

Reported sexually transmitted diseases

Teens and adults in upstate New York* (rates per 100,000)

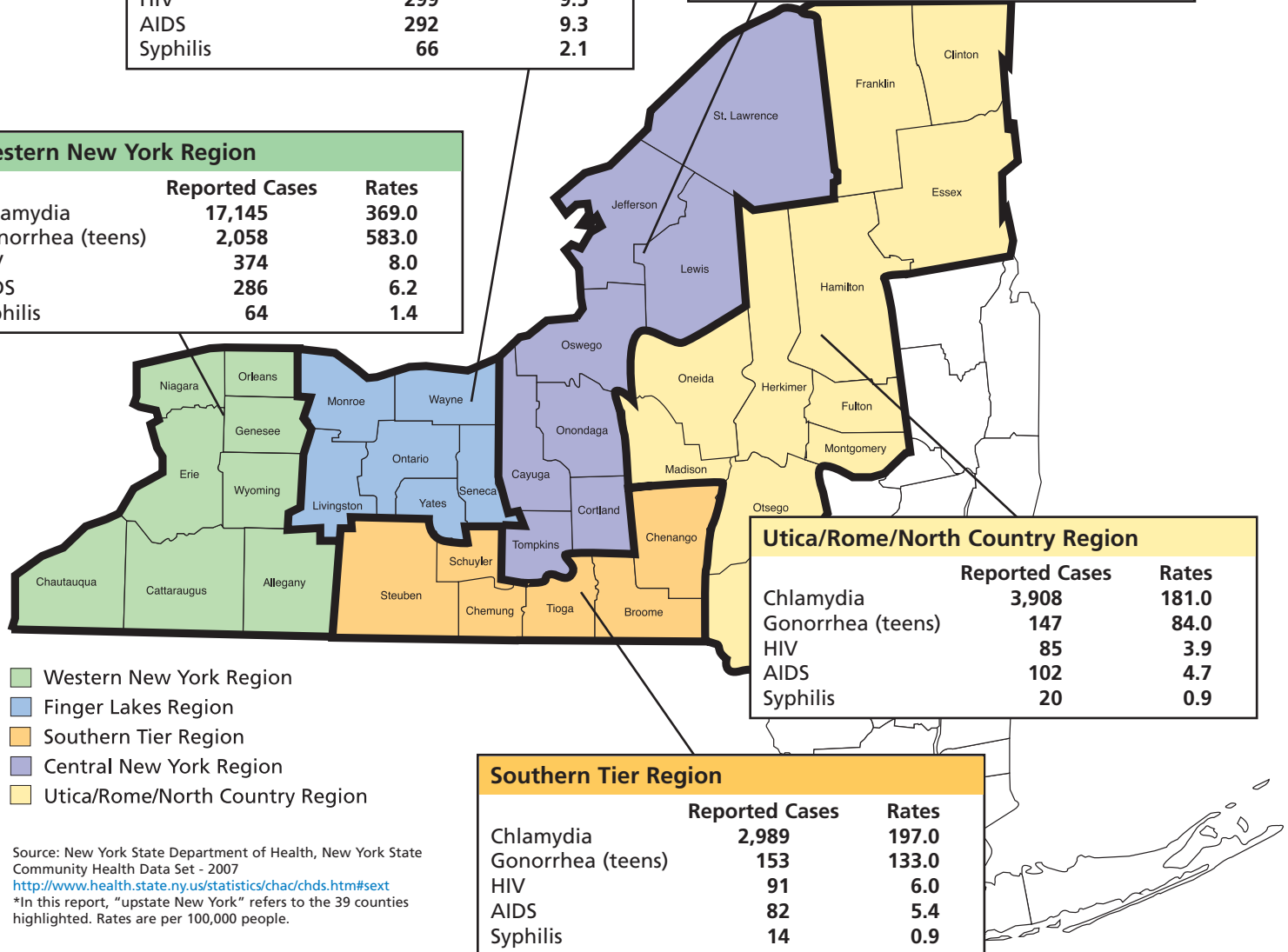
Upstate New York		
	Reported Cases	Rates
Chlamydia	47,348	323.0
Gonorrhea (teens)	4,384	377.0
HIV	1,011	6.9
AIDS	954	6.5
Syphilis	199	1.4

New York State		
	Reported Cases	Rates
Chlamydia	213,872	369.0
Gonorrhea (teens)	13,030	314.0
HIV	14,065	24.3
AIDS	13,102	22.6
Syphilis	5,742	9.9

Finger Lakes Region		
	Reported Cases	Rates
Chlamydia	12,839	407.0
Gonorrhea (teens)	1,391	548.0
HIV	299	9.5
AIDS	292	9.3
Syphilis	66	2.1

Central New York Region		
	Reported Cases	Rates
Chlamydia	10,467	328.0
Gonorrhea (teens)	635	237.0
HIV	171	5.4
AIDS	183	5.7
Syphilis	35	1.1

Western New York Region		
	Reported Cases	Rates
Chlamydia	17,145	369.0
Gonorrhea (teens)	2,058	583.0
HIV	374	8.0
AIDS	286	6.2
Syphilis	64	1.4



Source: New York State Department of Health, New York State Community Health Data Set - 2007

<http://www.health.state.ny.us/statistics/chac/chds.htm#sect>

*In this report, "upstate New York" refers to the 39 counties highlighted. Rates are per 100,000 people.

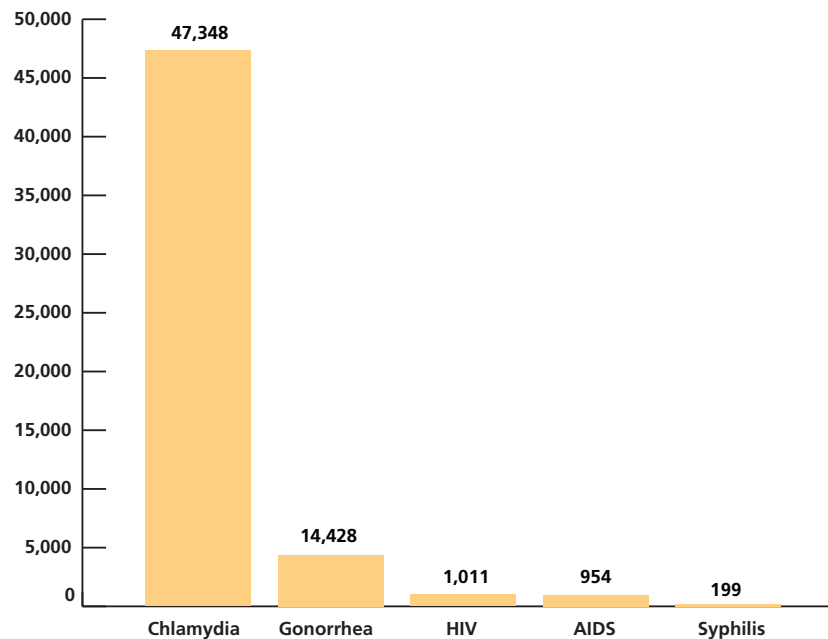
There are more than 19 million new cases of sexually transmitted diseases in the United States each year, half among young people 15 to 24 years old. The true impact of these sexually transmitted diseases (STDs) is undercounted because of misdiagnoses and unreported cases. The more than 20 identified STDs have a significant effect on quality of life and incur steep health care costs, estimated at nearly \$15.9 billion in 2007 dollars.¹ The groups with the greatest vulnerability for contracting STDs are women and infants, adolescents and young adults, minorities, men having sex with men, and people entering corrections facilities.²

STDs are primarily transferred through sexual activity (vaginal, oral or anal intercourse). Some are passed from mother to child during pregnancy, at birth or through breastfeeding.³ The underlying cause of the STD (bacterial or viral infection) determines the likelihood of cure. Bacteria-caused infections such as gonorrhea, chlamydia, syphilis and others can generally be treated and often cured by antibiotics. Viral infections, such as HIV/AIDS, genital herpes, hepatitis B and human papillomavirus (HPV) are not curable, but can be controlled with proper treatment.⁴

New York state ranks third in the nation for number of cases of chlamydia and syphilis, and seventh for cases of gonorrhea. When measuring reported infection rates, New York ranks third in the nation for syphilis, twelfth for chlamydia and in the middle of the 50 states at 24 for gonorrhea.⁵

Using the county level statistics collected by the New York State Department of Health, it is possible to analyze the impact of STDs on the upstate population in each of the upstate regions (see *STD Reporting* at the end of this fact sheet). The state reports data on five of the most common and critical STDs: chlamydia, gonorrhea, HIV, AIDS and syphilis.

Sexually transmitted disease cases reported in upstate New York for total population (2005 - 2007)



Source: New York State Community Health Data Set – 2007 <http://www.health.state.ny.us/statistics/chac/chds.htm#sex>

Chlamydia (47,348 cases) accounted for nearly three-quarters of STD cases upstate with a rate of infection of 323 per 100,000 people in 2007. The next most prevalent STD in the same time period was gonorrhea (14,428 cases) affecting 98 people per 100,000 in the population. For teens, the gonorrhea rate was 377 per 100,000. Together, the two diseases accounted for 97 percent of all STDs in upstate New York.



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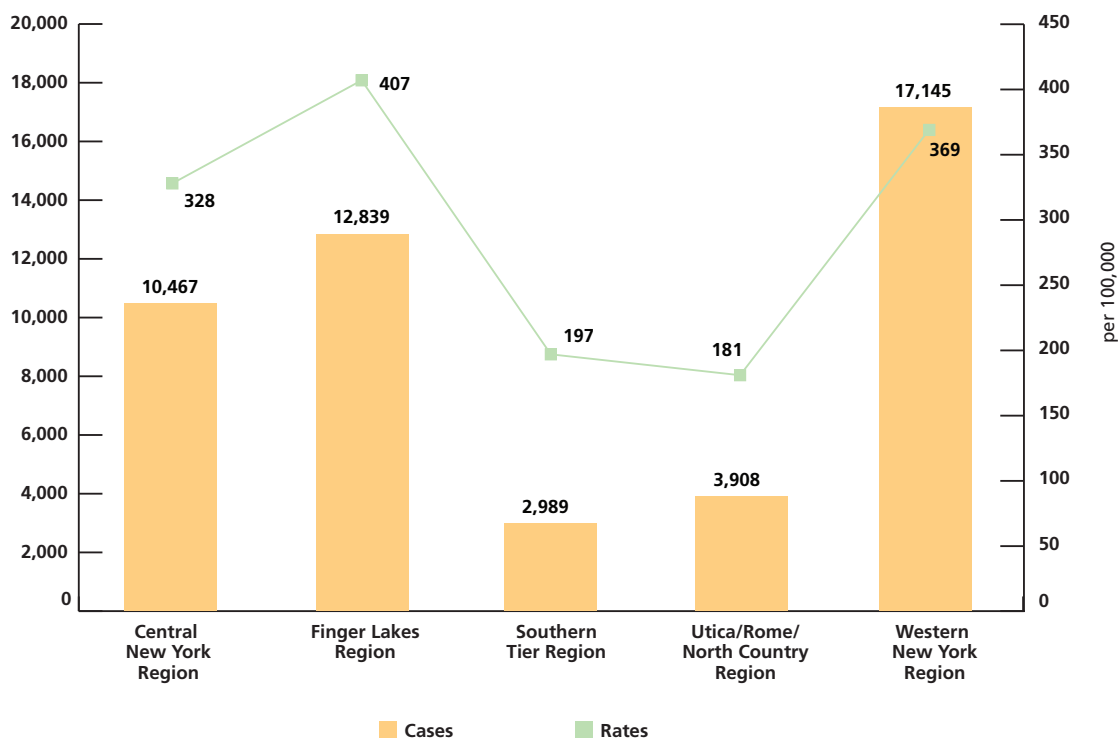
Chlamydia

Chlamydia is the most commonly reported sexually transmitted disease, but it is also the most likely to be under-diagnosed. Often the symptoms go unnoticed, and patients may not be tested for the bacterial infection, even if they are being treated for its symptoms. More than 1.2 million cases were reported in the country in 2008, less than half of the 2.8 million new cases the Centers for Disease Control and Prevention estimates occur each year.⁶ Since 2000, all states and the District of Columbia require that cases be reported.⁷

Chlamydia affects a higher proportion of women than men, striking teens and young adults more often, but particularly women 15 to 19 years old. Rates among minority racial or ethnic groups are higher than rates for whites. Nationally, rates for blacks in 2007 were more than eight times higher than for whites and made up nearly half of all reported cases. The rate for Hispanics was nearly three times higher than among whites.⁸

Left untreated, chlamydia can have serious health consequences for women, including pelvic inflammatory disease, ectopic pregnancies and infertility. Complications for men are rare.⁹

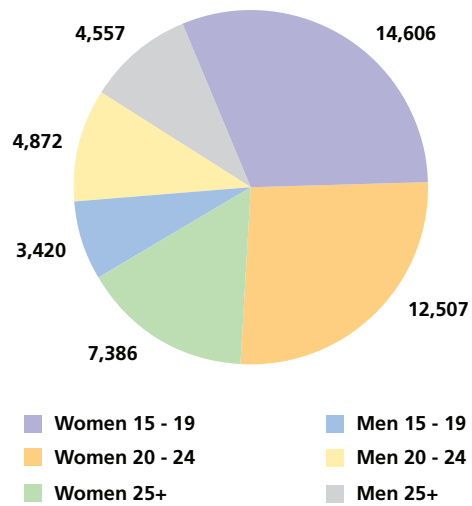
Reported chlamydia cases and rates by region, 2005 - 2007



Source: New York State Community Health Data Set – 2007 <http://www.health.state.ny.us/statistics/chac/chds.htm#sect>

The rate of chlamydia infection across the upstate regions ranges from a low of 181/100,000 in the Utica region to a high of 407/100,000 in the Finger Lakes region. The overall upstate rate of 323 is below the New York state rate of 369/100,000.

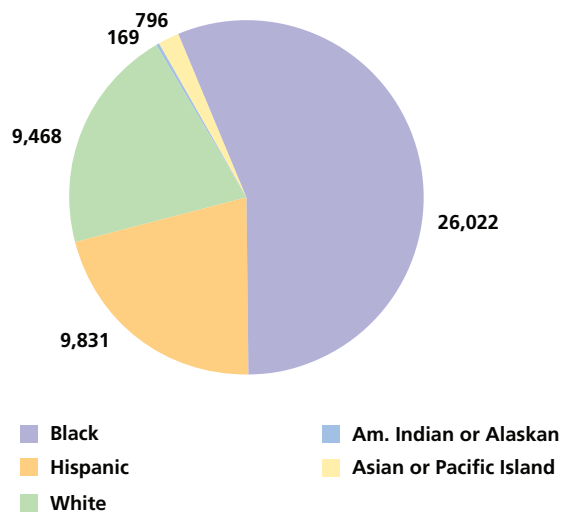
Reported chlamydia cases by gender and age in upstate New York, 2005 - 2007



Source: New York State Community Health Data Set – 2007 <http://www.health.state.ny.us/statistics/chac/chds.htm#top>

Chlamydia affects women far more than men; nearly three-quarters of all cases upstate affect women. These women were predominantly young, as three-quarters were under 25 years of age.

Reported chlamydia cases by race and ethnicity in New York state, 2008



Source: Centers for Disease Control and Prevention, Sexually Transmitted Diseases - Interactive Data 1996-2008, New York state <http://wonder.cdc.gov/controller/datarequest/D46;jsessionid=E6862E0876A35ACDD42BD4CA6E95576F?stage=results&action=sort&direction=BYVARIABLE>

The CDC reports on the race/ethnicity of slightly more than half of the cases in New York state. Among these, blacks make up 56 percent, while Hispanics and whites comprise about 20 percent each.

Gonorrhea

The second most prevalent reportable STD is also caused by a bacterial infection and affects both men and women. Often because there are no symptoms, gonorrhea may be mistaken for other diseases. Even without symptoms, it can still be transmitted to others.

According to the CDC, only half of the estimated 700,000 new cases in the United States each year are reported.¹⁰ If the same reporting rates hold in New York state, the 17,700 total cases reported in 2007 actually represent 35,000 people afflicted by gonorrhea.¹¹

Nationally, reported rates for women are slightly higher than among men, although rates for men over age 25 are higher than for women. In 2008, about 71 percent of reported cases of gonorrhea were among blacks, a rate 20 times greater than for whites.¹²

Gonorrhea is most often reported for teens and young adults. In 2008, more than 75 percent of cases in the United States were among 15- to 29-year-olds, with higher rates for women in this age group.¹³

Serious complications can result from untreated gonorrhea. Women can develop pelvic inflammatory disease, which can lead to more serious conditions, including infertility and tubal (ectopic) pregnancies. Babies who are born to women infected by gonorrhea can develop serious complications, including death. Having gonorrhea increases the risk of HIV infection and the possibility of spreading the HIV infection.

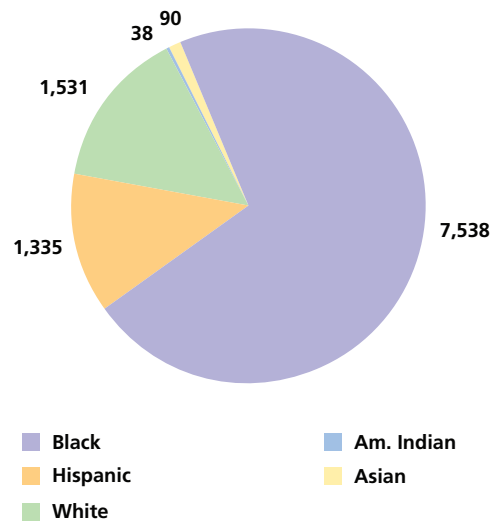
Reported gonorrhea rates for teens and total population, 2005 - 2007



Source: New York State Community Health Data Set – 2007 <http://www.health.state.ny.us/statistics/chac/chds.htm#sext>

New York state reports gonorrhea rates for the full population and the subset of teens 15 to 19 years old. From 2005 to 2007 in upstate New York, the highest rates for teens occurred in the Western New York region (583/100,000) and the lowest in the Utica region (84/100,000). For the full population, the highest rate was in the Finger Lakes and Western New York regions (144/100,000) and the lowest in the Utica region (23/100,000). Two upstate regions, Finger Lakes and Western New York, have higher reported rates than upstate and New York state for teens and all age groups.

Reported gonorrhea cases by race and ethnicity in New York state, 2008



Source: Sexually Transmitted Diseases - Interactive Data 1996-2008, New York state
<http://wonder.cdc.gov/controller/datarequest/D46;jsessionid=E6862E0B76A35ACDD42BD4CA6E95576F?stage=results&action=sort&direction=BYVARIABLE>

The CDC reports on the race/ethnicity of slightly less than two-thirds of the cases in New York state. Among these, blacks make up 71.6 percent of cases, while Hispanics and whites comprise 15 percent each.

Syphilis

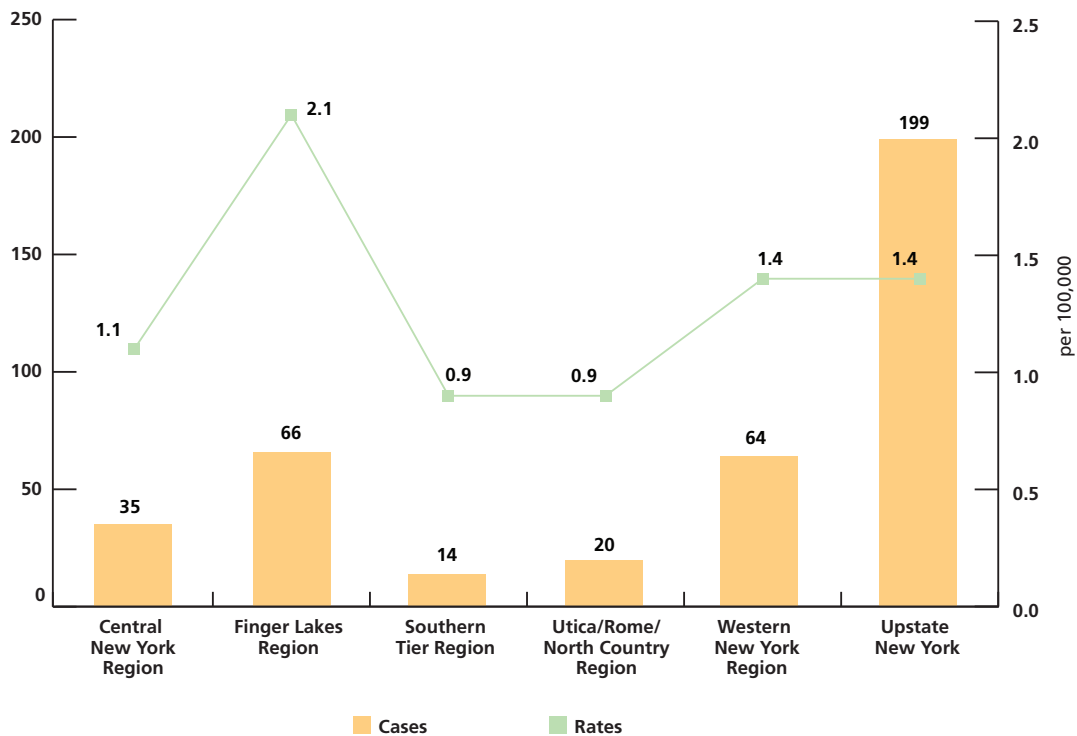
Syphilis is another bacterial sexually transmitted disease. It is often referred to as “the great imitator” because the rashes and sores that it causes are similar to other conditions.

Although syphilis decreased in the United States in the 1990s, it began to increase after hitting a low point in 2000. Its reported incidence is highly concentrated in 25 percent of the counties in the country, accounting for 99.9 percent of the cases reported in 2006. None of these counties are upstate, but four are New York City counties.¹⁵

Because the symptoms of syphilis are not easily recognizable, the disease may be transmitted unknowingly. The presence of syphilis increases the chances of acquiring HIV two to five times if exposure occurs when a person has syphilis. If not treated during the primary and secondary phases of the disease, the disease can progress to the late and latent stages, and if still untreated, can last for 10 to 20 years. Complications at this stage can lead to death. Syphilis has serious health consequences for a baby born to an infected mother.¹⁶

Of the cases reported in the United States in 2008, 49 percent were among blacks and 38 percent among whites. The rate for black men was seven times higher than for white men, but the rate for black women was more than 15 times higher than among white women.¹⁷

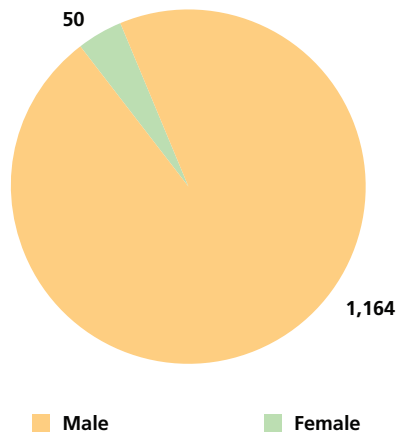
Reported syphilis cases and rates by region, 2005 - 2007



Source: New York State Community Health Data Set – 2007 <http://www.health.state.ny.us/statistics/chac/chds.htm#sect>

The reported rate of syphilis infections per 100,000 people in upstate New York ranges from 0.9 in the Southern Tier and Utica to 2.1 in the Finger Lakes region. The rate upstate is 1.4, compared to 9.9 for the state as a whole (not shown). The New York state rate is driven by the relatively higher rate in New York City (20.3 /100,000).

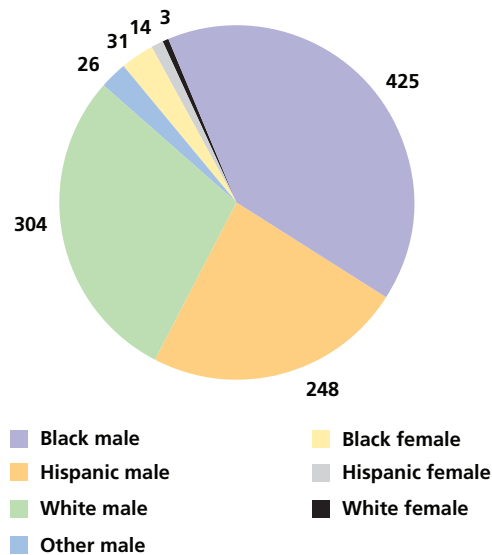
Primary and secondary reported syphilis cases by gender in New York state, 2008



Source: Sexually Transmitted Diseases - Interactive Data 1996-2008, New York state
<http://wonder.cdc.gov/controller/datarequest/D46;jsessionid=E6862E0B76A35ACDD42BD4CA6E95576F?stage=results&action=sort&direction=BYVARIABLE>

Syphilis afflicts men in much greater numbers than women. In New York state in 2008, 96 percent of primary and secondary cases were among men.

Primary and secondary reported syphilis cases by race and ethnicity in New York state, 2008



Source: Sexually Transmitted Diseases - Interactive Data 1996-2008, New York state
<http://wonder.cdc.gov/controller/datarequest/D46;jsessionid=E6862E0B76A35ACDD42BD4CA6E95576F?stage=results&action=sort&direction=BYVARIABLE>

The CDC reports on the race/ethnicity of 87 percent of the cases in New York state. Among these, black males make up 41 percent, whites males comprise 29 percent and Hispanic males 24 percent.

HIV/AIDS

The CDC estimates that 1.1 million Americans, a prevalence rate of 447.8 per 100,000 people,¹⁸ were infected with human immunodeficiency virus (HIV) in 2006. HIV, the virus that causes AIDS, is different from most other viruses because it attacks the immune system. Acquired immunodeficiency syndrome (AIDS) is the final stage of HIV infection.

Of those infected, 21 percent (233,000) do not know it. The number of newly diagnosed cases and the number of newly infected people is growing due to antiretroviral treatment extending the lives of infected persons. As a result, more people are becoming infected each year than are dying.¹⁹

Although the number of people living with the infection has grown, transmission of the disease has been on the decline since 1984. According to David Holtgrave, Ph.D., author of a new study on transmission rates in the United States, "For every 100 persons living with HIV today 5 or fewer will transmit the virus to an uninfected person in a given year...In other words, 95 percent or more of those living with HIV do not transmit the virus to others, which indicates that prevention efforts are having a real impact."²⁰

Scope of the HIV/AIDS epidemic

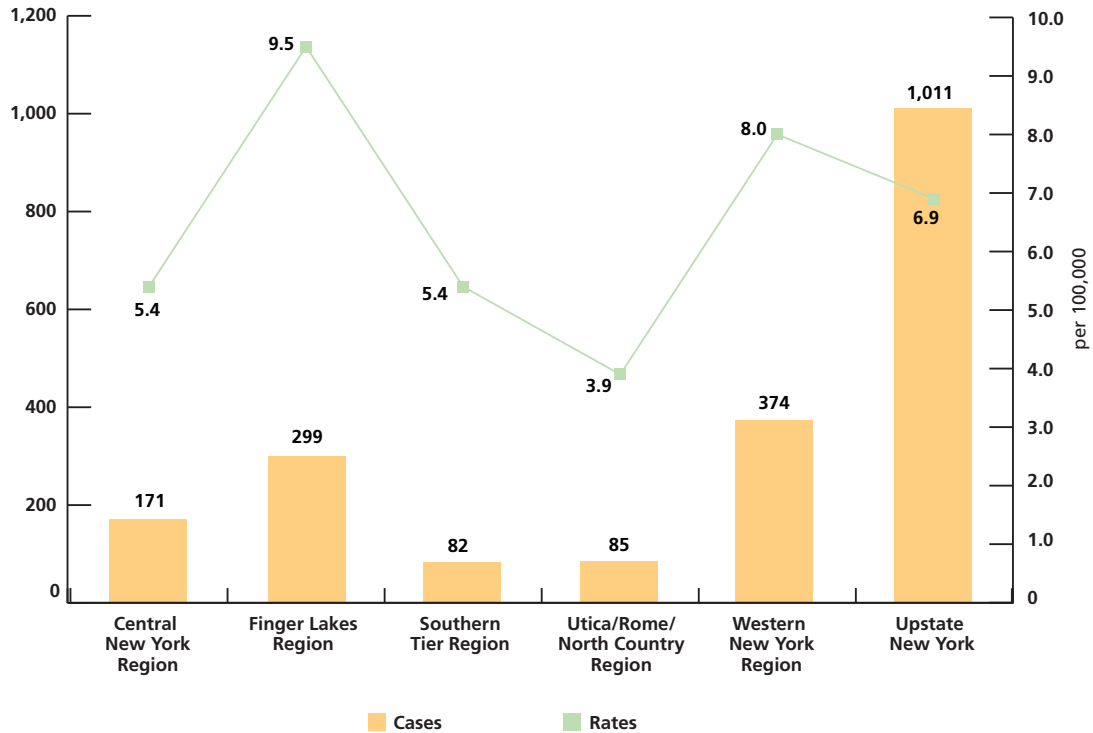
The first cases of HIV are believed to have come into the United States in the 1970s, although cases were not identified until 1983.²¹ Across the world, the Joint United Nations Programme on HIV/AIDS estimated that 33 million people were living with HIV in 2007.²² The most dominant methods for transmitting AIDS are through men having sex with men (46 percent), followed by high-risk heterosexual contact (31 percent).

An AIDS diagnosis is made when an HIV-infected person's immune system becomes severely compromised and/or the person becomes ill with a life-threatening disease, also known as an opportunistic infection. Without treatment, AIDS generally occurs eight to 10 years after the initial infection.²³ The CDC is now using a new incidence surveillance system to provide estimates of HIV incidence that will generate more accurate estimates of new HIV infections. The first use of the new analysis revealed that new HIV infections were underestimated by 41 percent. This does not represent an increase in cases, but an improvement in detection and estimation techniques.²⁴

The Food and Drug Administration has approved more than 30 antiretroviral drugs in five drug classes to treat people infected with HIV. With no known cure for an HIV infection or AIDS, treatment with antiretroviral drugs must be maintained to suppress the virus.²⁵

New estimates reveal that the epidemic is growing most rapidly among gay and bisexual men, African-Americans, Hispanics and Latinos.²⁶

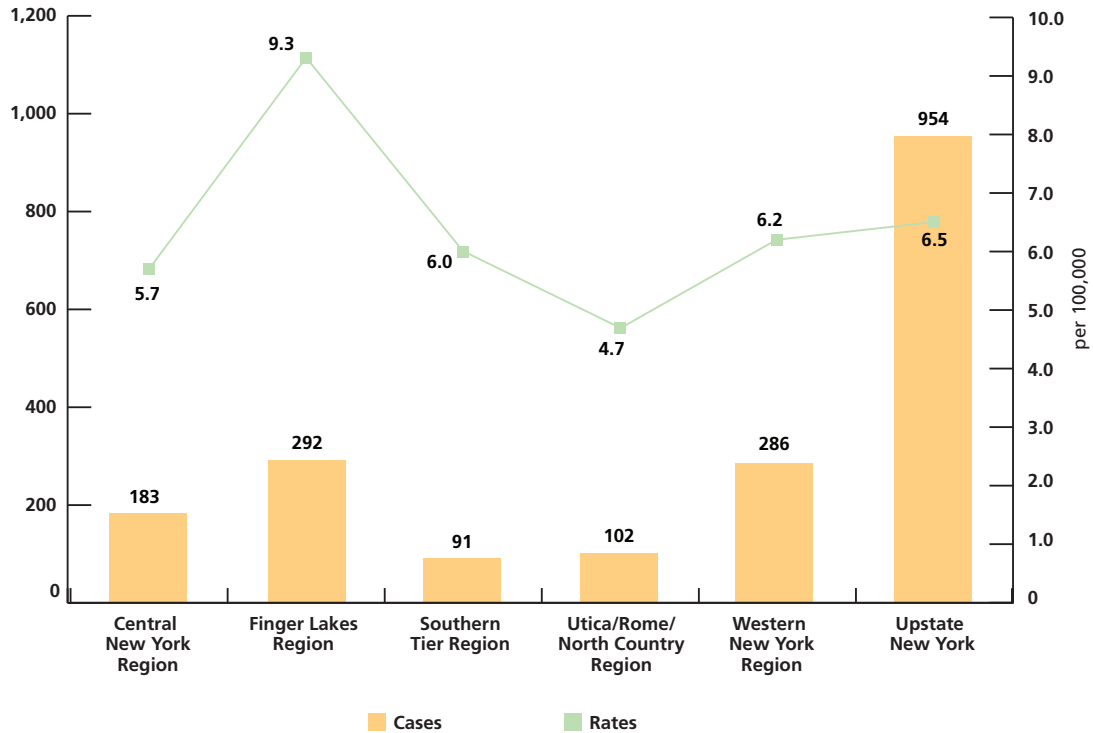
Newly diagnosed HIV reported cases and rates by region, 2005 - 2007



Source: New York State Community Health Data Set – 2007 (New York state includes all newly diagnosed HIV, regardless of concurrent or subsequent AIDS diagnosis) <http://www.health.state.ny.us/statistics/chac/chds.htm#sect>

Across upstate New York, the Finger Lakes region has the highest reported rate for newly diagnosed HIV cases (9.5/100,000) and the lowest rate is in the Utica region (3.9/100,000). The rate in New York state exceeds that of any region in upstate New York at 24/100,000, driven by an even higher rate in New York City of 46/100,000.

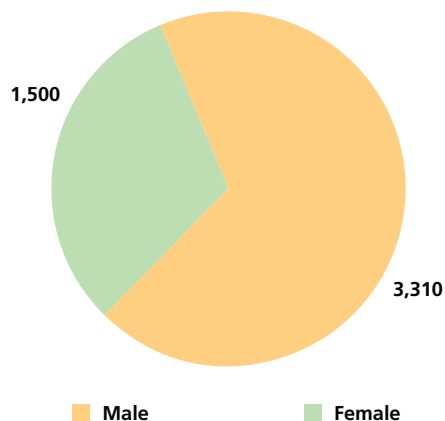
Reported AIDS cases and rates by region, 2005 - 2007



Source: New York State Community Health Data Set – 2007 (New York state includes all newly diagnosed HIV, regardless of concurrent or subsequent AIDS diagnosis) <http://www.health.state.ny.us/statistics/cha/chds.htm#sect>

Similar rates of reported AIDS cases prevail, with the highest rate in the Finger Lakes region (9.3/100,000) and the lowest in the Utica region (4.7/100,000). The state rate for AIDS (22.6/100,000) is far higher, driven by the rate in New York City (42.7/100,000).

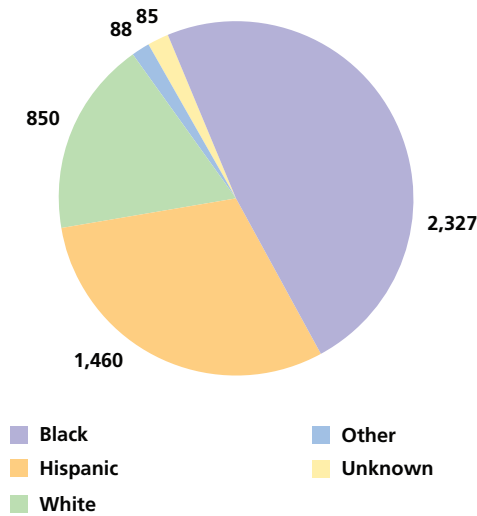
Newly reported AIDS cases by gender in New York state, 2007



Source: The Henry J. Kaiser Family Foundation, State Health Facts: AIDS <http://www.statehealthfacts.org/profilecat.jsp?rgn=34&cat=11>

More than two-thirds of the newly reported cases of AIDS in New York state in 2007 were among males (69 percent), a slightly lower proportion than that among males in the United States (74 percent - data not shown).

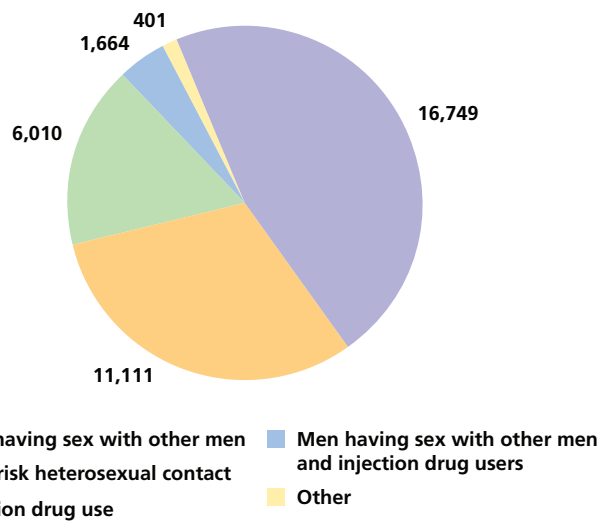
Newly reported AIDS cases by race/ethnicity in New York state, 2007



Source: State Health Facts: AIDS <http://www.statehealthfacts.org/profilecat.jsp?rgn=34&cat=11>

Minorities made up more than 80 percent of the new cases of AIDS in New York state in 2007, which is higher than the proportion of minorities newly reporting AIDS cases in the United States (69 percent - data not shown).

Newly reported AIDS cases by transmission category in the United States, 2007



Source: CDC, Basic Statistics, HIV/AIDS <http://www.cdc.gov/hiv/topics/surveillance/basic.htm#area> Last Modified: February 26, 2009

The majority of newly reported AIDS cases in the United States in 2007 were transmitted through male-to-male sexual contact and high-risk heterosexual contact (heterosexual contact with a person known to have, or to be at high risk for, HIV infection).

Cost

Estimating the economic impact of STDs is limited by a lack of data. The estimation process is challenged by the difficulty in reaching a starting point, i.e., the number of actual cases of STDs. Due to underreporting and lack of diagnosis, the number of cases and new cases is often undercounted, thereby limiting the ability to project costs on a population.

The costs attributable to STDs fit into three categories: (1) direct – the medical or nonmedical costs of treating STDs and the future costs of resulting complications; (2) indirect – lost wages and productivity; and (3) intangible costs for pain and suffering.

In 1996, the American Social Health Association organized a panel of national experts to estimate the incidence, prevalence and cost of STDs in the country. The panel found that the direct medical cost of treating 15.3 million new STD infections in the United States in 1996 was \$8.4 billion in 1997 dollars. The panel extrapolated this to a cost in New York state of \$629 million for 1.1 million new cases of STDs. This estimate does not include nonmedical indirect costs, out-of-pocket costs, the cost incurred by transmission to infants or the cost of STD prevention and screening.²⁷

The most current study of the economic burden of STDs upon teens and young adults was conducted by economists and researchers in the Division of STD Prevention of the CDC. Economist Harrell W. Chesson estimated the direct medical, lifetime costs of the 9 million new cases of STDs for 15- to 24-year-olds in 2000 to be \$6.5 billion.²⁸

The direct medical cost of new cases of STDs for 15- to 24-year-olds nationwide was estimated in 2000 to be:

STD	Average lifetime cost per case	New cases	Total direct medical costs
HIV	\$ 199,800	15,000	\$ 3,000,000,000
HPV	\$ 1,228 women 27 men	4,600,000	\$ 2,900,000,000
Genital Herpes	\$ 417 women 511 men	640,000	\$ 2,927,000
Chlamydia	\$ 244 women 20 men	1,500,000	\$ 248,400,000
Gonorrhea	\$ 266 women 53 men	431,000	\$ 77,000,000
Trichomoniasis	\$ 18	1,900,000	\$ 34,200,000
Syphilis	\$ 444	8,200	\$ 3,600,000
TOTAL	-----	9,100,000	\$ 6,500,000,000

To estimate the impact on upstate New York, it is possible to apply the estimated case cost from the Chesson study to the state's reported chlamydia rates for teens and young adults in 2006. This analysis estimates that the lifetime direct medical cost of new chlamydia cases among 15- to 24-year-olds by region in upstate New York would be nearly \$3.6 million in 1997 dollars.

Region	Chlamydia cases	Lifetime cost estimate
Central New York	4,047	\$ 743,308
Finger Lakes	5,017	\$ 920,852
Southern Tier	1,210	\$ 212,136
Utica	1,548	\$ 301,328
Western New York	7,176	\$ 1,410,688
Upstate New York	18,998	\$ 3,588,312

Source: Chesson HW, Blandford JM, Gift TL, Tao G, Irwin KL, "The estimated direct medical cost of STDs among American youth, 2000" and New York State Community Health Data Set – 2007

Prevention, detection and treatment of STDs

There are many effective ways to prevent, detect and treat STDs.

The most reliable ways to avoid STD infection is to abstain from sex or to be in a long-term, mutually monogamous relationship with an uninfected partner. Used consistently and correctly, latex condoms can significantly reduce the risk of STD transmission. HPV (human papillomavirus) and hepatitis A and B can be prevented through routine vaccinations.

Screening is one of the most effective tools to detect STDs and avoid their transmission. The CDC recommends annual chlamydia screening for sexually active women under the age of 26. It also recommends that girls and women between the ages of 11 and 26 be fully vaccinated against HPV. For sexually active men who have sex with men, the CDC recommends annual HIV and syphilis blood testing, chlamydia screening, and gonorrhea testing. The CDC advises more frequent testing for men who have sex with men who engage in high-risk behaviors, such as having nonsteady partners and/or injecting drugs.

Most STDs can be treated simply and effectively, especially if detected early. Specific treatments include:

- Chlamydia and gonorrhea – Both diseases are treated with oral antibiotics; however, gonorrhea is becoming more difficult to treat due to an increase in drug-resistant strains of the disease. Today, the CDC only recommends the use of a single class of antibiotics – cephalosporins – to treat gonorrhea.
- Syphilis – Penicillin given by injection is the preferred treatment for all stages of syphilis.
- HIV/AIDS – While there is no cure for HIV infection or AIDS, the virus can be managed with antiretroviral drug therapy. Without treatment, nearly all HIV-infected individuals will develop AIDS.

For more information on STD prevention and treatment guidelines, go to:

<http://www.cdc.gov/std/treatment/>

Source: Centers for Disease Control and Prevention, Sexually Transmitted Diseases in the United States, 2008, National Surveillance Data for Chlamydia, Gonorrhea, and Syphilis <http://www.cdc.gov/std/stats08/2008survFactSheet.PDF>

STD reporting in New York state

Reporting of suspected or confirmed cases of communicable diseases is required under the New York State Public Health Law and Sanitary Code (PHL 2102, NYCRR 2.10, 2.12). These requirements apply to health care providers and laboratories. Assistance with reporting cases of communicable disease is available in New York state by calling the New York State Department of Health Bureau of STD Control at (518) 474-3598 or in New York City by calling the New York City Department of Health and Mental Hygiene Bureau of STD Control at (212) 788-4443.

Notifiable STDs include syphilis, gonorrhea and chlamydia. The data presented in this report, which are useful for examining overall trends and trends among specific populations at risk, represent only a proportion of the true burden of STDs in the state. Many cases of notifiable STDs go undiagnosed, and some highly prevalent viral STDs, such as human papillomavirus and genital herpes, are not reported at all.

Source: New York State Department of Health, Bureau of STD Control

Endnotes

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