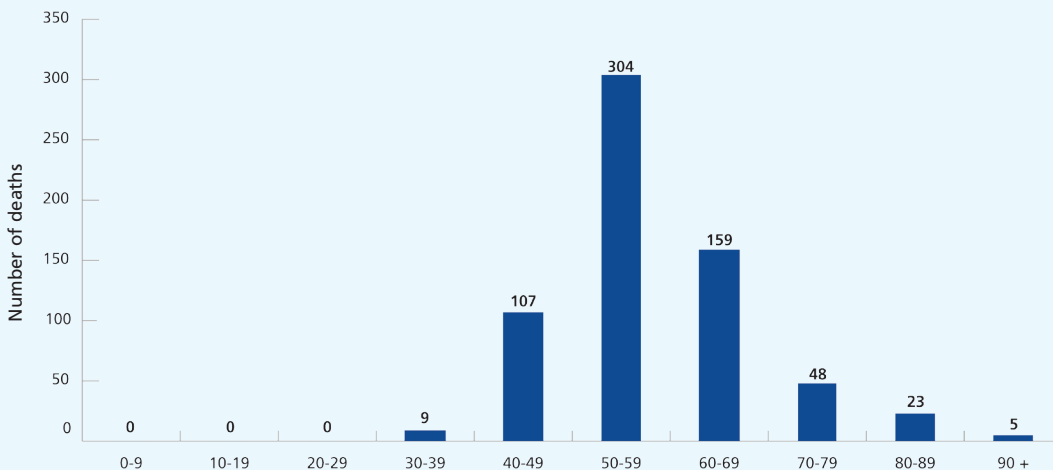


Nationwide, the annual number of deaths attributed to HCV in recent years surpassed the number of deaths attributed to HIV and 59 other nationally notifiable infectious diseases combined.<sup>3</sup> The number of deaths related to HCV has increased 400% in the last 10 years. Most deaths associated with HCV were among males, and nearly 50% of all deaths were in men age 50-59. More than 75% of HCV decedents were age 45-64 at the time of death with a mean age of 58 years, similar to trends nationwide.

FIGURE 17

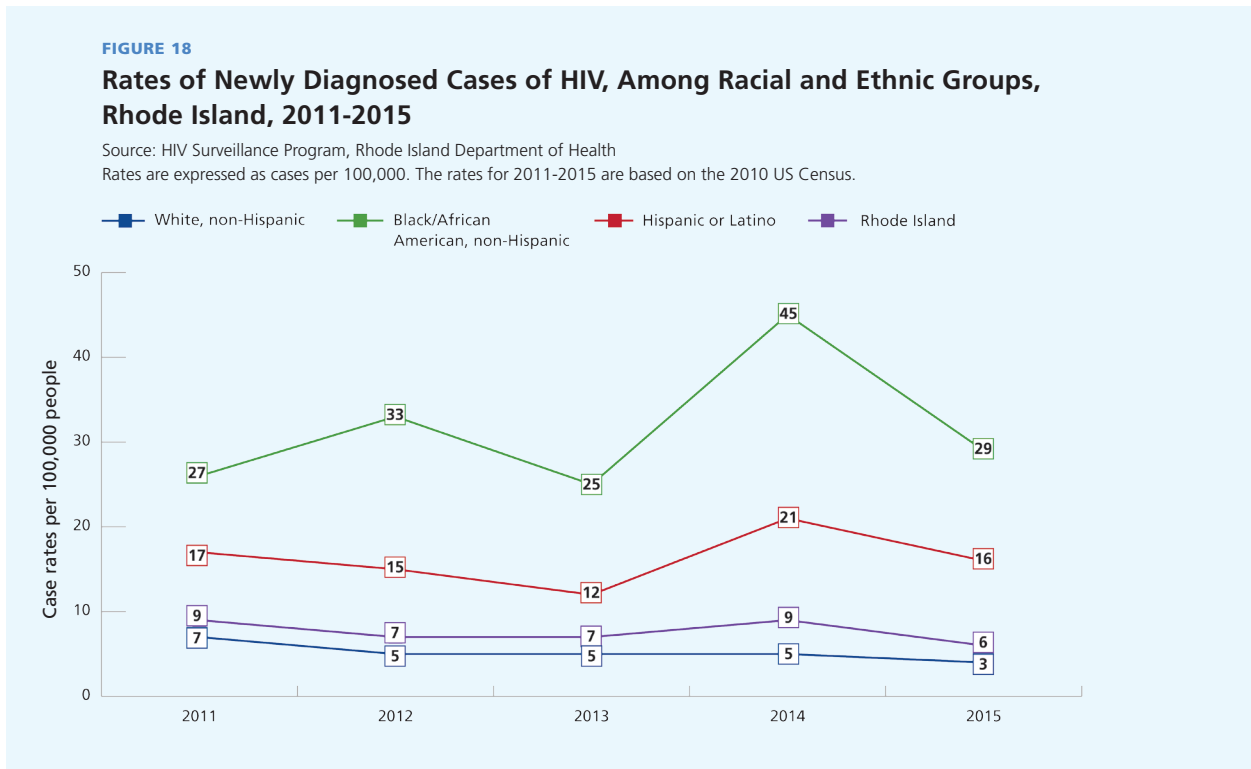
### Number of Deaths Associated with HCV, By Age, Rhode Island, 2005-2014

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health



# 06 | RACIAL AND ETHNIC GROUPS

According to the Centers for Disease Control and Prevention (CDC), acknowledging the inequities in STD and HIV rates by race and ethnicity is one of the first steps in empowering affected communities to organize and focus on each problem. The factors contributing to these health inequities are complex and can include poverty, income inequality, access to healthcare, and healthcare-seeking experiences. Another contributing factor is that in communities where STD prevalence is higher, individuals face a greater chance of encountering an infected partner than those in lower-prevalence settings.



HIV diagnoses have decreased in the last 5-10 years, but disparities in HIV rates among racial and ethnic groups in Rhode Island generally persist. These disparities increased from 2013 to 2014. When compared to Whites, in 2015, the rates of HIV were nine times higher among Blacks/African Americans, and nearly twice as high as Hispanics/Latinos.

When comparing 2011 to 2015, there has been an increase in infectious syphilis rates among all racial and ethnic groups. The sharpest rise in infectious syphilis rates occurred from 2013 to 2014 among Blacks/African Americans. Rates of infectious syphilis for Blacks/African Americans and Hispanics/Latinos have historically been higher than Whites.

From 2011 to 2015, gonorrhea case rates increased among all racial and ethnic groups. Blacks/African Americans consistently had the highest rates of gonorrhea, followed by Hispanics/Latinos. Both Blacks/African Americans and Hispanics/Latinos have had higher rates than Whites did.

FIGURE 19

### Rates of Infectious Syphilis Cases, By Race/Ethnicity, Rhode Island, 2011-2015

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health  
 Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.

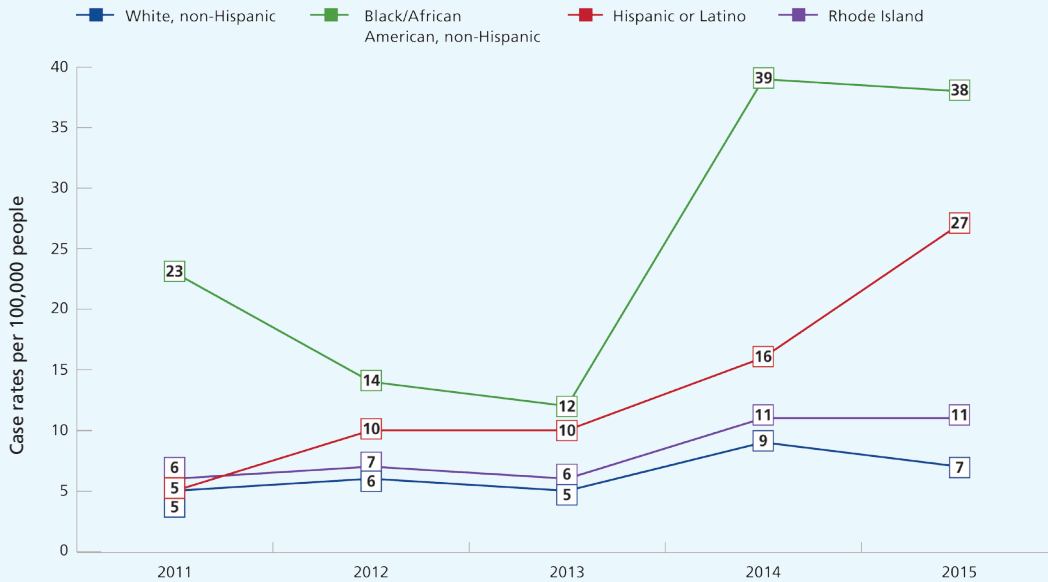


FIGURE 20

### Rates of Gonorrhea Cases, By Race/Ethnicity, Rhode Island, 2011-2015

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health  
 Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.

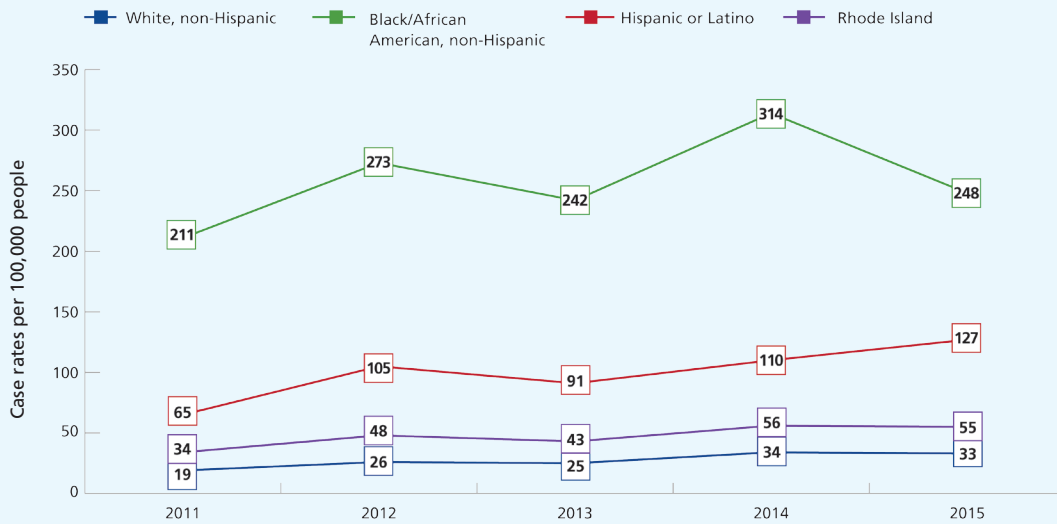
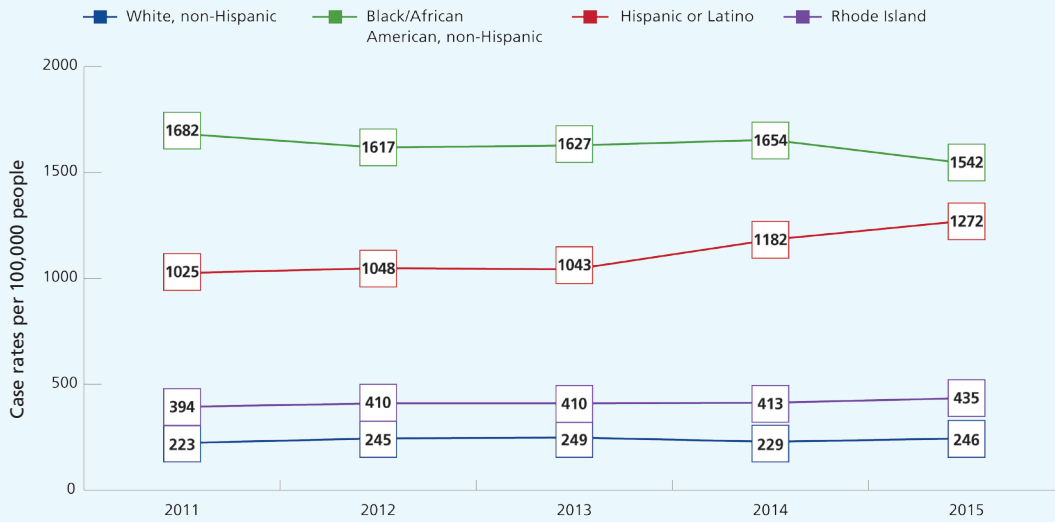


FIGURE 21

### Rates of Chlamydia Cases, By Race/Ethnicity, Rhode Island, 2011-2015

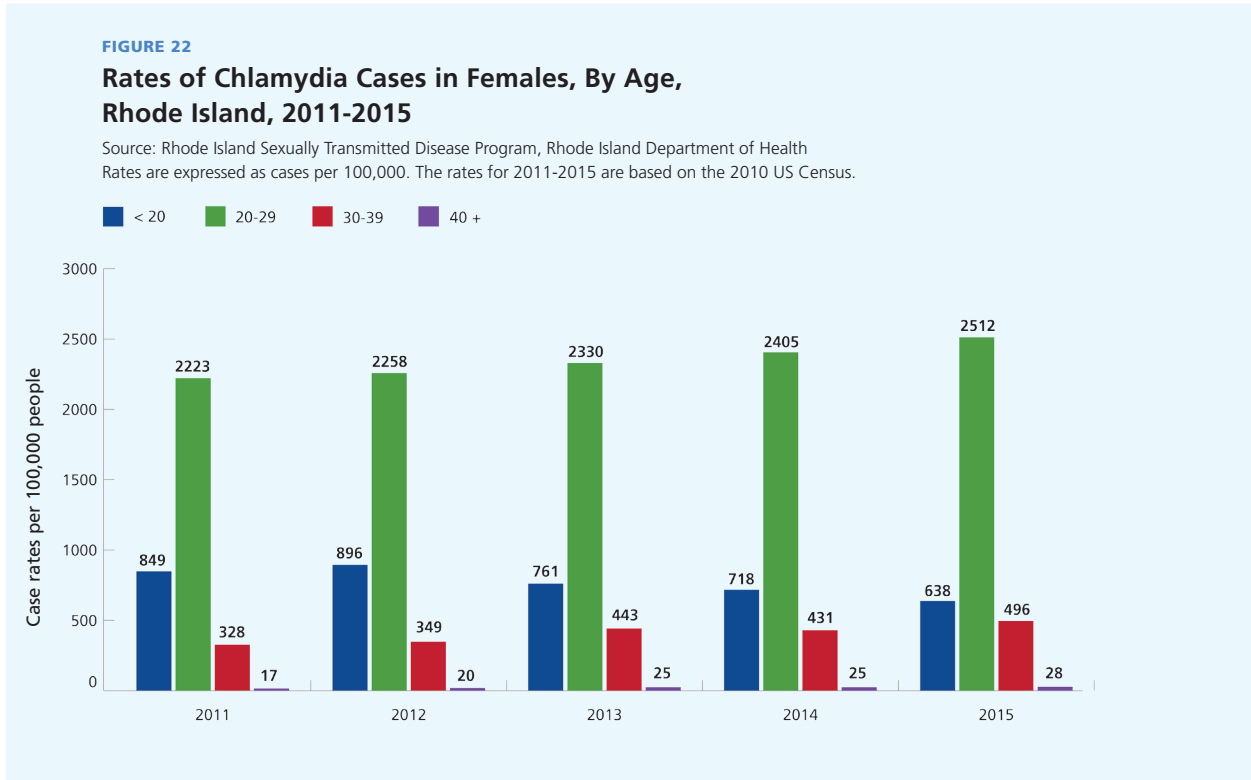
Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health  
Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.



From 2011-2015, Blacks/African Americans and Hispanics/Latinos had consistently higher chlamydia rates than Whites. Rates in Hispanics/Latinos increased from 2013 to 2015, while rates in Blacks/African Americans have decreased slightly. Race and ethnicity rates for chlamydia are estimates based on 80% of the total of case reports that have complete racial and ethnic data.

# 07 | FEMALES

According to the CDC, females and infants may have significant long-term consequences of STDs. In addition to biological and social factors, such as poverty and access to quality STD services, a female’s inability to negotiate safer sexual practices with male partners, such as condom use, can significantly affect her sexual health and subsequently the health of her unborn baby.



From 2011-2015, chlamydia rates in females were highest among women in their 20s followed by women younger than age 20. Case rates for women in their 20s increased 13% from 2011 to 2015.

### HIV Risk Factors and Females

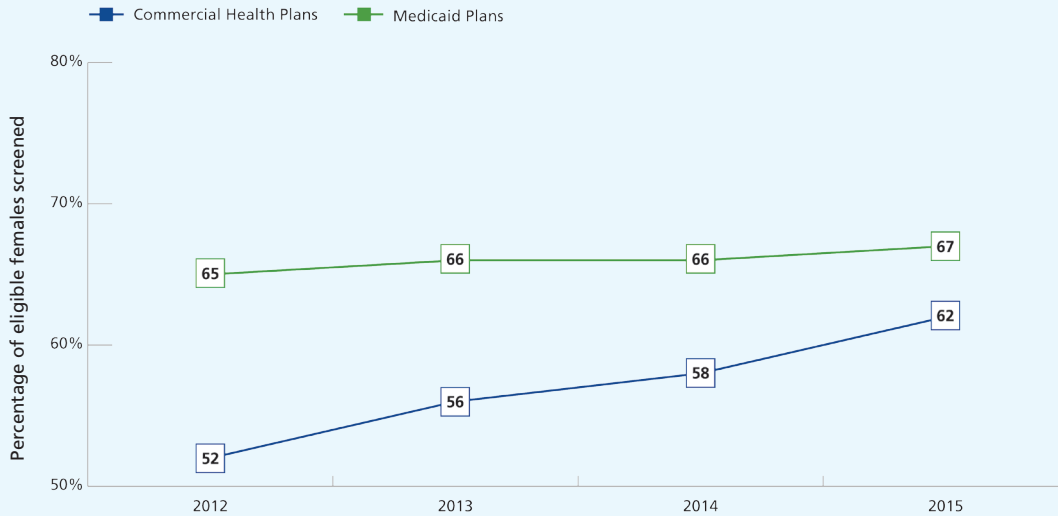
Characteristics of the 53 females who were newly diagnosed with HIV infection in Rhode Island from 2013 to 2015 include:

- Born outside of the United States: 57%
- Sex with a known positive case of HIV: 30%
- Exchanged sex for money, drugs, goods, or services in their life: 8%
- Sex while high or intoxicated: 21%
- Forced to have sex involuntarily in their lifetime: 13%
- Injected non-prescription drugs in their lifetime: 15%
- History of incarceration: 15%

FIGURE 23

### Percentage of Eligible Females (Age 16-24) Screened for Chlamydia, By Insurance Plan Type, Rhode Island, 2012-2015

Source: Healthcare Effectiveness and Data Information Set (HEDIS)

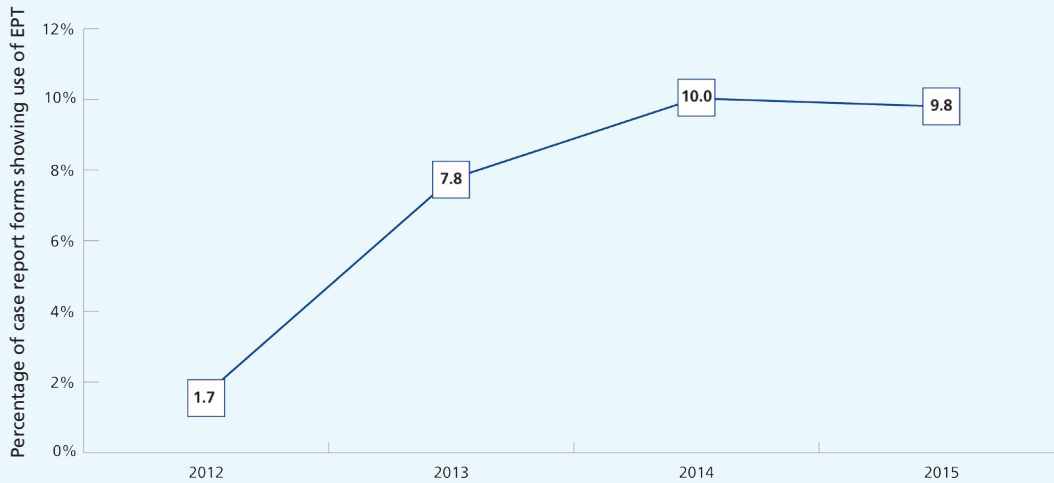


Through the Healthcare Effectiveness and Data Information Set (HEDIS), insurance claim data is used to calculate annual estimates of the percentage of sexually active females, age 16-24, that are screened for chlamydia. In Rhode Island, 67% of women enrolled in Medicaid and 62% of women enrolled in commercial health plans were screened for chlamydia. These figures are well above national averages. Nationally, in 2015, 52% of women enrolled in Medicaid and 40% enrolled in commercial health plans were screened for chlamydia (National Committee for Quality Assurance).

**FIGURE 24**

### Physician Utilization of Expedited Partner Therapy as a Percentage of Chlamydia Case Reports, Rhode Island, 2012-2015

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health



From 2012 to 2015, the percentage of chlamydia case reports that included a documented reference to a physician utilizing expedited partner therapy (EPT) increased about eight percentage points from 1.67% in 2012 to 9.8% in 2015. Legislation permitting EPT was passed in Rhode Island in 2006. This legislation allows physicians to prescribe prescription drugs for a patient’s sexual partners without seeing their patients’ partners. The CDC recommends EPT as a useful option to facilitate partner management, particularly for treatment of male partners of women with chlamydial infection.

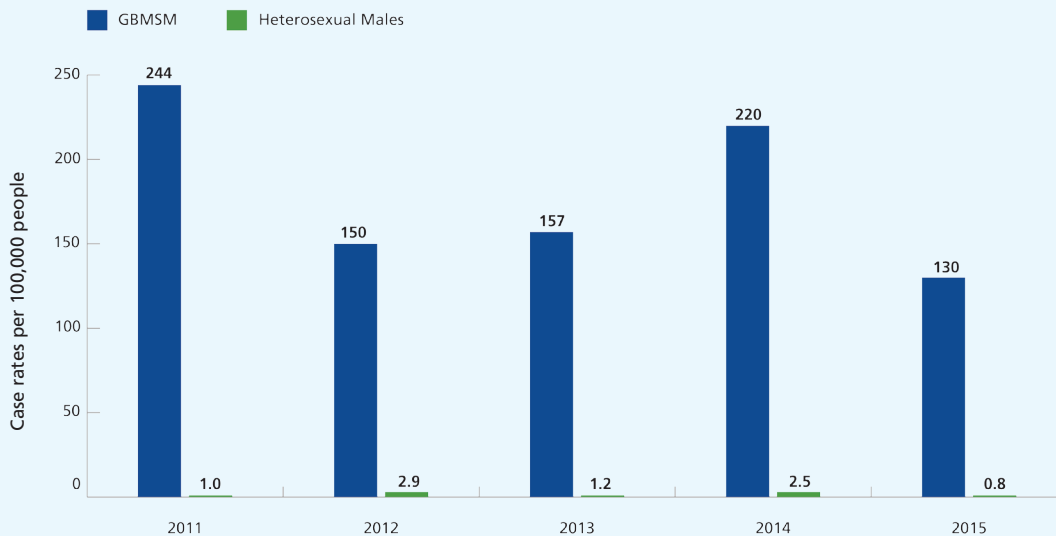
# 08 | GAY, BISEXUAL, AND OTHER MEN WHO HAVE SEX WITH MEN (GBMSM)

According to the CDC, GBMSM are at increased risk for STDs and HIV due to a number of individual-level risk behaviors (e.g., higher numbers of lifetime sex partners, higher rates of partner change and partner acquisition rates, and unprotected sex), as well as other interpersonal and societal-level factors. GBMSM who have lower socioeconomic status are particularly vulnerable to poorer sexual health outcomes. Other factors that impact sexual risk-taking among GBMSM include lack of emotional/social support, drug and alcohol use, and individual experiences related to social discrimination.

**FIGURE 25**

### Rate of Newly Diagnosed Cases of HIV among Males, By Mode of Sexual Exposure, Rhode Island, 2011-2015

Source: HIV Surveillance Program, Rhode Island Department of Health.  
Estimate of GBMSM population size is 5% of adult male population and is based on data from the Rhode Island Behavioral Risk Factor Surveillance System (BRFSS) and Lieb et al. Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.



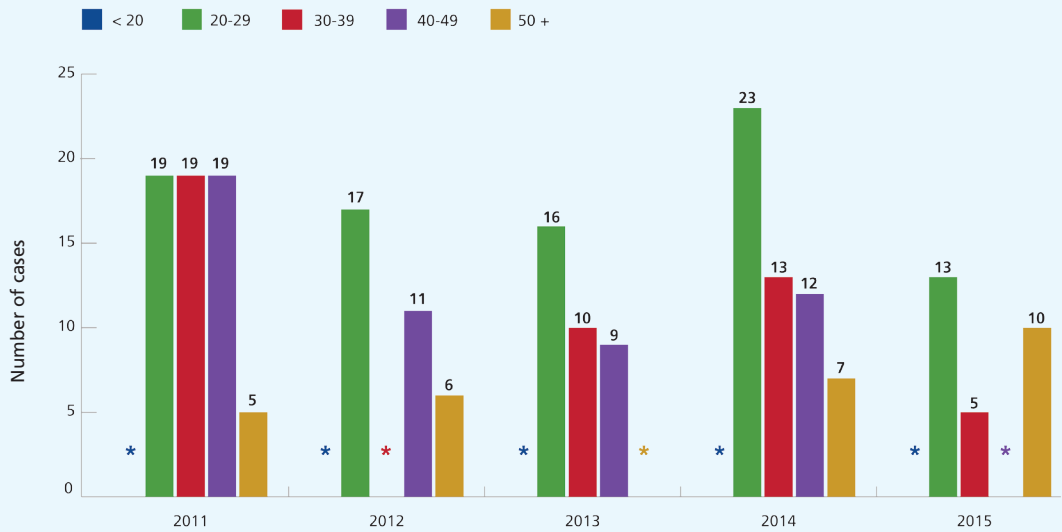
In the last five years, the rates of newly diagnosed cases of HIV among GBMSM have been substantially higher than among heterosexual men. In 2015, the rate of newly diagnosed HIV cases among GBMSM was 156 times higher than among heterosexual men.



FIGURE 26

### Newly Diagnosed Cases of HIV Among GBMSM, By Age, Rhode Island, 2011-2015

Source: HIV Surveillance Program, Rhode Island Department of Health  
Categories with fewer than five cases ( \*) have been suppressed to ensure privacy and confidentiality.



From 2011-2014, individuals in their 20s, 30s, and 40s represented the majority of newly diagnosed cases of HIV among GBMSM in Rhode Island. However, in 2015, individuals in their 20s and individuals age 50 or older represented the majority of the newly diagnosed cases of HIV among GBMSM. Like other areas in the United States, young gay/bisexual Blacks/African Americans and Hispanic/Latino men in Rhode Island have been increasingly affected by HIV/AIDS.

From 2011-2015, infectious syphilis case rates among GBMSM increased from 226.1 per 100,000 in 2011 to 409.9 per 100,000 in 2015—an 81% increase. In 2015, the infectious syphilis rate for GBMSM was 146 times higher than it was for heterosexual males. While no data has emerged to explain this significant increase in infectious syphilis rates among GBMSM in Rhode Island, educational campaigns for GBMSM have been launched in recent years to promote regular syphilis and STD testing, as well as to raise awareness that syphilis can be spread through anal and oral sex.

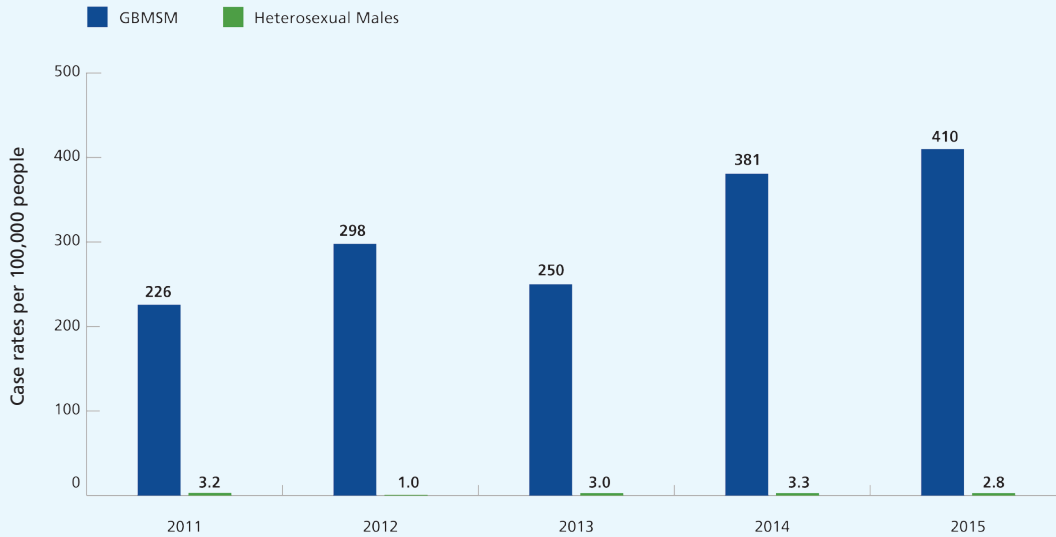
### Gonorrhea and the GBMSM Population

Information collected through interviews with men in Rhode Island diagnosed with gonorrhea indicates that approximately 57% of the males identified as GBMSM in 2015, compared to 35% in 2014. Some of the increase in number of gonorrhea cases may be due to an increase in extragenital testing in GBMSM, which is detecting more cases than in previous years.

**FIGURE 27**

**Rates of Infectious Syphilis Cases Among Males, Rhode Island, 2011-2015**

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health  
 Estimate of GBMSM population size is 5% of adult male population and is based on data from the Rhode Island Behavioral Risk Factor Surveillance System (BRFSS) and Lieb et al. Rates are expressed as cases per 100,000. The rates for 2011-2015 are based on the 2010 US Census.



**FIGURE 28**

**GBMSM with HIV Among Infectious Syphilis Cases, Rhode Island, 2011-2015**

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health

Year	Cases identifying as GBMSM	Self-reported HIV positive	Percent HIV positive in GBMSM
2011	48	23	47.9%
2012	62	32	51.6%
2013	52	23	44.2%
2014	80	26	32.5%
2015	86	24	27.9%

A substantial percentage of GBMSM diagnosed with infectious syphilis in recent years also self-identified as living with HIV. Of the 86 GBMSM who had infectious syphilis in 2015, 24 individuals (27.9%) self-identified as HIV-positive. 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.

# 09 | YOUTH AND YOUNG ADULTS

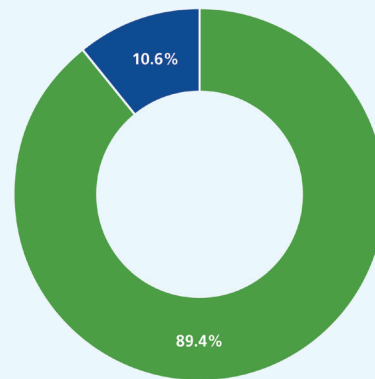
According to the CDC, prevalence estimates suggest that young people ages 15–24 account for half of all newly diagnosed STDs. Also, 25% of sexually active adolescent females have an STD. Compared to adults age 25 and older, sexually active young people are at higher risk of acquiring STDs due to a combination of behavioral, biological, and cultural reasons. The higher prevalence of STDs among adolescents may also reflect multiple barriers to accessing quality STD prevention services, including inability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality.

By a ratio of nearly 10:1, males outnumbered females in the number of newly diagnosed cases of HIV among young adults (ages 18-24) in Rhode Island from 2011-2015. Among the 47 young adult male cases, 89% were GBMSM. The exposure mode for all of the 10 cases among young adult females was heterosexual contact.

**FIGURE 29**  
**Young Adult (18-24) Male Newly Diagnosed Cases of HIV, Rhode Island, 2011-2015**  
 (Total cases = 47)

Source: HIV Surveillance Program, Rhode Island Department of Health

■ GBMSM    ■ All Other Risk Groups



**FIGURE 30**  
**Rates of Chlamydia in Young Adults, Rhode Island, 2011-2015**

Year	Young adults ages 15-24 (cases per 100,000)	Rhode Island incidence (cases per 100,000)
2011	1,888	394
2012	1,954	410
2013	1,836	410
2014	1,811	413
2015	1,825	434

**FIGURE 31**  
**Rates of Gonorrhea in Young Adults, Rhode Island, 2011-2015**

Year	Young adults ages 15-24 (cases per 100,000)	Rhode Island incidence (cases per 100,000)
2011	134	34
2012	175	48
2013	140	43
2014	152	56
2015	155	55

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health

The incidence of both chlamydia and gonorrhea among people age 15-24 far exceeded the statewide rate for the last five years.

## Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) is an anonymous and voluntary, self-administered survey conducted every two 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 32

### Sexual Risk Behavior Among High School Students in Rhode Island vs. United States, Percentage High School Youth Responding Yes

Source: YRBS 2015

Question	Rhode Island	United States
Ever had sex	37%	41%
Had sex before age 13	3%	4%
Had sex with more than four partners	7%	12%
Was currently sexually active	26%	30%
Did not use a condom	39%	43%

In 2015, Rhode Island high school students reported less sexual risk-taking behavior than high school students nationally based on the five questions included in the survey. The 2015 United States data was reported as part of the YRBS administered through the CDC.

The Rhode Island high school students participating in the 2015 YRBS self-identified as follows: heterosexual (87%), gay or lesbian (3%), bisexual (7%), and not sure (4%). Gay, lesbian, and bisexual youth consistently reported higher sexual risk behaviors than heterosexual youth.

**FIGURE 33**

**Sexual Risk Behavior, By Sexual Orientation, Percentage of High School Youth Responding Yes**

Source: CDC Youth Risk Behavior Survey, Rhode Island, 2015

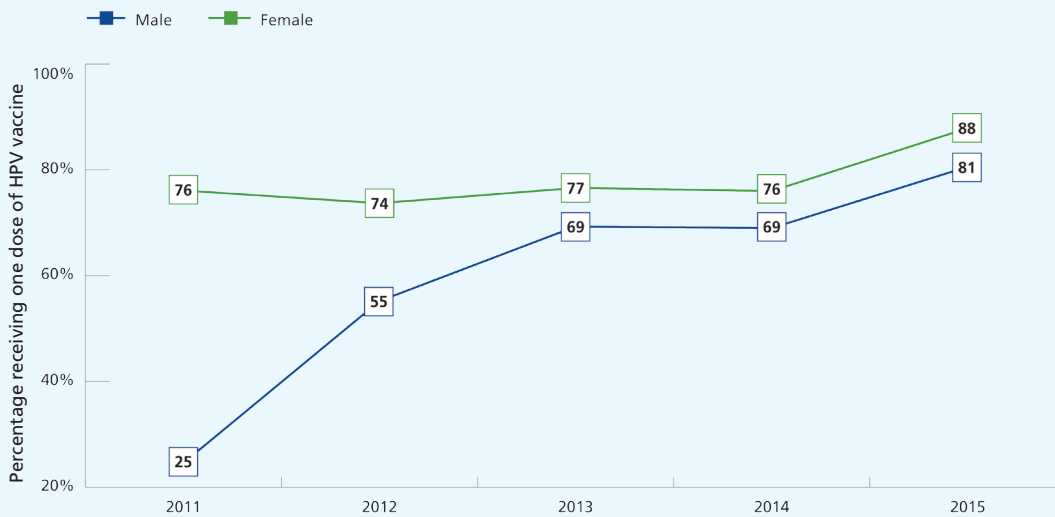
Question	Heterosexual	Gay, Lesbian, Bisexual
Ever had sex	37%	44%
Had sex before age 13	2%	7%
Had sex with more than four partners	6%	15%
Were currently sexually active	26%	31%
Did not use a condom	37%	49%

**Human Papilloma Virus (HPV)**

**FIGURE 34**

**One Dose of HPV Vaccination Among Youth, Age 13-17, By Sex, Rhode Island, 2011-2015**

Source: Rhode Island Immunization Program, Rhode Island Department of Health



RIDOH began distributing HPV vaccine for girls in 2006 and for boys in 2010. In 2015, Rhode Island had the highest coverage rate for at least one dose of HPV vaccine for both boys (80.6%) and girls (87.9%) age 13-17. HPV is transmitted through contact with infected skin, usually through sexual contact. HPV vaccine protects individuals 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 the onset of sexual debut.

# 10 | GEOGRAPHIC DISTRIBUTION OF HIV AND STDs IN RHODE ISLAND

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

**FIGURE 35**

### Top Five Ranking Municipalities, By Cumulative Count of Newly Identified Cases of HIV, Rhode Island, 2011-2015

Source: HIV Surveillance Program, Rhode Island Department of Health

Municipality	Number of cases	Average rate (cases per 100,000)	Population estimate (2010)
Providence	132	15	178,042
Pawtucket	59	17	71,148
Cranston	43	11	80,387
North Providence	36	22	32,078
Woonsocket	17	8	41,186

**FIGURE 36**

### Top Five Ranking Municipalities, By Cumulative Count of Infectious Syphilis Cases, Rhode Island, 2013-2015

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health

Municipality	Number of cases	Average rate (cases per 100,000)	Population estimate (2010)
Providence	109	61	178,042
Pawtucket	48	68	71,148
Cranston	22	27	80,387
East Providence	15	32	47,037
Warwick	14	17	82,672

**FIGURE 37****Top Five Ranking Municipalities, By Count of Gonorrhea Cases, Rhode Island, 2015**

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health

Municipality	Number of cases	Average rate (cases per 100,000)	Population estimate (2010)
Providence	246	138	178,042
Pawtucket	59	83	71,148
Cranston	52	65	80,387
Woonsocket	35	85	41,186
East Providence	26	55	47,037

**FIGURE 38****Top Five Ranking Municipalities, By Count of Chlamydia Cases, Rhode Island, 2015**

Source: Rhode Island Sexually Transmitted Disease Program, Rhode Island Department of Health

Municipality	Number of cases	Average rate (cases per 100,000)	Population estimate (2010)
Providence	1568	881	178,042
Pawtucket	506	711	71,148
Cranston	309	384	80,387
Woonsocket	258	626	41,186
Central Falls	191	986	19,376

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

# 11 | GLOSSARY OF TERMS AND DATA SOURCES

**Behavioral Risk Factor Surveillance Survey (BRFSS):** An ongoing, random-digit, population-based telephone (landline and mobile phone) interview survey conducted annually in Rhode Island.

**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 STDs, not how individuals self-identify in terms of their sexuality.

**Extragenital testing:** Traditional methods of testing for gonorrhea and chlamydia include urine-based, cervical, or vaginal tests. STDs can infect various parts of the body and traditional tests cannot always identify infections in other areas of the body. Depending on sexual behavior, individuals may be infected in the throat or rectum. Swab-based tests of the throat and rectum can identify gonorrhea and chlamydia infections of those sites and allow for proper treatment.

**Expedited Partner Therapy (EPT):** For some chlamydia cases, a doctor may prescribe EPT for their patient's sexual partner(s) when it is 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.

**Healthcare Effectiveness and Data Information Set (HEDIS):** HEDIS is a dataset managed by the National Committee for Quality Assurance that is used by healthcare plans to monitor performance for certain aspects of healthcare. For STDs, this includes insurance claim data that is used to calculate yearly estimates for the percentage of sexually active females age 16-24 that 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 obtained from Blue Cross & Blue Shield of Rhode Island and UnitedHealthcare. These four plans account for the majority of health insurance providers in Rhode Island.

**HIV/AIDS and STD surveillance data:** All HIV/AIDS and STD data are collected from case and laboratory reports received from healthcare providers, 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]*.

**HPV vaccination data source:** CDC, National Immunization Survey – Teen (NIS-Teen), 2008-2014



**Infectious syphilis:** Includes primary, secondary, and early-latent stages

**Population-based rate calculations:** Rates are expressed as cases per 100,000 population. The rates for 2011-2015 are based on the 2010 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. Individuals 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. Individuals classified as Hispanic or Latino represent individuals who may have also identified as another racial group.
2. Individuals classified as White or Black/African American represent only those individuals 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 in order to protect the privacy and confidentiality of those populations that have small case counts and population sizes. Please contact RIDOH's Center for HIV, Hepatitis, STD, and TB Epidemiology for more information on these populations.

**Title X/Family Planning Sites:** The Title X Family Planning Program provides confidential family planning services at low/no cost through a federal grant. These services include HIV and STD testing.

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

## 12 | DATA LIMITATIONS

**BRFSS:** The BRFSS relies on information reported directly by the respondent, which may have a potential for bias.

**Population estimates for GBMSM:** No standard estimate exists for the number of GBMSM that live in the United States or in each state. Research by Spencer Lieb et al<sup>4</sup> and results from the BRFSS were used to estimate that 5% of the adult male population in Rhode Island identifies as gay or bisexual. Rates of disease for the GBMSM population were calculated using this estimate and data from the US Census.

**Deaths attributed to HIV/AIDS:** Vital status for cases of HIV is obtained 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 death data available for this report is from 2014.

**HIV/AIDS prevalence:** 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 individuals who died. Routine interstate review for duplicates is carried out semi-annually to identify cases who may have been reported in more than one jurisdiction and to ensure individuals 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. In 2014, accounting for interstate migration was improved and the 2014 prevalence estimate has been updated with the new methodology.

**Newly diagnosed cases of HIV versus incident cases of HIV:** The data presented in this surveillance report represents newly diagnosed cases of HIV and not trends for *new infection* of HIV. Rhode Island, like all states and U.S. territories, collects and reports data on persons *diagnosed* with HIV infection. However, because HIV diagnosis can occur at any point after infection, these estimates may not reflect all recent infections.

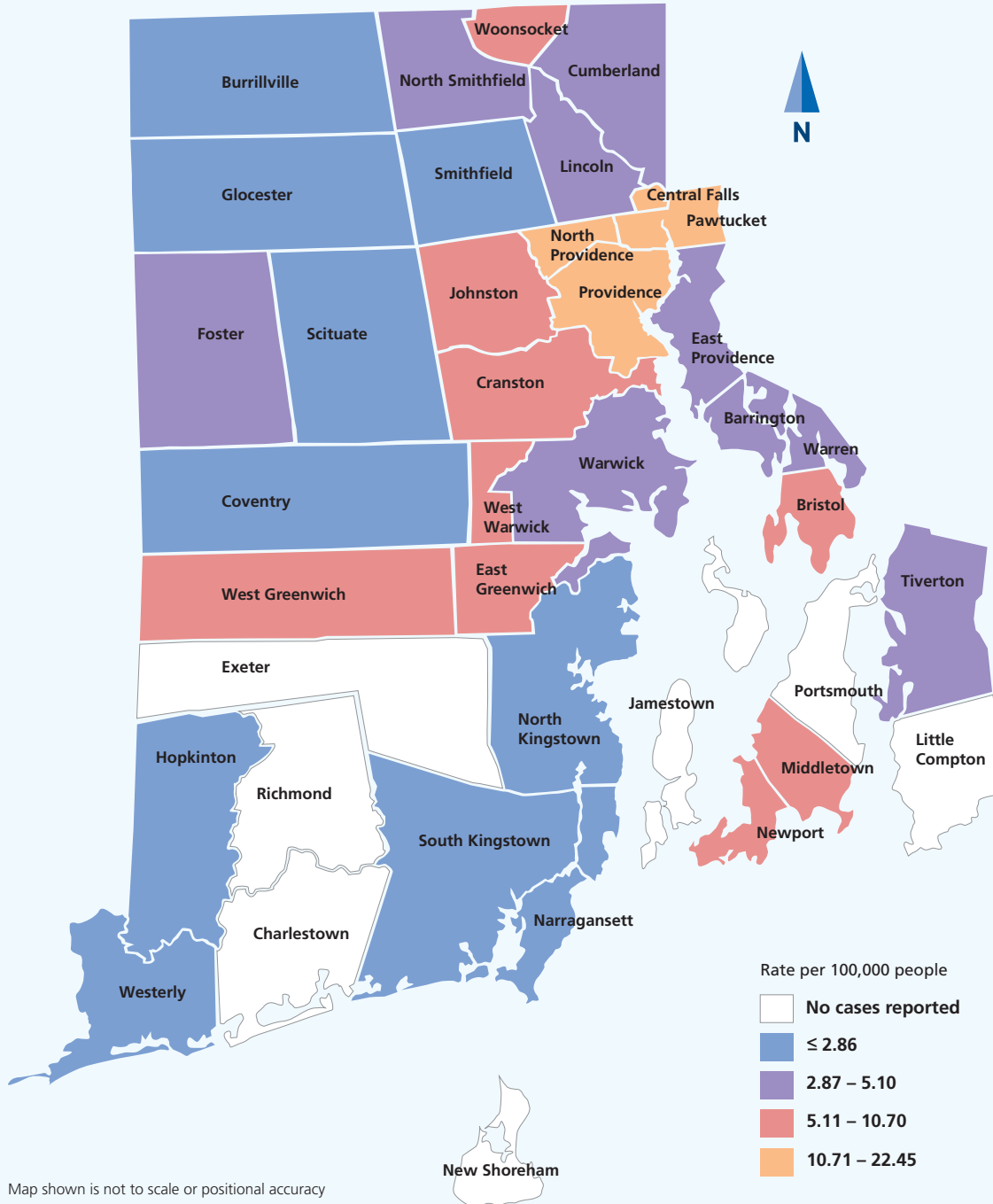
# 13 | APPENDIX

MAP 1

## Newly Diagnosed Cases of HIV, By Municipality, Rhode Island, 2011-2015

Map is based on residence at diagnosis for 409 of 411 reported cases for 2011-2015.

Sources: HIV Surveillance Program, Rhode Island Department of Health; Rhode Island Geographical Information Systems (RIGIS)



Map shown is not to scale or positional accuracy

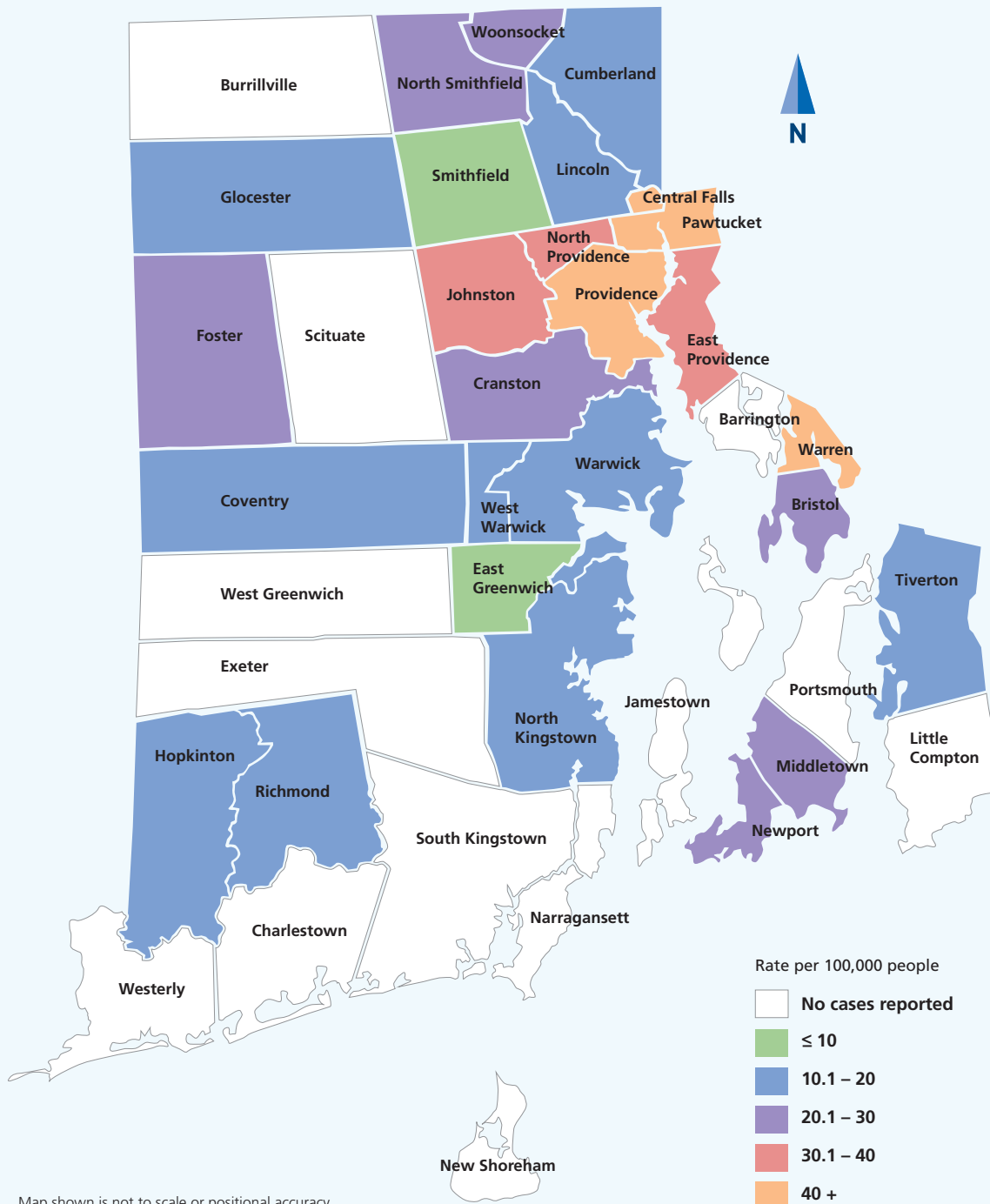
MAP 2

### Infectious\* Syphilis Case Rates, By Municipality, Rhode Island, 2013-2015

Map is based on residence at diagnosis for 299 of 302 reported cases for 2013-2015.

\*Infectious syphilis includes primary, secondary, and early latent stages.

Sources: Rhode Island Sexually Transmitted Diseases Program, Rhode Island Department of Health; Rhode Island Geographic Information Systems (RIGIS)



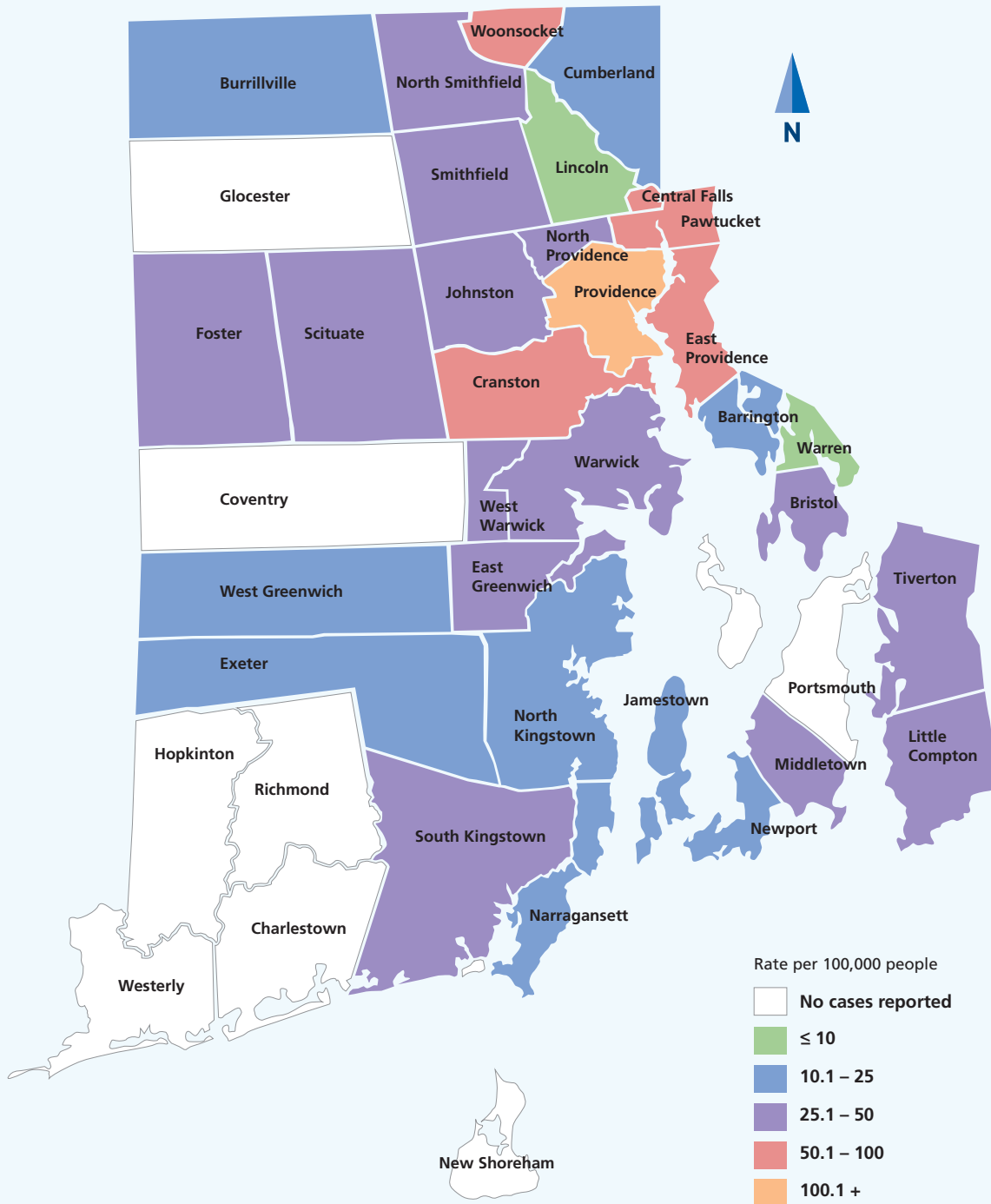
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MAP 3

### Gonorrhea Case Rates, By Municipality, Rhode Island, 2015

Map is based on residence at diagnosis for 579 of 580 reported cases in 2015.

Sources: Rhode Island Sexually Transmitted Diseases Program, Rhode Island Department of Health; Rhode Island Geographic Information Systems (RIGIS)



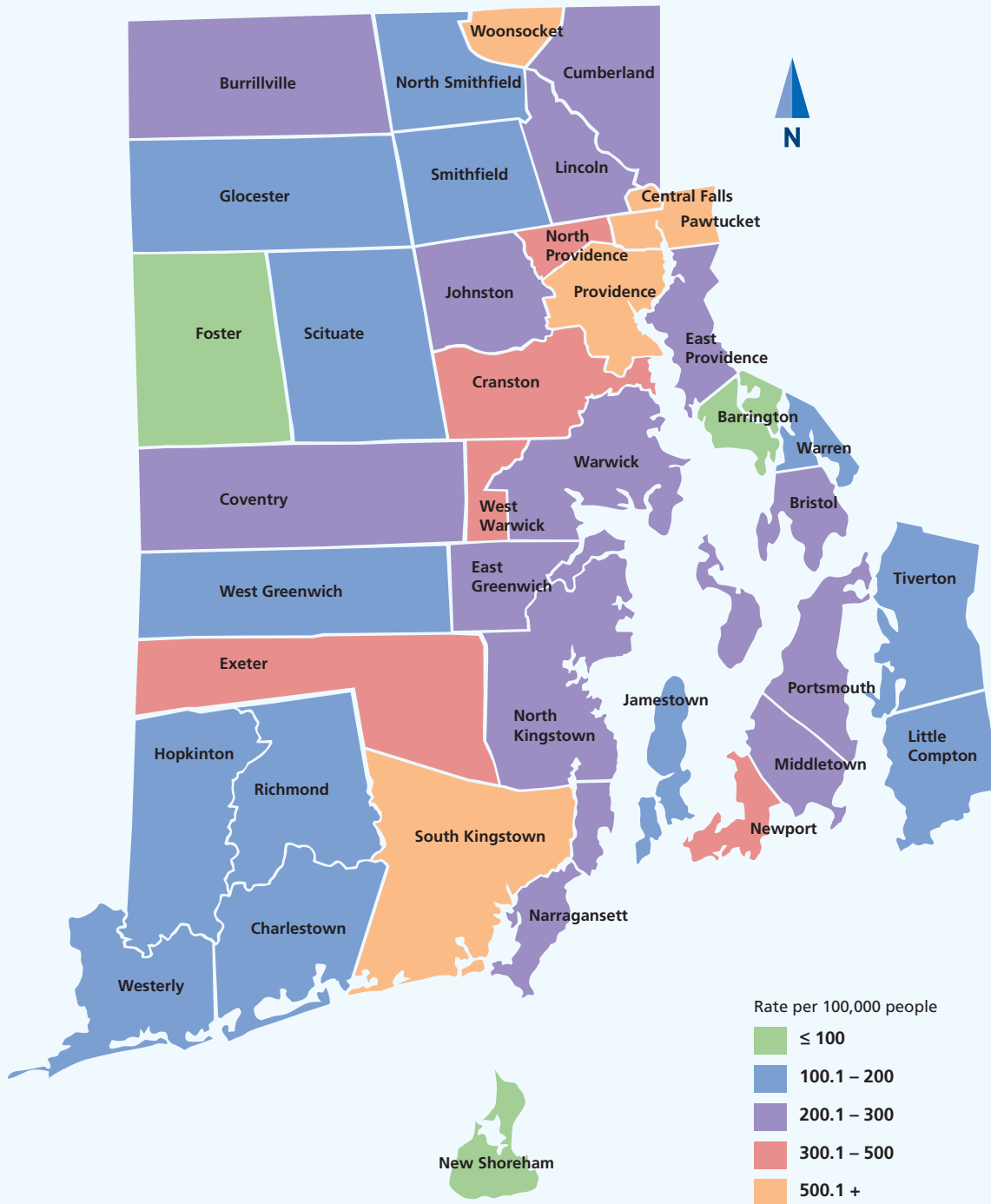
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MAP 4

### Chlamydia Case Rates, By Municipality, Rhode Island, 2015

Map is based on residence at diagnosis for 4,531 of 4,575 reported cases for 2015.

Sources: Rhode Island Sexually Transmitted Diseases Program, Rhode Island Department of Health; Rhode Island Geographic Information Systems (RIGIS)



Map shown is not to scale or positional accuracy

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