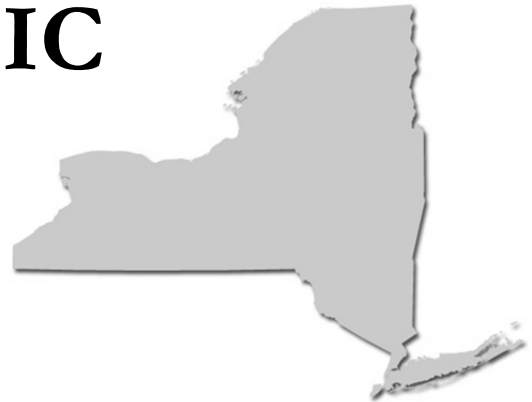

NEW YORK STATE
HIV/AIDS • STD • HCV
EPIDEMIOLOGIC
PROFILE
2012



NEW YORK STATE DEPARTMENT OF HEALTH, AIDS INSTITUTE
DIVISION OF EPIDEMIOLOGY, EVALUATION AND RESEARCH
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Abbreviations and Acronyms

AI	AIDS Institute
AIDS	Acquired Immune Deficiency Syndrome
AN	Alaskan Native
BHAE	Bureau of HIV/AIDS Epidemiology
Blood Prod	Blood Product
BSTDPE	Bureau of STD Prevention and Epidemiology
CDC	Centers for Disease Control and Prevention
CD4	Cluster of Differentiation 4 cell (T4 cell, a receptor for HIV in humans)
CSTE	Council of State and Territorial Epidemiologists
DEER	Division of Epidemiology, Evaluation and Research
DOCCS	Department of Corrections and Community Supervision
DOH	Department of Health
Dx	Diagnosed
eHARS	Enhanced HIV and AIDS Reporting System
FPHC	Female Presumed Heterosexual Contact
FTM	Female-to-Male
HCV	Hepatitis C Virus
Hetero	Heterosexual
HIV	Human Immunodeficiency Virus
HRSA	Health Resources and Service Administration
IDU	Injection Drug Use(r)
MSA	Metropolitan Statistical Area(s)
MSM	Men who have Sex with Men
MTF	Male-to-Female
Native Amer	Native American
NH	Native Hawaiian
NHANES	National Health and Nutrition Examination Survey
NHAS	National HIV/AIDS Strategy
NYC	New York City
NYCDOHMH	New York City Department of Health and Mental Hygiene
NYS	New York State
OPER	Office of Program Evaluation and Research
PCSI	Program Collaboration and Service Integration
PI	Pacific Islander
PPG	Prevention Planning Group
ROS	Rest of State (refers to the geographic area of NYS, excluding NYC)
STD	Sexually Transmitted Disease
US	United States

Section A. Introduction

The *New York State 2012 Epidemiologic Profile* is the first “Epi Profile” produced after a major realignment within the New York State Department of Health (NYSDOH). In 2010, the Bureau of HIV/AIDS Epidemiology (BHAЕ) and the Bureau of STD Control were moved from the Center for Community Health into the AIDS Institute (AI) to better address the “syndemics” of human immunodeficiency virus (HIV), sexually transmitted diseases (STDs), and hepatitis C virus (HCV). These infections tend to be interrelated in terms of risk factors, symptom/disease manifestations, and more frequent occurrence in socioeconomically disadvantaged subpopulations. Nationally, the need for a coordinated response to these conditions has been recognized through the Centers for Disease Control and Prevention’s (CDC’s) Program Collaboration and Service Integration (PCSI) initiative.

This realignment has been manifested organizationally through: 1) the combination of field staff performing partner services with field staff performing anonymous HIV counseling and testing into a new Bureau of HIV/STD Field Services, 2) creation of the Bureau of STD Prevention and Epidemiology (BSTDPE), and 3) creation of a new Division of Epidemiology, Evaluation and Research (DEER) consisting of BHAЕ, BSTDPE, and the Office of Evaluation and Research (OPER). The AI is evaluating all its functions in terms of the impact it can have not only on HIV, but also on STDs and viral hepatitis.

These organizational changes have mirrored the changes in approach to the epidemic. Under the leadership and funding structure of the CDC, the approach to HIV prevention has evolved towards a greater focus on treatment of those HIV-infected, as effective treatment results in dramatic decreases in the level of virus in blood and body fluids and, therefore, greatly decreases transmission. STDs have increasingly been recognized as both a behavioral marker of potential HIV risk as well as a biological predisposing factor to HIV acquisition; in other words, people with breaks in the skin or irritated mucous membranes from an STD are more likely to become infected with HIV if they are exposed to it than people with normal skin and mucous membranes. HIV surveillance data has become increasingly important as both HIV prevention and healthcare programs look for additional ways to measure success. The ongoing monitoring of CD4 lymphocytes and viral loads made possible by electronic laboratory reporting has provided new information on linkage to HIV care, retention in care, and population levels of viral load suppression. Nationally, the National HIV/AIDS Strategy (NHAS) has focused attention increasingly on markers including new HIV infections, new HIV diagnoses, entry into HIV care, retention in care, and suppression of HIV viral load.

Thus, the scope of the Epi Profile has been expanded. In addition to background information on the population of New York State (NYS) and standard HIV epidemiologic information on the gender, race/ethnicity, age, and risk of persons with new HIV diagnoses and persons living with HIV infection, a new section provides estimates of linkage to care for those newly diagnosed, and retention in care for all New Yorkers known to have HIV infection. A section on STDs highlights recent trends and demographic characteristics in the three most common reportable diseases, i.e., syphilis, gonorrhea, and Chlamydia. A brief section on HCV shows newly reported cases and available demographic

information. Finally, a section on HIV/AIDS among transgender persons is included by special request from the Prevention Planning Group (PPG). While surveillance data do not currently allow for a review of HIV/AIDS epidemiology among transgender persons in New York State, a review of the literature indicates that transgender persons are at particularly high risk for HIV/AIDS, STDs and Hepatitis C. The side-by-side presentation of data makes apparent the fact that surveillance is conducted differently for these conditions, and among various population subgroups. Data on STDs and HCV is less complete than that for HIV. Contributing factors include: the differing natural history of the infections, the diagnostic tests available to clinicians, historical precedent, screening recommendations, regulatory requirements and the funding available for surveillance of each. While these differences limit us, they also provide focus for future efforts and improvements in surveillance.

This document was primarily produced by DEER staff with information on HCV contributed by the Viral Hepatitis Section of the AI Division of HIV and Hepatitis Healthcare. The AI Division of HIV, STD, and Hepatitis Prevention assisted in planning the document and identifying broader themes of interest to the Prevention Planning Group (PPG).

Key Themes

The following key themes emerge from a review of the data in this Epidemiologic Profile:

New York State Demographics

1. The population in NYS has grown over the last thirty years. In 2010, the population was 19.4 million compared to 17.6 million in 1980. The two major metropolitan areas to experience relative growth between 2000 and 2012 were Glens Falls, located in upstate New York, and New York City (NYC).
2. New York's population is aging significantly. People born between the years of 1946 and 1964, also known as the "Baby Boomer" generation, have accounted for the greatest percentage of New Yorkers over the last three decades.
3. White (non-Hispanic) people accounted for 58% of the State's population in 2010; people identified as black followed at 14%, as did people that identified as Hispanic (14%). In NYC, people of color made up a larger percentage of the population, at 67%, than people identified as white (33%). This trend is reversed in the Rest of State (ROS), where the white population made up a larger percentage of the area's population (77%) than people of color (23%).
4. New Yorkers are relatively well educated, with only 15% of the population aged 25 and older in 2010 having less than a High School diploma.

HIV/AIDS

1. New HIV diagnoses are decreasing. From 2002 to 2010, new HIV diagnoses decreased 37%. New HIV diagnoses decreased in men and women and among blacks, Hispanic/Latinos, and whites, and all risk groups except men who have sex with men (MSM), who have had a stable number of new diagnoses. New diagnoses are decreasing in all age groups except young MSM, particularly young MSM of color.

2. Numbers of people living with HIV infection are increasing, with the highest numbers of persons known to be living with HIV infection now age 40-59 years.
3. Health disparities continue, with persons of color and especially women of color disproportionately affected by the HIV epidemic.

Laboratory Indicators of Engagement in HIV/AIDS Care

1. Evidence of entry into HIV care, defined as the percentage of newly diagnosed persons with lab tests indicating HIV care within three months of HIV diagnosis, was 78% overall, and was higher in ROS than the NYC; among females compared to males; in whites compared to other racial/ethnic groups; and higher with increasing age.
2. Unmet need, defined as the percentage of persons known to be living with HIV/AIDS with no evidence of HIV care, was similar across transmission risk groups, and in NYC and the ROS; higher in males compared to females; similar across racial/ethnic groups; increasingly elevated with increasing age; and highest among injecting drug users compared to other transmission risk groups.

Sexually Transmitted Diseases

1. Over the last decade, cases of early syphilis have increased three-fold in NYS with over 80 percent of cases reported among men.
2. Based on available information, 86% of early syphilis cases reported in 2010 were reported among MSM. Case rates for syphilis are much higher in NYC than the ROS.
3. Among persons with known race/ethnicity, the highest percentage of syphilis, gonorrhea and Chlamydia was reported among black non-Hispanic individuals, suggesting that this racial/ethnic group is disproportionately affected by STDs.
4. Adolescents and young adults aged 15-24 comprise the majority of Chlamydia and gonorrhea cases, thus signaling the importance of comprehensive STD prevention and counseling programs for this population.
5. Overall, females carry the highest burden of reportable STDs, accounting for 64% of all cases.

Hepatitis C

1. The HCV surveillance system identifies persons ever infected with HCV. It does not distinguish between those who have resolved their infection and those who are chronically infected and at risk for serious health problems from HCV.
2. Over time, the number of reported chronic/resolved HCV cases has remained stable and high. Since 2003, the number of newly reported cases in NYS has exceeded 15,000 annually.
3. Overall, more cases are reported among males than females; this pattern is consistent across age groups and regions.
4. The age distribution of newly reported chronic/resolved HCV cases has shifted. Although most newly reported cases remain in the 40-65 year age range, an increasing percentage of cases was seen among younger ages (<40 years) in 2009 compared to 2003.

Section B. Demographic Characteristics of New York State Residents

An analysis of United States (US) Census data adds contextual information to assist with interpreting the health statistics provided in this document. General demographic indicators are displayed in the following tables and figures, including population in the total state, NYC, and the ROS, and population by gender, age, race and ethnicity. Sociodemographic indicators are also provided at the State level including educational attainment, median household income, unemployment rate, and poverty rate.

Demographic Figures and Tables

Table B1: NYS Population Estimates by Region, Gender, Age, and Race/Ethnicity, 2010

- The NYS population was estimated to be 19.4 million in 2010. Compared to the 19 million people in 2000, the state population grew by 2.1% during this ten year period.
- At 8.2 million people, NYC made up 42% of the state's population. With 11.2 million people, those living in the ROS (all counties excluding NYC) made up 58% of the state's population in 2010.

2010 Population Estimates	New York State		New York City		Rest of State	
	Estimate	%	Estimate	%	Estimate	%
Total	19,378,102	100.0%	8,175,133	100.0%	11,202,969	100.0%
Gender						
Male	9,377,147	48.4%	3,882,544	47.5%	5,494,603	49.1%
Female	10,000,955	51.6%	4,292,589	52.5%	5,708,366	51.0%
Race/Ethnicity						
Not Hispanic or Latino	15,961,180	82.4%	5,797,356	70.9%	10,163,824	90.7%
<i>White</i>	11,304,247	58.3%	2,723,853	33.3%	8,580,394	76.6%
<i>Black/African American</i>	2,783,857	14.4%	1,874,089	22.9%	909,768	8.1%
<i>Asian</i>	1,406,194	7.3%	1,012,014	12.4%	394,180	3.5%
<i>Am Indian & Al Native</i>	53,908	0.3%	15,225	0.2%	38,683	0.4%
<i>Native Hawaiian & Pl</i>	5,320	0.0%	1,767	0.0%	3,553	0.0%
<i>Other Race</i> ¹	81,620	0.4%	68,714	0.8%	12,906	0.1%
<i>Two or More Races</i> ²	326,034	1.7%	101,694	1.2%	224,340	2.0%
Hispanic or Latino	3,416,922	14.4%	2,281,115	27.9%	1,135,807	10.1%
Age						
14 and Under	3,531,233	18.2%	1,459,037	17.9%	2,072,196	18.5%
15 to 24	2,777,213	14.3%	1,178,418	14.4%	1,598,795	14.3%
25 to 49	6,728,117	34.7%	3,112,824	38.1%	3,615,293	32.3%
50 to 64	3,723,596	19.2%	1,431,696	17.5%	2,291,900	20.5%
65 and Over	2,617,943	13.5%	993,158	12.2%	1,624,785	14.5%

¹The "Other Race" category was created by the US Census Bureau for survey respondents who were unable to identify with the five Office of Management and Budget race categories (White, Black/African American, Native American and Alaska Native, Asian, and Native Hawaiian and Other Pacific Islander). ²According to the US Census Bureau, individuals who chose more than one of the six racial categories (including "Other Race") are referred to as the Two or More Races population. Source: US Census Bureau, 2010 Census, Summary File 2, Table DP-1, 2010 American Community Survey, Tables DP02 and B16005 (1-year estimates). <http://factfinder2.census.gov>

Figure B1: NYS Population, 1960-2010

- The population in NYS has grown from approximately 17 million persons in 1960 to over 19 million in 2010.

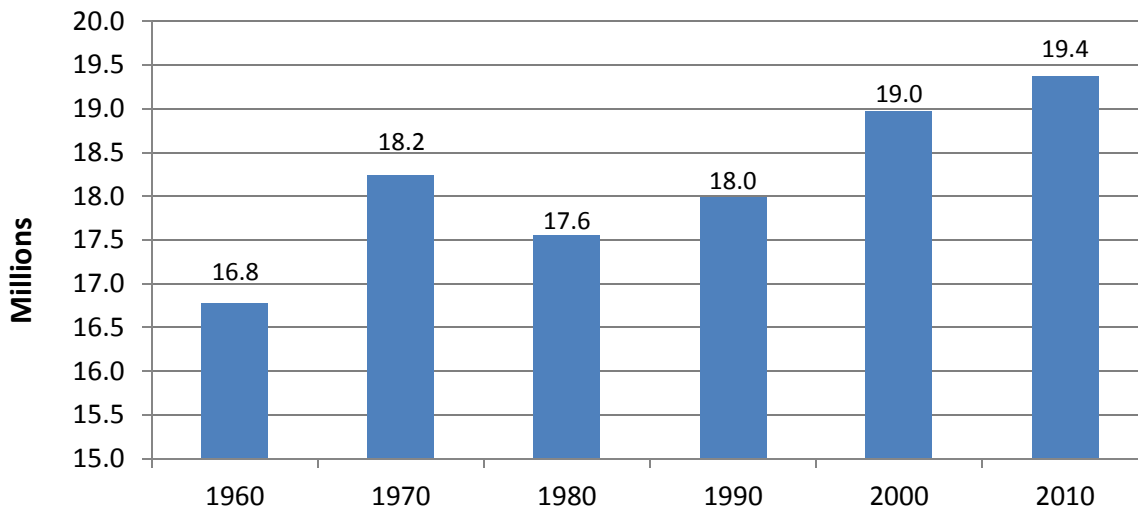


Figure B2: Relative Population Growth and Decline in NYS Metro Areas, 2000-2010

- An analysis of major metropolitan statistical areas (MSAs) shows that only Glens Falls and NYC experienced population growth between 2000 and 2010, at the rates of 3.7% growth and 2.1% growth, respectively.
- All other MSAs experienced population declines, as follows:
 - Syracuse (-9.5%)
 - Rochester (-4.0%)
 - Jamestown (-3.5%)
 - Buffalo-Niagara (-3.0%)
 - Elmira (-2.5%)
 - Albany-Schenectady-Troy (-0.6%)
 - Binghamton (-0.2%)
 - Utica-Rome (-0.2%)

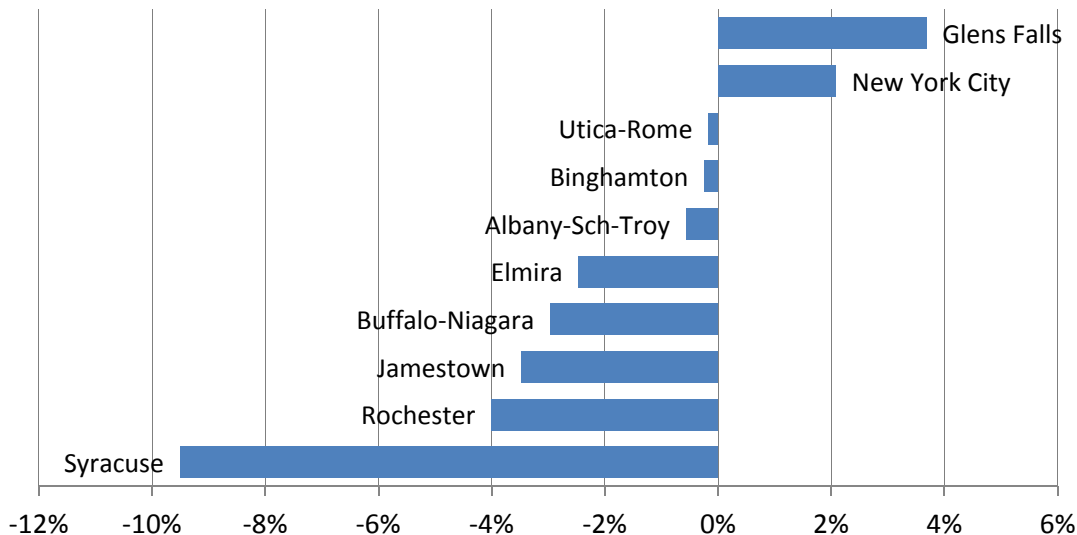


Figure B3: NYS Population by Gender, 2010

- Males made up just under half of the NYS population at 48%, while women made up the majority of the population at 52%.
- Percentages by gender were similar for both NYC and the ROS.

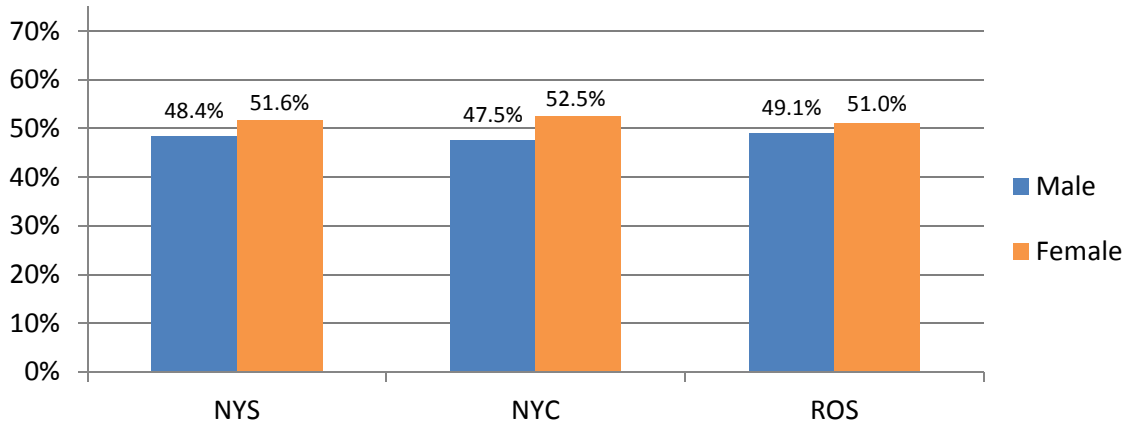
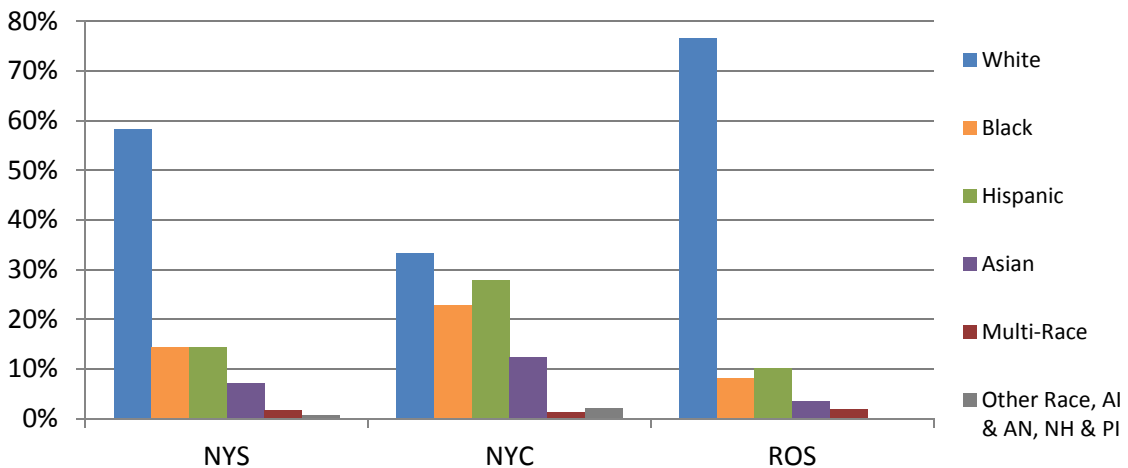


Figure B4: NYS Population by Race/Ethnicity, 2010

- Observing the population by race and ethnicity, people that were identified as white (non-Hispanic) made up 58% of the population. Those identified as black made up 14%, as did those that identified as Hispanic (14%).
- Another 14% of the state's population was comprised of people identified as Asian (7%), those who identified as two or more races (2%), other race (0.4%), American Indian and Alaska Native (0.3%), and Native Hawaiian and Pacific Islanders (0.03%).
- In NYC, people of color made up a larger percentage of the population, at 67%, than people identified as white (33%). This trend reversed in the ROS, where the white population made up a larger percentage of the population (77%) than people of color (23%).

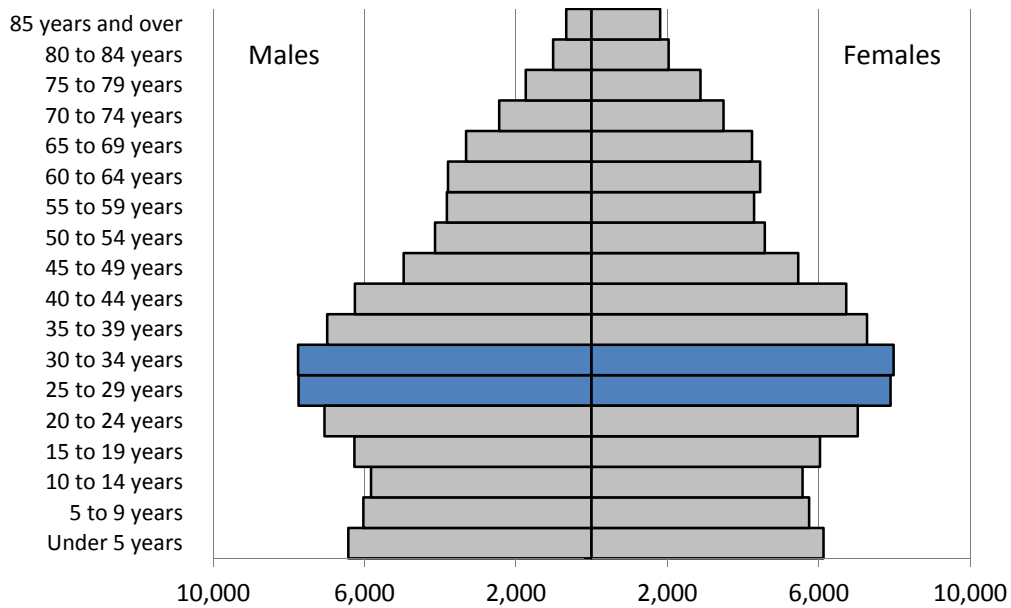


AI=American Indian, AN=Alaskan Native, NH=Native Hawaiian, PI=Pacific Islander

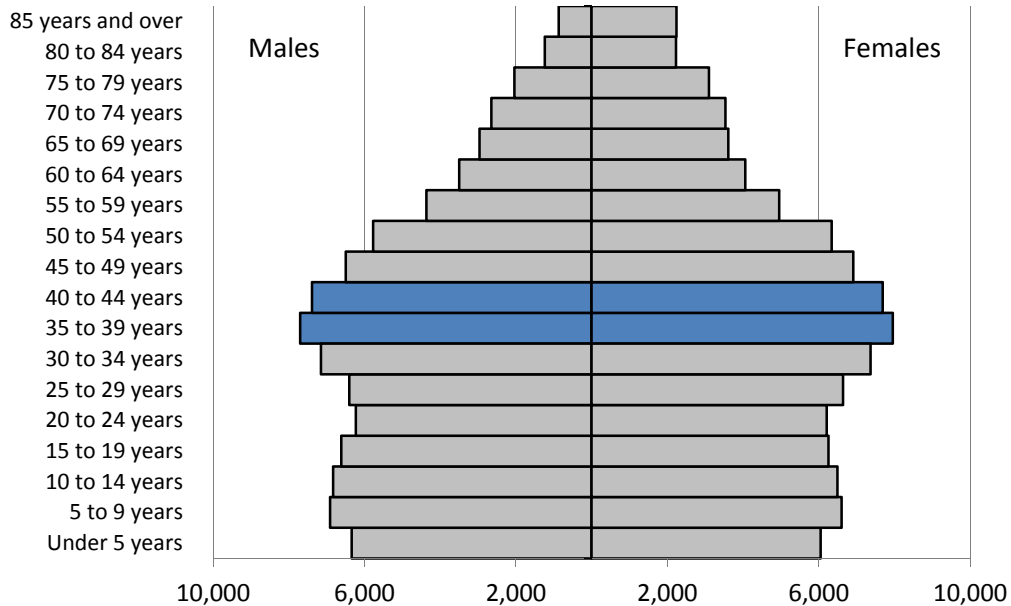
Figure B5: NYS Population Pyramids, Gender and Age, 1990, 2000, 2010

- The aging of the population in NYS is observed in the three charts that follow.
- In 1990, the largest percentage of the population was those aged 25 to 34; in 2000 it was people aged 35 to 44; in 2010 it was people aged 45 to 54.

NYS Population 1990



NYS Population 2000



NYS Population 2010

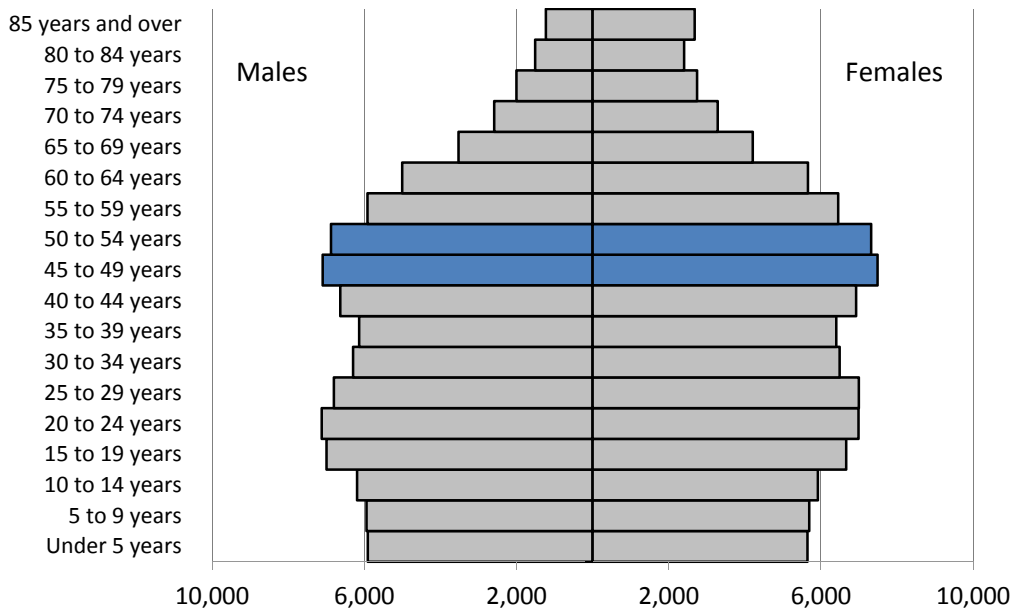


Table B2: NYS Population Estimates by Nativity and Language Spoken at Home, 2010

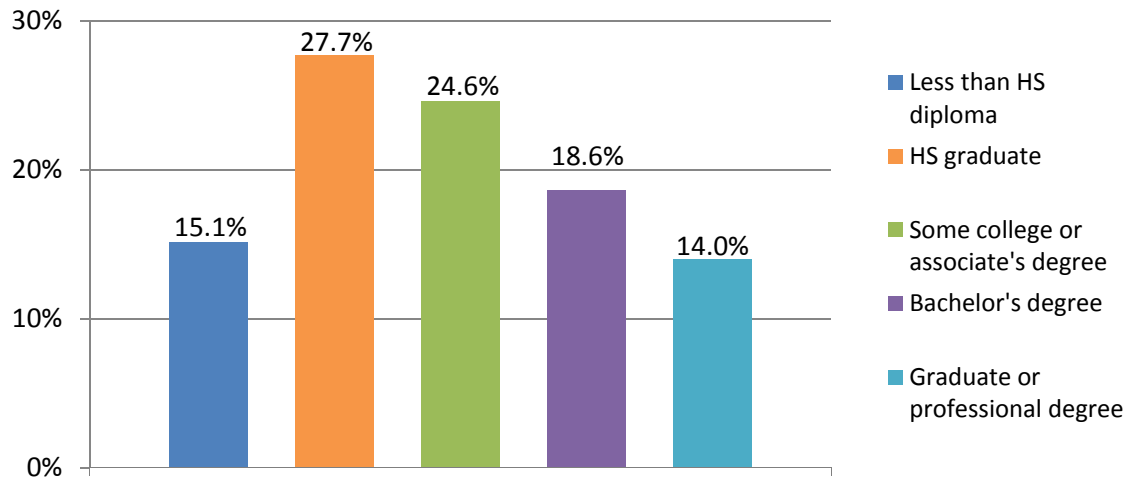
- Foreign-born people accounted for 22% of the NYS population in 2010, at 4.3 million people. In NYC, the foreign-born made up 37% of the city's population; in the ROS, they made up 11% of the population.
- Languages spoken at home highlight the diversity of the NYS population as well, with English spoken in 70% of homes, and other languages spoken in 30% of homes in 2010.

2010 Population Estimates	New York State		New York City		Rest of State	
	Estimate	%	Estimate	%	Estimate	%
Total	19,378,102	100.0%	8,175,133	100.0%	11,202,969	100.0%
Place of Birth						
Native Born	15,094,671	77.8%	5,142,584	62.8%	9,952,087	88.8%
Foreign Born ¹	4,297,612	22.2%	3,042,315	37.2%	1,255,297	11.2%
Language Spoken at Home (for the Population 5 Years and Older)						
Native Born:	13,969,187	100.0%	4,640,930	100.0%	9,328,257	100.0%
English Only	11,753,700	84.1%	3,182,115	68.6%	8,571,585	91.9%
Spanish	1,361,803	9.8%	948,804	20.4%	412,999	4.4%
Other Indo-European	584,555	4.2%	316,465	6.8%	268,090	2.9%
Asian/PI Languages	176,775	1.3%	132,080	2.9%	44,695	0.5%
Other Languages	92,354	0.7%	61,466	1.3%	30,888	0.3%
Foreign-Born Population:	4,272,277	100.0%	3,027,110	100.0%	1,245,167	100.0%
English Only	1,023,366	24.0%	715,707	23.6%	307,659	24.7%
Spanish	1,333,220	31.2%	955,516	31.6%	377,704	30.3%
Other Indo-European	1,038,230	24.3%	694,107	22.9%	344,123	27.6%
Asian/PI Languages	698,751	16.4%	535,727	17.7%	163,024	13.1%
Other Languages	178,710	4.2%	126,053	4.2%	52,657	4.2%

¹The number of the foreign-born population does not include undocumented immigrant population residing in NYS.

Figure B6: Educational Attainment among NYS Population, 2010

- State-level data indicate that only 15% of New Yorkers age 25 and over have less than a High School diploma; 28% are High School graduates; and 57% are at least college-educated.
- Median household income for New Yorkers is just over \$54,000 per year. NYS has a poverty rate of approximately 12% (of all families), and an unemployment rate of 6% (data not displayed).



Section C. HIV/AIDS Epidemiology in New York State

HIV/AIDS Introduction

New York State leads the nation in the number of living HIV/AIDS cases, with approximately 130,000 people currently living with HIV/AIDS. Approximately 18% of the nation's cumulative AIDS diagnoses have occurred in NYS, and New York ranks second to only Washington DC in terms of its AIDS diagnosis rate. Newly diagnosed HIV cases have fallen steadily over the past 10 years. Despite this promising trend, NYS still accounts for approximately 10% of the nation's newly diagnosed HIV cases. Of particular note, MSM and persons of color remain disproportionately impacted by HIV/AIDS. Disparities among young MSM of color and women of color are particularly notable. Much work remains to ensure that the HIV/AIDS epidemic continues to diminish and disparities are fully addressed.

HIV/AIDS Data Definitions

The HIV/AIDS surveillance data presented in this report are generated by the NYSDOH BHA. Cases are included which were diagnosed through December 31, 2010, and the data are current as of March, 2012. Additional information about HIV/AIDS surveillance data collection, data processing, and reporting procedures is available by visiting the NYSDOH website:

<http://www.health.ny.gov/diseases/aids/statistics/annual/index.htm>.

- **Living AIDS Cases**

All reported individuals living with AIDS at the end of the reporting period.

- **Living HIV Cases**

All reported individuals living with HIV infection who have not developed AIDS at the end of the reporting period.

- **Newly Diagnosed AIDS Cases**

Cases reported with AIDS for the first time. Includes AIDS cases that have never been reported before and cases initially reported as HIV infection that have subsequently developed AIDS.

- **Newly Diagnosed HIV Cases**

HIV cases that have been reported for the first time through laboratory reporting of a positive Western blot antibody test, a positive HIV detection test (culture, P24 antigen), a detectable nucleic acid test or by a physician reporting of an initial HIV diagnosis, regardless of concurrent or subsequent AIDS diagnosis. Although DOH staff seeks to obtain an accurate diagnosis date, please note that HIV reporting began in June 2000 and that infected persons may move into NYS

from another areas; therefore, cases reported by a provider other than the provider who made the original HIV diagnosis may be misclassified as newly diagnosed.

- **Late HIV Diagnoses**

Late diagnoses are defined as HIV diagnoses followed by an AIDS diagnosis within 12 months. In other reports, late diagnoses are further subdivided into "concurrent" (AIDS diagnosis within one month of HIV diagnosis) or "other late" (AIDS diagnosis within 12 months). These subdivisions are not used in this report.

- **New HIV Diagnoses (Not AIDS)**

All new HIV diagnoses that are not late diagnoses – including newly diagnosed HIV cases without a subsequent AIDS diagnosis or with an AIDS diagnosis more than 12 months after HIV diagnosis.

- **HIV Transmission Risk Category**

Information on possible mode(s) of HIV exposure or transmission risk is typically given to health care providers during routine medical history taking; most often, NYSDOH obtains the information from review of the patient's medical records. An individual can be exposed to HIV through more than one route. However, per CDC guidance for surveillance, only one exposure mechanism is considered. (The category of "men who have sex with men and inject drugs" is the only exception to this.)

Persons identified with more than one potential exposure route are classified in accordance with the following CDC-defined hierarchy of exposure category (ordered by probability of transmission as recognized early in the epidemic). Based on this hierarchy, for example, a woman who may have been exposed to HIV through both injection drug use and through heterosexual contact with an HIV-infected partner would be classified only as an injection drug user, since that mode of exposure precedes heterosexual contact on the hierarchy.

Adults:

- Men who have sex with men and inject drugs
- Men who have sex with men (includes bisexual men)
- Injection drug users
- Hemophiliacs or persons with other clotting disorders
- Heterosexual contact with an injection drug user, a bisexual man, a hemophiliac, an HIV-positive blood product recipient, or a person with documented HIV or AIDS
- Transfusion or transplant recipient
- Confirmed other risk
- Female presumed heterosexual contact
- Adult with undetermined mode of exposure

Children:

- Hemophiliacs or children with other clotting disorders
 - Mother is an injecting drug user
 - Mother had sex with an injection drug user, a bisexual man, a hemophiliac, an HIV-positive blood transfusion recipient, a person with documented HIV or AIDS
 - Mother received a transfusion or blood products
 - Mother had AIDS or is HIV-positive
 - Transfusion or transplant recipient
 - Pediatric other risk
 - Child with undetermined mode of exposure
-
- **Female Presumed Heterosexual Contact**

This Epidemiologic Profile incorporates a new transmission risk category known as “Female Presumed Heterosexual Contact” (FPHC). For a case to be classified as FPHC the HIV Surveillance record for the case must show all of the following:

- (a) sex at birth is female,
- (b) case does not meet requirements for any other transmission risk group,
- (c) no indication of injection drug use, and
- (d) heterosexual contact not specifically denied.

The FPHC definition is consistent with the recommendation by a work group convened by the CDC in 2008 to study the addition of a female presumed heterosexual transmission category to CDC’s existing transmission risk hierarchy. The CDC accepted the group’s recommendation and announced plans to implement it in 2012. Starting in 2011, the NYSDOH AI epidemiological data products have featured the FPHC category. The new risk categorization has been applied to all cases in the surveillance registry, regardless of date of diagnosis or initial report.

The introduction of the FPHC category has had a substantial impact on the transmission risk profile of HIV in NYS. Of the 39,000 females living with diagnosed HIV infection as of December 2010, about 15,000 (38%) are classified as FPHC. Before the introduction of the FPHC category all of these would have been classified as having unknown risk.

Individuals with an undetermined mode of exposure may fall into one of several categories: persons for whom public health representatives have not completed data collection, persons for whom no mode of exposure was identified because the individual died or was lost to follow-up, persons with lack of exposure information in the medical chart, and persons for whom adequate follow-up information revealed no identifiable exposure mechanism.

- **Diagnosis Date**

The earliest date on which a clinical or laboratory diagnosis of HIV and AIDS is documented on a provider report form, laboratory report or in the patient's medical chart. This date may be months, or even years, earlier than the date the case was reported to the health department.

- **Case Rates**

Crude (unadjusted) rates are based on the number of cases per 100,000 population using the US Census Bureau's 2010 Decennial Census SF1 files.

- **Residence**

In this report, following CDC standards, new HIV and AIDS diagnoses are assigned to the county of residence at the time of diagnosis, as reported in the surveillance record. Similarly, living AIDS cases are assigned to the county of AIDS diagnosis. Living HIV cases that were diagnosed with AIDS after the close of the report period are assigned to the county of HIV diagnosis. For example, a case diagnosed with HIV in Albany County in 2006 and diagnosed with AIDS in Monroe County in 2008, would be included among living HIV cases in Albany County in the annual report for December 2007. Reports based on data from 2008 and following would include the person among living AIDS cases in Monroe County but would exclude the person from Albany County case counts.

Because of the population migration between areas of the State, between boroughs of the City, and between NYS and neighboring states, the residence categorization may not represent current residence.

- **Incarcerated Individuals**

Cases categorized as "Incarcerated Individuals" have been diagnosed and/or reported while persons were incarcerated in one of the NYS Department of Corrections and Community Supervision (DOCCS) facilities throughout NYS. Prison cases are often presented separately from the general population data because residence at diagnosis may reflect the address of the correctional facility, rather than the pre-incarceration address.

In this report, tabulations for the whole state and for NYC include incarcerated individuals. In less populated geographic areas, incarcerated individuals may be a significant percentage of living cases, and information is most useful to local communities if incarcerated individuals are categorized separately from other community residents. Incarcerated individuals are included in the tables and figures except where otherwise noted.

HIV/AIDS Figures

The following tables and figures provide a broad picture of the HIV/AIDS epidemic in NYS, with a focus on two communities that were identified by New York State's HIV PPG, namely MSM, especially young MSM of color and women of color. Data are provided that summarize the distribution of HIV/AIDS cases in NYS as of December, 2010, as well as the distribution and selected trends among HIV cases newly diagnosed in 2010. Most results are shown by gender and age group, race/ethnicity, transmission risk category, and region. Description and interpretation of major findings are provided in bulleted text above each figure.

Laboratory Indicators of Engagement in HIV/AIDS Care Figures

Beginning with Figure C28 of this section, laboratory indicators of engagement in care are presented. The NYSDOH HIV/AIDS surveillance system routinely receives reports of HIV-related laboratory tests performed within NYS or for persons who are NYS residents. These tests are used primarily for disease surveillance, that is, to detect cases of HIV infection. However, the tests can also be used as indirect measures for contact with the medical care system to indicate how promptly people enter care after their initial HIV diagnosis and whether they subsequently remain in care after diagnosis.

Entry into care is one of the key indicators of the National HIV/AIDS Strategy (NHAS). The national target level for 2015 is that 85% of newly diagnosed persons will have entered HIV care within three months of diagnosis. In 2008, 78% of newly diagnosed HIV cases in NYS had a CD4, viral load or genotype drug resistance test within three months of their diagnosis.

A measure of access to care is "unmet need", which is used by the Health Resources and Service Administration (HRSA) to allocate Ryan White funds. Unmet need is defined as the percentage of people living with diagnosed HIV infection who show no evidence of care – i.e., no reported HIV-related laboratory tests – over the course of a year. In NYS, 34% of people living with a diagnosis of HIV infection in December 2009 had no HIV-related laboratory tests during 2010, suggesting that state-wide about one third received no HIV care in that year.

Additional Information

To ask questions or provide comments about any of the information in this report, please call the Bureau of HIV/AIDS Epidemiology, AIDS Institute, New York State Department of Health, at 518-474-4284 or submit an inquiry at BHAE@health.state.ny.us.

Figure C1: Trends in HIV and AIDS Cases, NYS, 1984-2010

- Figure C1 provides an overall picture of the trends in HIV and AIDS cases in NYS from 1984 to 2010.
- The trend lines in blue and orange show how diagnosis of AIDS and deaths among people with AIDS grew steadily throughout the mid-1980s and early 1990s until around 1994.
- The number of deaths subsequently fell dramatically with the introduction of highly active antiretroviral therapy. As people started living longer, the number of people living with HIV and AIDS grew and continues to grow, as depicted by the green and purple bars below.

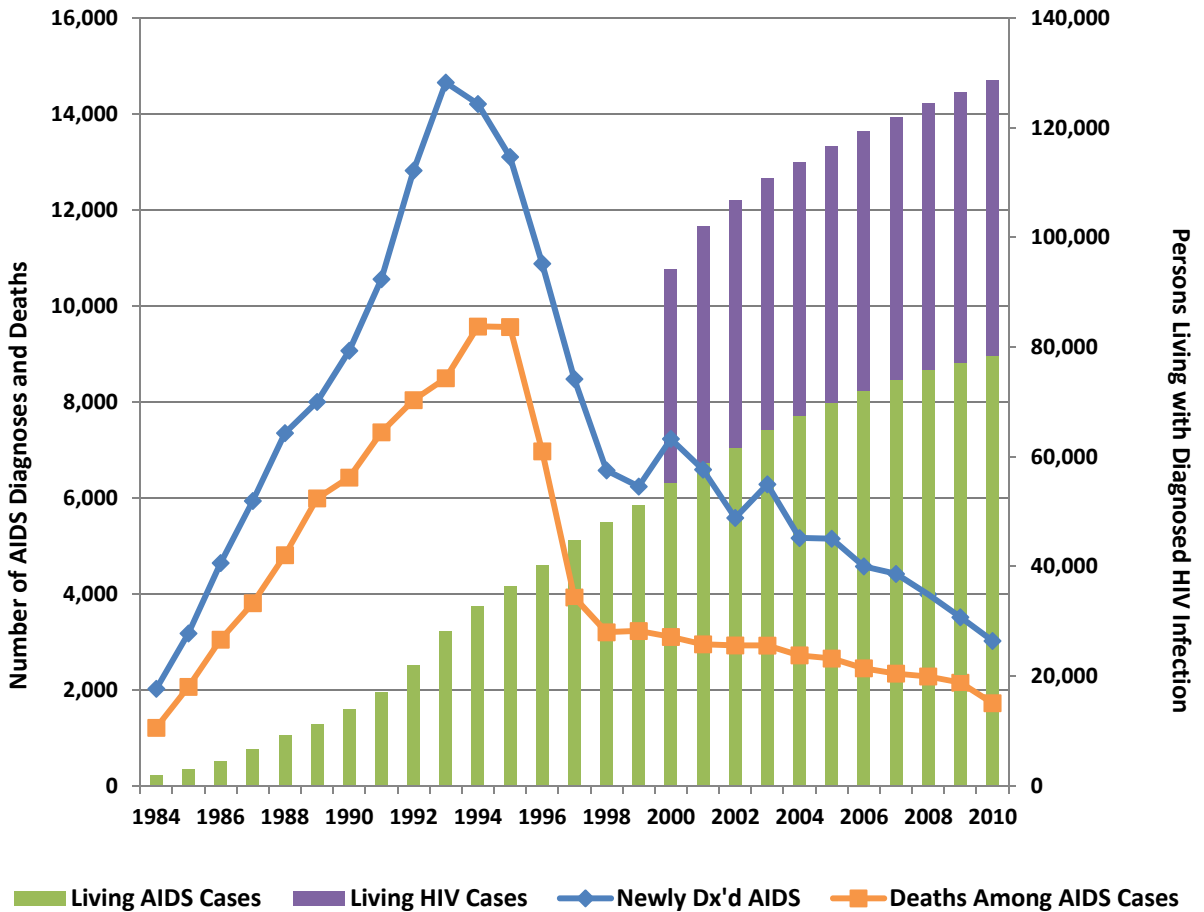


Figure C2: Newly Diagnosed HIV Cases, NYS, 2002-2010

- Figure C2 shows the trend in newly diagnosed HIV cases from 2002 to 2010.
- Newly diagnosed HIV cases have fallen steadily over this time period, with over 6,000 cases in 2002, which declined to under 4,000 cases in 2010.
- This represented a 37% drop in newly diagnosed HIV cases over this 9-year period.

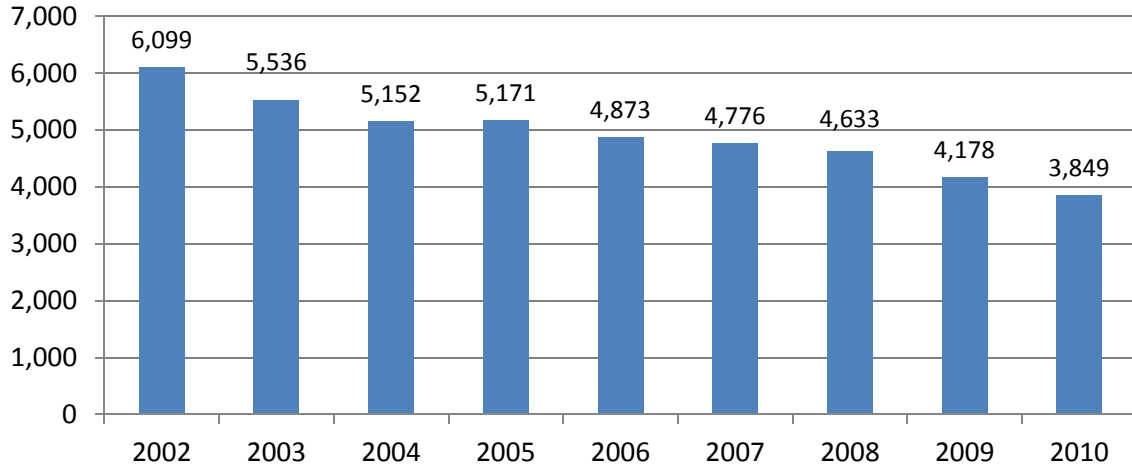


Figure C3: Newly Diagnosed HIV Cases among White, Black, and Hispanic Persons, NYS, 2002-2010

- Figure C3 shows the number of newly diagnosed HIV cases among white, black, and Hispanic persons from 2002 to 2010.
- This figure demonstrates that the successes observed in Figure C2 have also been observed among the three most populous racial/ethnic groups in NYS.
- In fact, the sharpest decline was observed among black persons, with a 42% decrease, followed by Hispanic (35%) and white (26%) persons.
- The number of newly diagnosed HIV cases among Asian/Pacific Islanders, Native Americans, and Multi-race were too small to provide meaningful trends, and therefore are not shown.

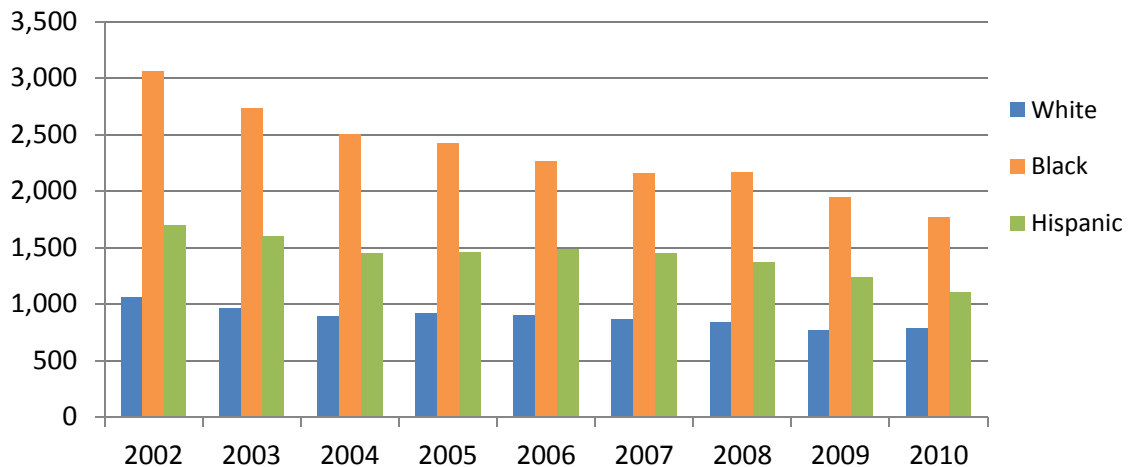


Figure C4: Number and Rate of Perinatal HIV Infected Infants, by Year of Delivery, NYS, 1997-2010

- Figure C4 displays the number and rate of HIV-infected infants born in NYS by year of delivery, from 1997 to 2010.
- The number and rate of HIV-infected infants has declined dramatically, falling from about 100 HIV-infected infants in 1997 and a rate of 11.5% to only three HIV-infected infants and a rate of 0.7% in 2010.
- These findings represent one of the most significant achievements in the history of the NYSDOH.

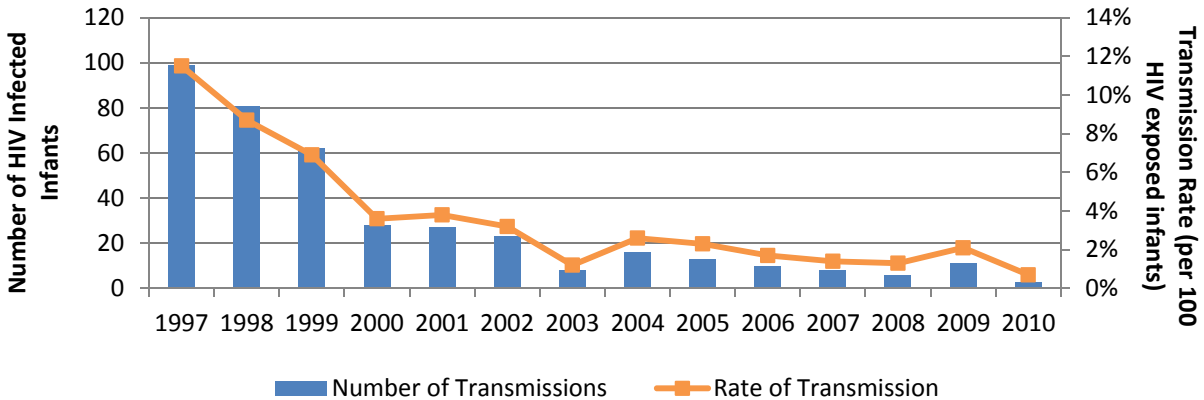


Figure C5: HIV Prevalence among White, Black, and Hispanic Childbearing Women by Year of Delivery, NYS, 1988-2010

- Figure C5 shows the HIV prevalence among white, black, and Hispanic childbearing women in NYS, by year of delivery, from 1988 to 2010.
- Similar to previously described epidemiologic trends, black and Hispanic childbearing women experienced higher prevalence of HIV than white childbearing women throughout this time period.
- However, HIV prevalence declined among all three racial/ethnic groups until about 2008, when levels remained at about 0.9% for black childbearing women, and 0.2% for Hispanic childbearing women.
- HIV prevalence decreased by approximately 50% and 80% among black and Hispanic childbearing women, respectively. The decline among white childbearing women was very small.

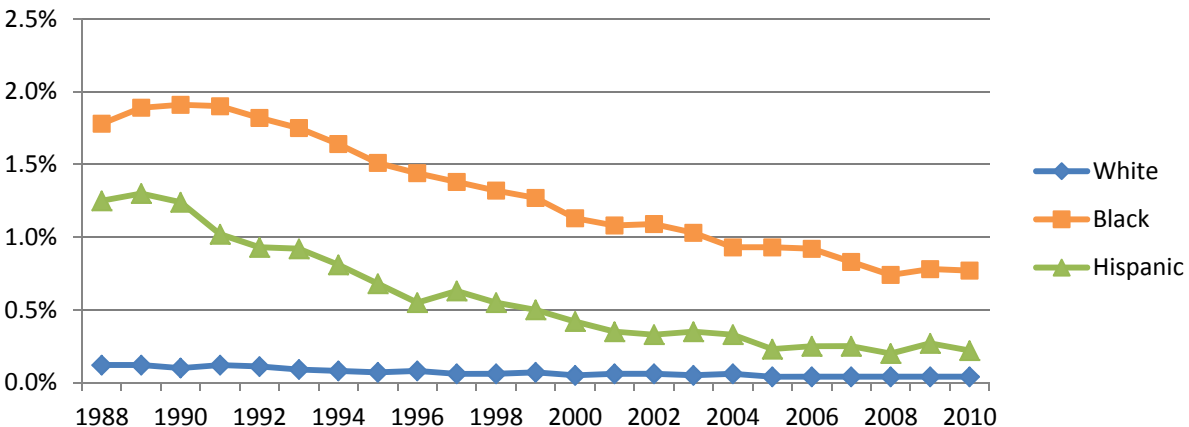


Figure C6: Newly Diagnosed HIV Cases among Injecting Drug Users, and Injecting Drug Use as a Percentage of Annual Cases, NYS, 2002-2010

- Figure C6 displays newly diagnosed HIV cases among injecting drug users and injecting drug users as a percentage of annual cases from 2002 to 2010.
- The substantial decline in newly diagnosed HIV cases among injecting drug users represents another significant achievement in the history of the AIDS epidemic.
- The number of newly diagnosed HIV cases attributable to injecting drug use declined by 78% from 2002 to 2010.
- Injecting drug users accounted for 12% of newly diagnosed HIV cases in 2002, but comprised just 4% of cases in 2010.

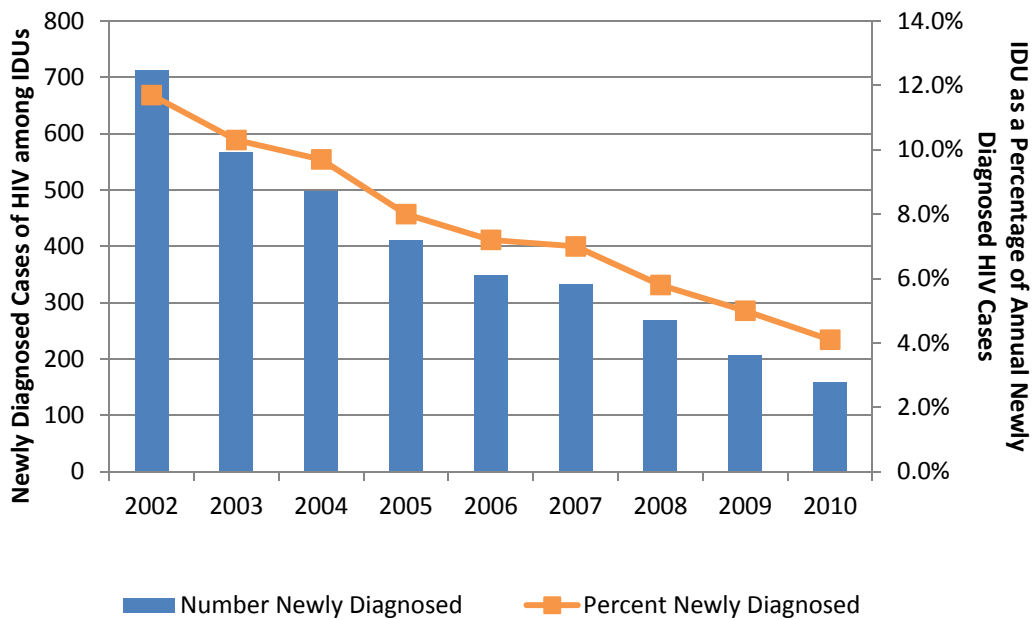


Figure C7: Living HIV/AIDS Cases, by Gender and Race/Ethnicity, NYS, 2010

- Figure C7 shows the percentage of males and females living with HIV/AIDS by race/ethnicity as of year-end 2010.
- The epidemic has impacted males more dramatically than females, and has disproportionately impacted black and Hispanic males and females compared to persons of other races/ethnicities.
- The vast majority of living HIV/AIDS cases, both male and female, are black and Hispanic persons, with 70% of cases among black and Hispanic males and 86% of cases among black and Hispanic females.

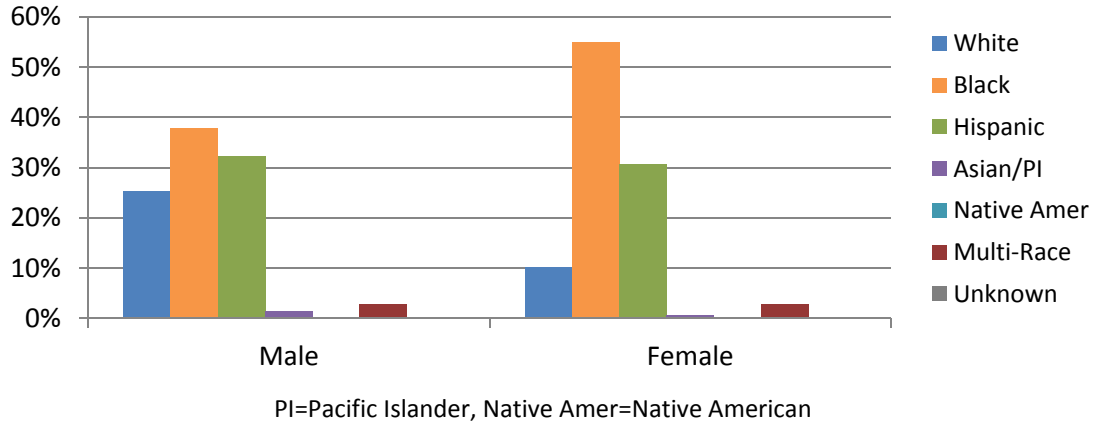


Figure C8: Living HIV/AIDS Cases, by Gender and Age Group, NYS, 2010

- Figure C8 shows the percentage of males and females living with HIV/AIDS by age group as of year-end 2010.
- Among both males and females, the number of HIV/AIDS cases increases with increasing age up to ages 40-49, where the largest number of cases are observed. Those aged 40-59 represent 64% of cases among both males and females.
- Among persons aged 30-39 and 60 and over, a total of 28% and 27% of living HIV/AIDS cases are seen among males and females, respectively.
- The median age for persons living with HIV/AIDS as of 2010 was 48 years (data not shown).
- These statistics reflect the aging of the HIV/AIDS epidemic and are strongly influenced by the widespread use of antiretroviral therapy, which has resulted in people with HIV/AIDS living much longer than would otherwise be possible.

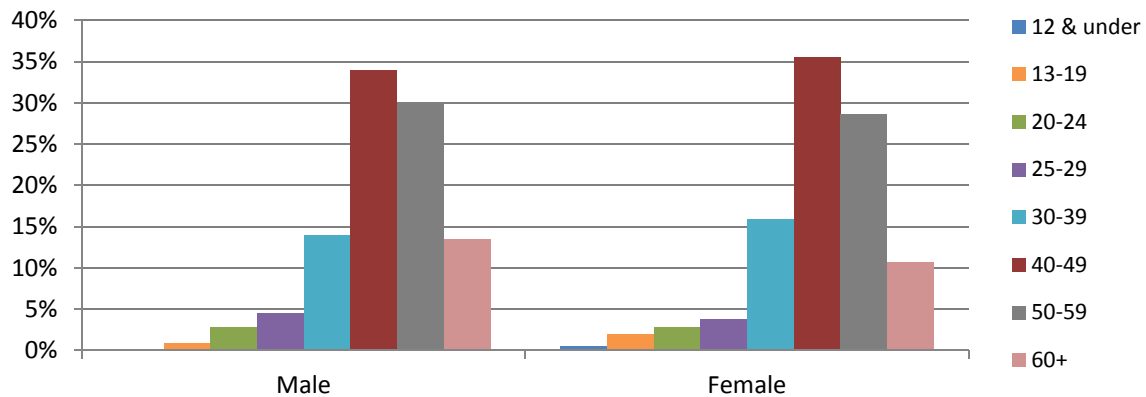
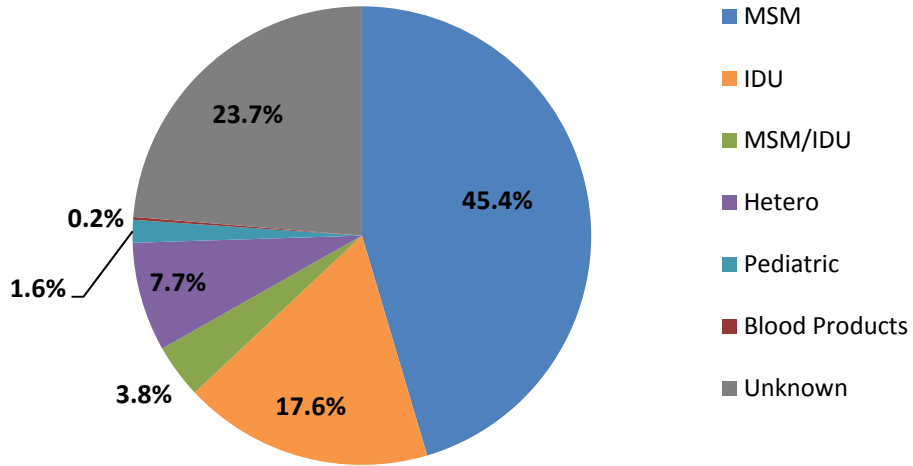


Figure C9a: Living Male HIV/AIDS Cases, by Transmission Risk Category, NYS, 2010

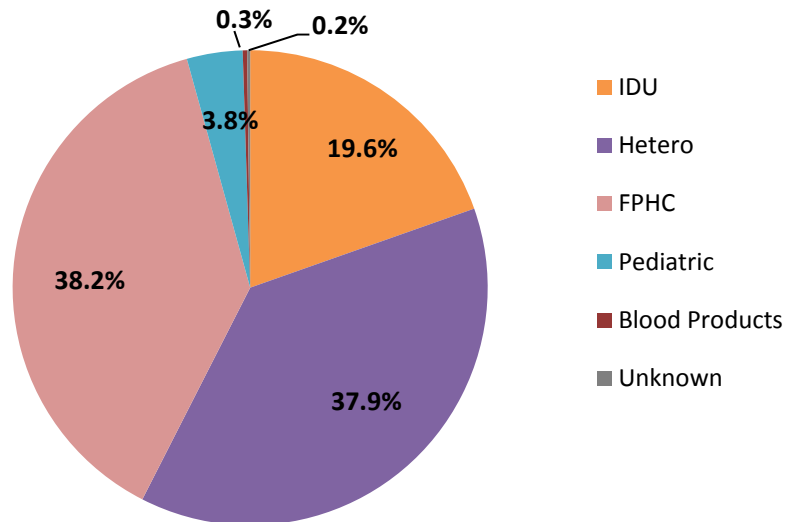
- Figure C9a displays the percentages of males living with HIV/AIDS by transmission risk category as of year-end 2010.
- MSM was the most common transmission risk category among men (45% of cases), followed by unknown risk and heterosexual contact at 24% and 8% of cases, respectively.



MSM=Men who have Sex with Men, IDU=Injection Drug User, Hetero=Heterosexual

Figure C9b: Living Female HIV/AIDS Cases, by Transmission Risk Category, NYS, 2010

- Among females, the combined categories of heterosexual contact and FPHC comprise 76% of living HIV/AIDS cases, with an additional 20% attributed to IDU.



IDU=Injection Drug User, Hetero=Heterosexual, FPHC=Female Presumed Heterosexual Contact

Figure C10: Living HIV/AIDS Cases, Excluding Incarcerated Individuals, by Gender and Ryan White Region, NYS Exclusive of NYC, 2010

- Figure C10 shows the number of persons living with HIV/AIDS by gender among the Ryan White Regions outside of NYC as of year-end 2010.
- The regions adjacent to NYC, Lower Hudson and Nassau/Suffolk, are most heavily affected.
- More cases were observed among males than females in all regions, with approximately twice as many male than female cases occurring in each region.

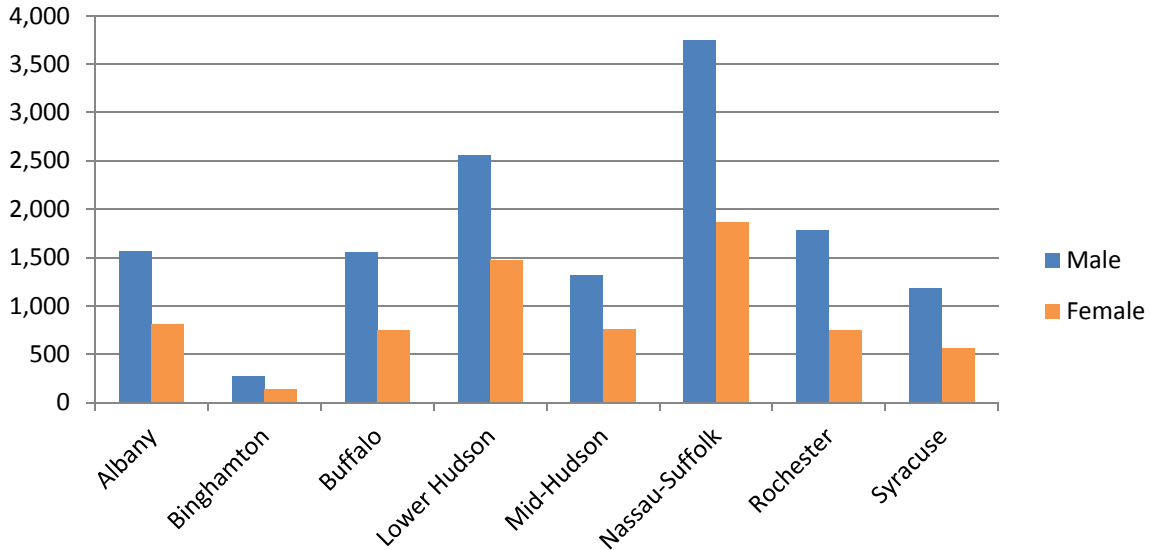


Figure C11: Living HIV/AIDS Cases, by Gender, NYC Boroughs, 2010

- Figure C11 displays the number of persons living with HIV/AIDS by gender in each NYC borough as of year-end 2010.
- Similar to Figure C10, the number of cases among males was higher in each borough; however, the difference according to gender was most pronounced in Manhattan, which reflects the impact of the HIV/AIDS epidemic among MSM in this region.

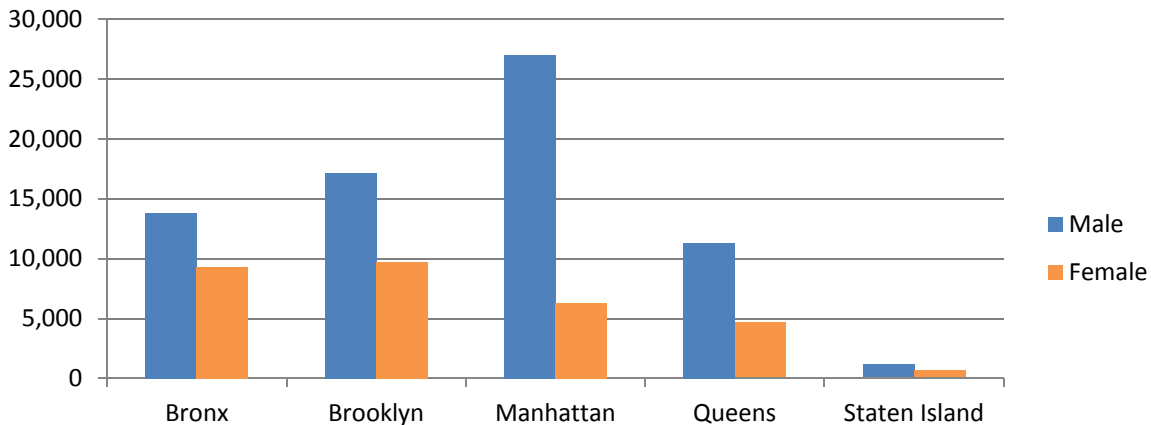
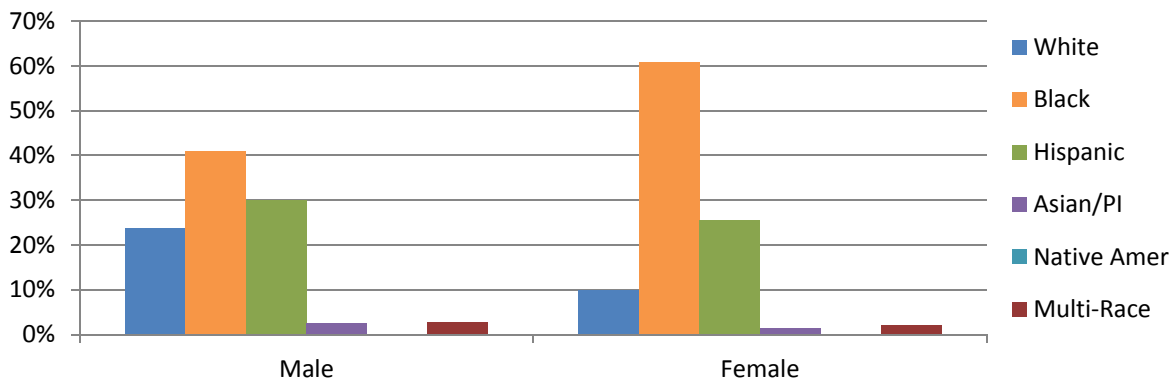


Figure C12: Newly Diagnosed HIV Cases, by Gender and Race/Ethnicity, NYS, 2010

- Figure C12 shows the racial/ethnic distribution of newly diagnosed HIV cases among males and females in 2010.
- The majority of newly diagnosed HIV cases among males and females were observed among blacks and Hispanics, as is true for living HIV/AIDS cases (see Figure C2).
- Black and Hispanic persons accounted for 71% of cases among males, but comprised nearly 86% cases among females. In contrast, whites represented 24% of cases among males, while accounting for just 10% of cases among females.
- A comparison with female living HIV/AIDS cases suggests that black women are becoming disproportionately affected by the epidemic as compared to Hispanic women.



PI = Pacific Islander, Native Amer = Native American

Figure C13: Newly Diagnosed HIV Cases, by Gender and Age Group, NYS, 2010

- Figure C13 shows the age distribution of newly diagnosed HIV cases among males and females in 2010.
- In contrast to living HIV/AIDS cases, the distribution of newly diagnosed HIV cases includes a higher percentage of persons in the 20-24 and 25-29 year age groups, together accounting for 34% of cases among males and 22% of cases among females.
- However, similar to living HIV/AIDS cases, the largest percentage of newly diagnosed HIV cases are found among persons 30-39 and 40-49 years of age, comprising 45% and 49% of cases among males and females, respectively.
- The median age for people newly diagnosed with HIV in 2010 is 36 years (data not shown).

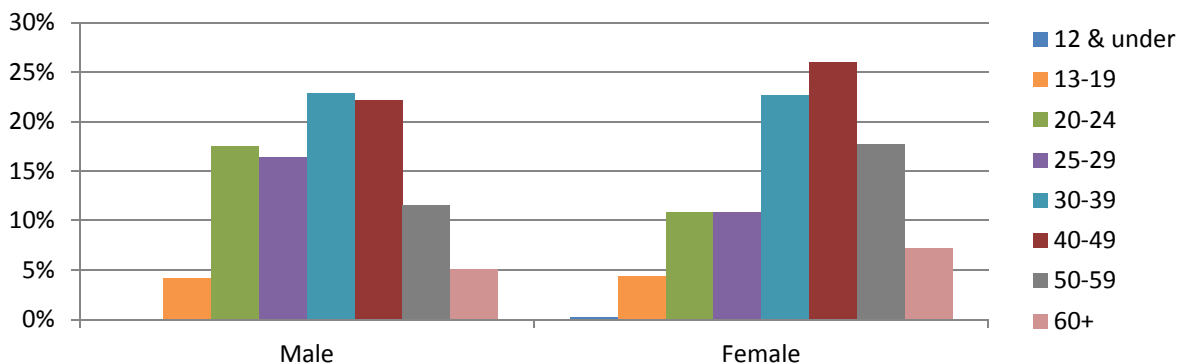
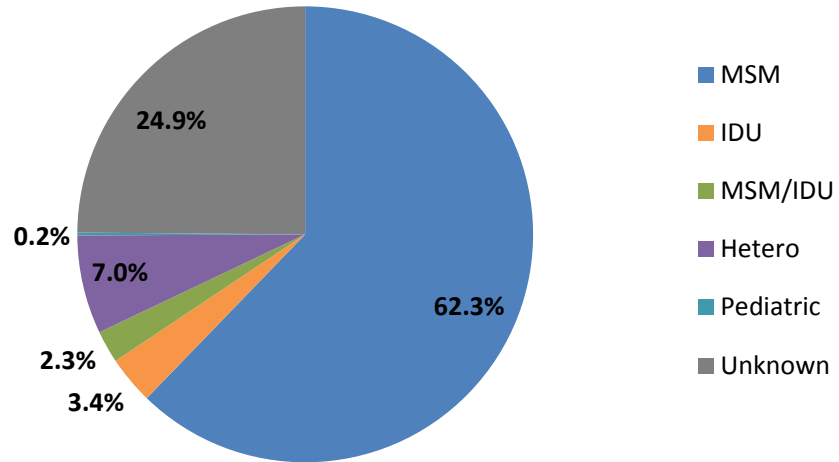


Figure C14a: Newly Diagnosed Male HIV Cases, by Transmission Risk Category, NYS, 2010

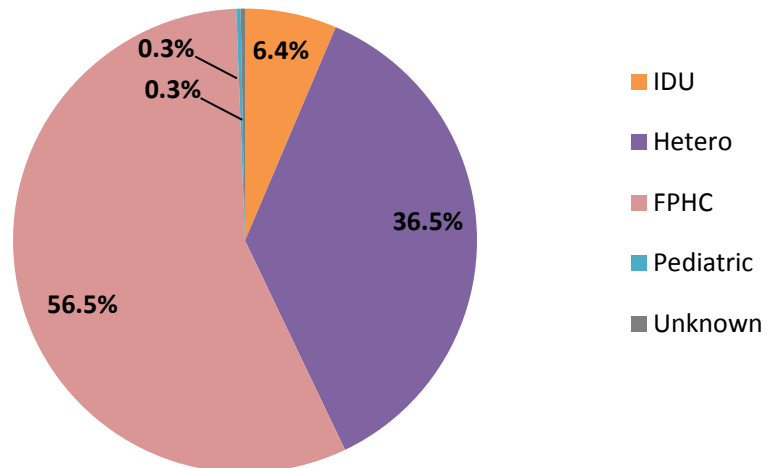
- Figure C14a displays the percentage of newly diagnosed HIV cases by transmission risk among males in 2010.
- Among males, 62% of cases had MSM as the transmission risk, with just 7% of cases attributed to heterosexual transmission and 25% of cases with unknown transmission risk.



MSM=Men who have Sex with Men, IDU=Injection Drug User, Hetero=Heterosexual

Figure C14b: Newly Diagnosed Female HIV Cases, by Transmission Risk Category, NYS, 2010

- Among females (Figure C14b), the combination of heterosexual contact and FPHC risk categories accounted for 93% of cases, with an additional 6% of cases attributed to injecting drug use.



IDU=Injection Drug User, Hetero=Heterosexual, FPHC=Female Presumed Heterosexual Contact

Figure C15: Total Newly Diagnosed HIV Cases, Excluding Incarcerated Individuals, by Ryan White Region, 2002-2010

- Figure C15 shows the cumulative number of newly diagnosed HIV cases (excluding incarcerated individuals) in the Ryan White Regions from 2002 to 2010.
- The largest number of cases was observed in Nassau-Suffolk (2,120), followed by the Lower Hudson (1,428), Buffalo (1,066), Rochester (997), Albany (921), Syracuse (728), Mid Hudson (701), and Binghamton (156) regions.

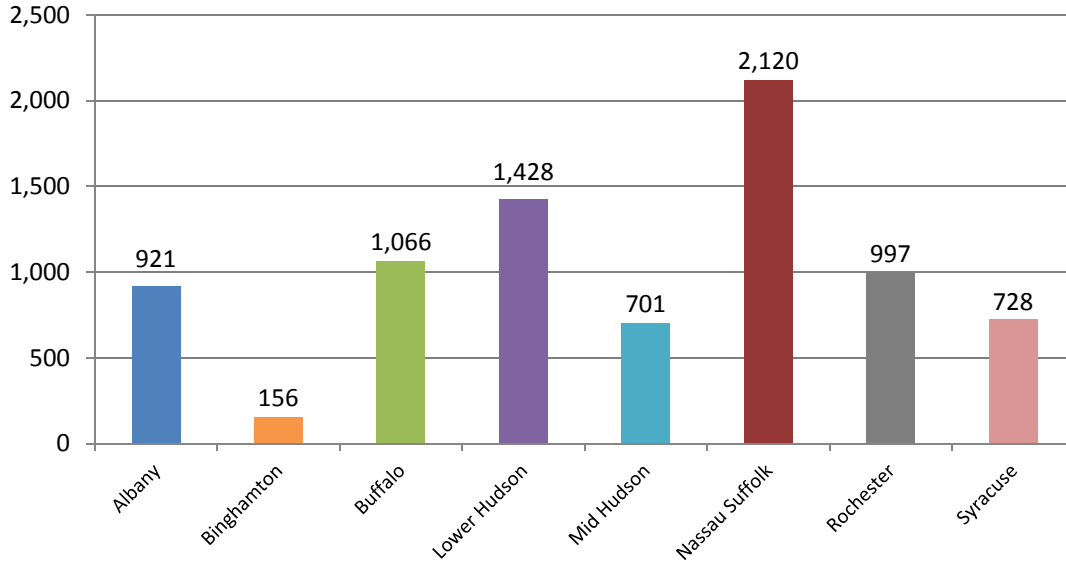


Figure C16: Total Newly Diagnosed HIV Cases, by NYC Borough, 2002-2010

- Figure C16 shows the cumulative number of newly diagnosed HIV cases in the five boroughs of NYC from 2002 to 2010.
- Manhattan (10,515) and Brooklyn (10,081) represented the boroughs with the highest number of newly diagnosed HIV cases, followed by the Bronx (8,316), Queens (5,872), and Staten Island (665).

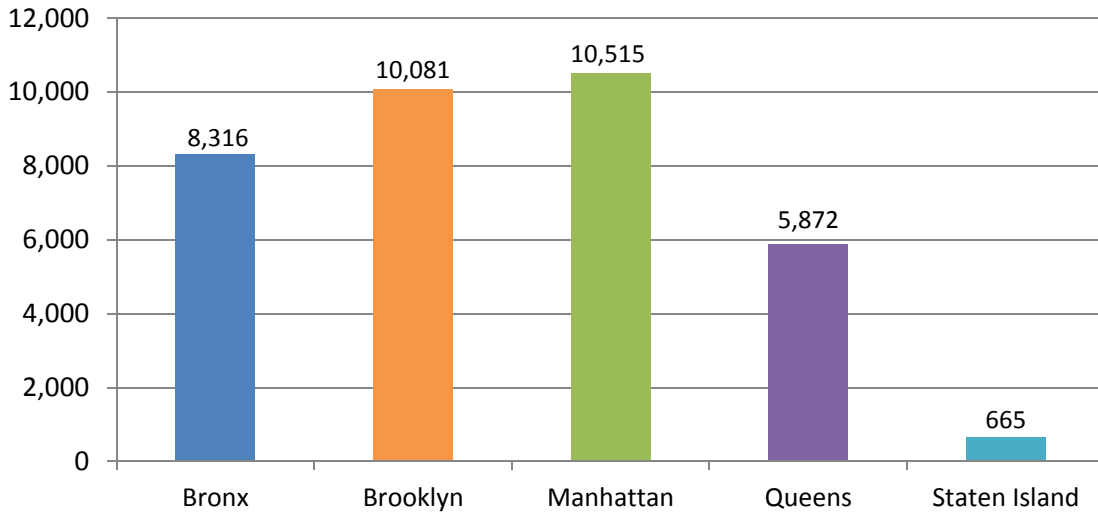


Figure C17: Newly Diagnosed HIV Cases, Excluding Incarcerated Individuals, by Ryan White Region, Exclusive of NYC, 2010

- Figure C17 displays the number of newly diagnosed HIV cases within each gender by Ryan White Region, exclusive of NYC, in 2010.
- The number of newly diagnosed HIV cases among males is higher than the number among females in all regions.

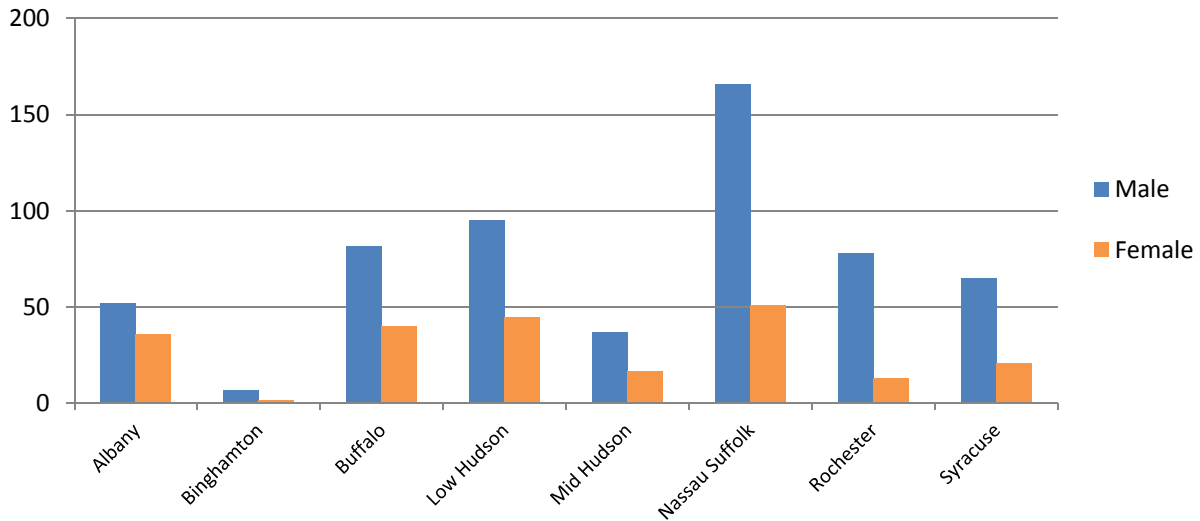


Figure C18: Newly Diagnosed HIV Cases, NYC Boroughs, 2010

- Figure C18 shows the number of newly diagnosed HIV cases by gender in the boroughs of NYC.
- Similar to Figure C17, males account for higher numbers of cases in all boroughs of NYC.
- The male-to-female ratio is highest in Manhattan, where cases with MSM transmission risk account for over half of all new diagnoses.

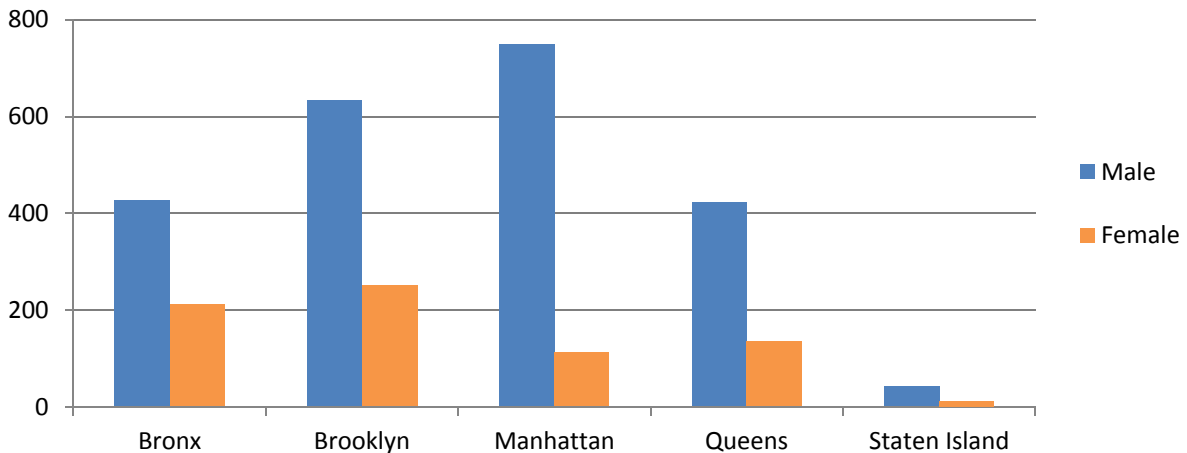


Figure C19: Annual Newly Diagnosed HIV Cases, NYC versus ROS, Compared to 2002

- Figures C19-25 show percentage trends in annual newly diagnosed HIV cases, using 2002 as a baseline reference point (100%).
- Each year the number of newly diagnosed HIV cases are divided by the number observed in 2002. The percentage obtained is shown on the graph and provides a picture of the increase or decrease from year to year.
- Figure C19 illustrates that newly diagnosed HIV cases declined in both regions, although the decrease was more pronounced in NYC compared to the ROS.

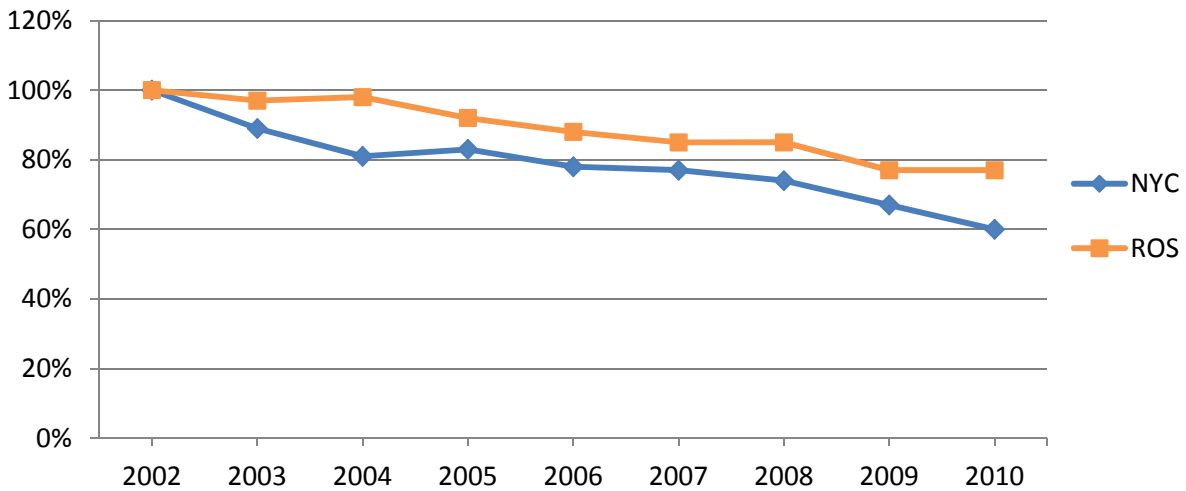


Figure C20: Annual Newly Diagnosed HIV Cases, by Gender, NYS, Compared to 2002

- Figure C20 shows the percentage trend in annual newly diagnosed HIV cases among males and females, using 2002 as the baseline year.
- Newly diagnosed HIV cases among females decreased by 53 percentage points compared to a 29 percentage point decrease among males.

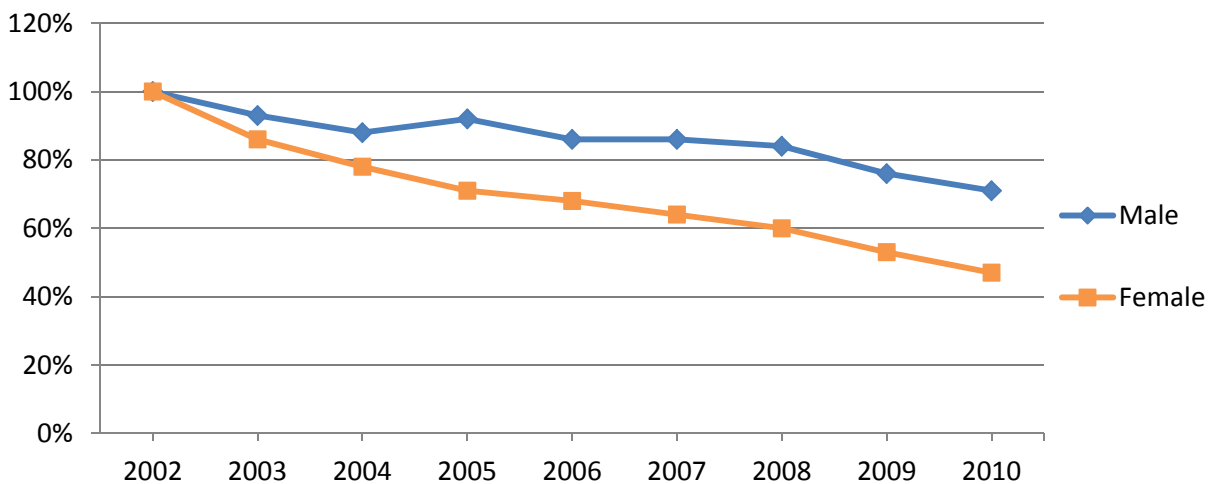


Figure C21: Annual Newly Diagnosed HIV Cases among White, Black, and Hispanic Persons, NYS, Compared to 2002

- Figure C21 illustrates that the percentage decrease in annual newly diagnosed HIV cases was relatively similar among white, black, and Hispanic persons.

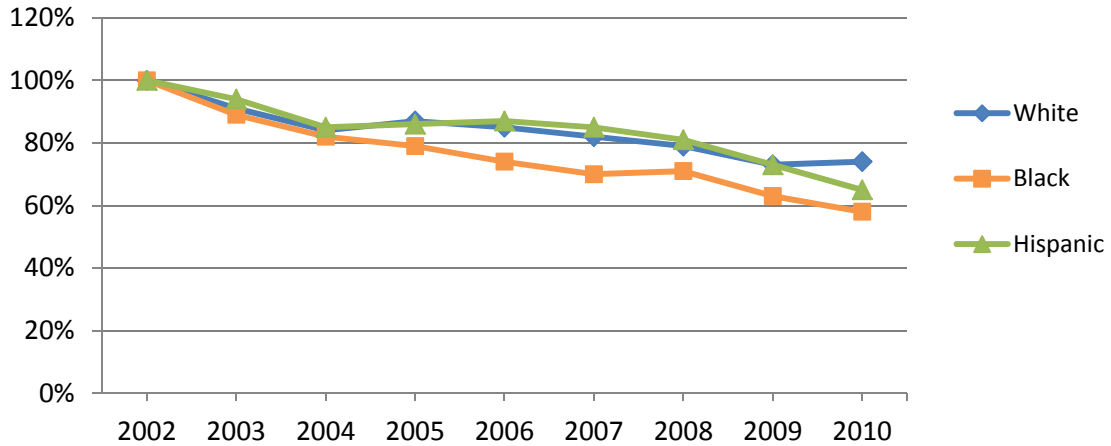


Figure C22: Annual Newly Diagnosed HIV Cases, by Gender and Age Group, NYS, Compared to 2002

- Figure C22 provides additional information about this trend by looking at cases by gender and age group with 2002 as a baseline.
- Increases in annual newly diagnosed HIV cases were observed among males aged 13-24, while cases decreased among females aged 13-24 and 25 and older and among males aged 25 and older.

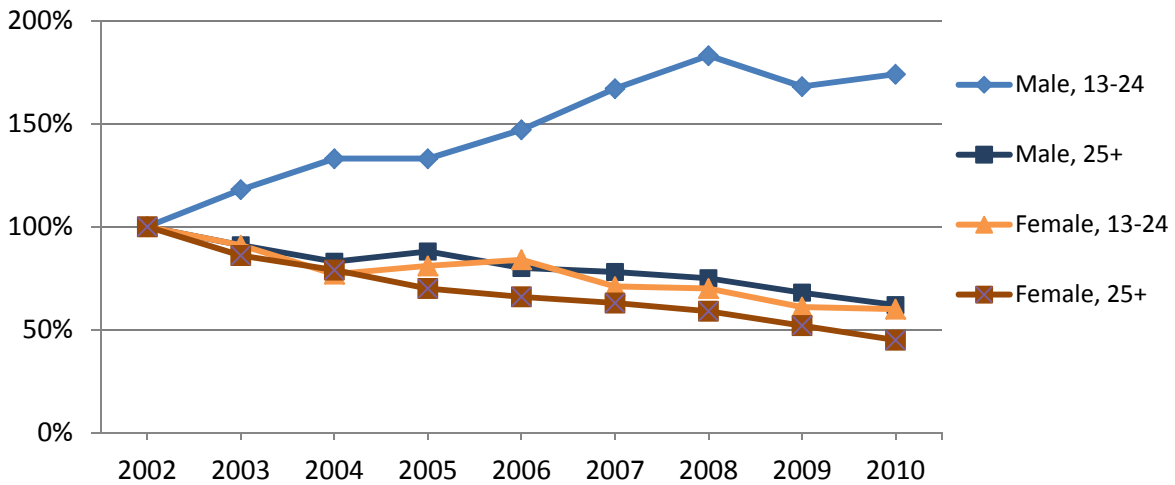


Figure C23a: Annual Newly Diagnosed Male HIV Cases, by Transmission Risk Category, NYS, Compared to 2002

- Figure C23a shows the percentage decrease in newly diagnosed HIV cases by transmission risk category among males using 2002 as a baseline.
- Among males, the number of HIV cases diagnosed with MSM transmission risk has remained about the same over time, while decreases are seen among all other transmission risk groups (pediatric not shown).

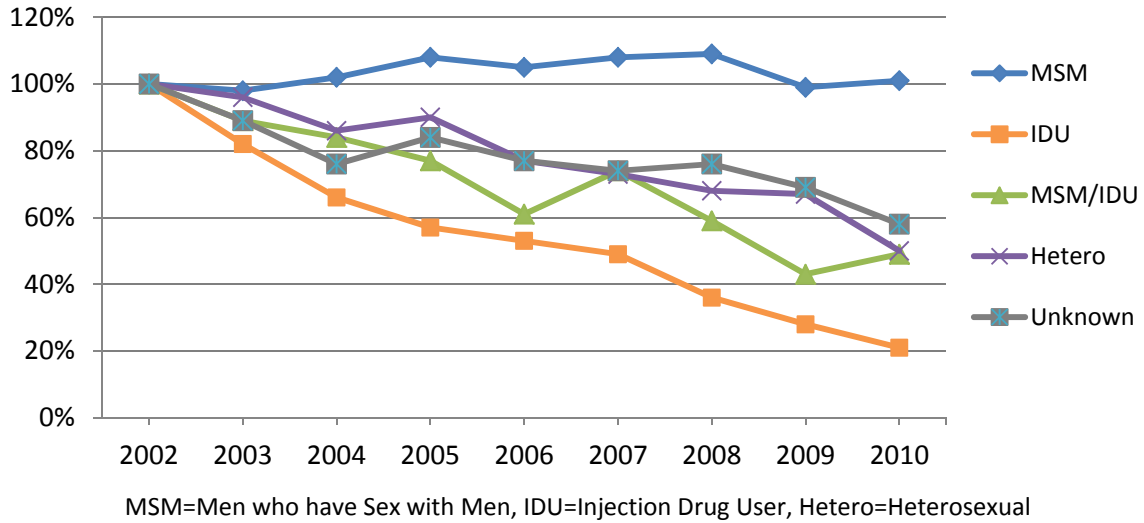


Figure C23b: Annual Newly Diagnosed Female HIV Cases, by Transmission Risk Category, NYS, Compared to 2002

- Among females (Figure C23b), decreases were observed for all transmission risk groups, with the largest declines being observed among cases attributed to perinatal transmission (not shown) and IDUs.

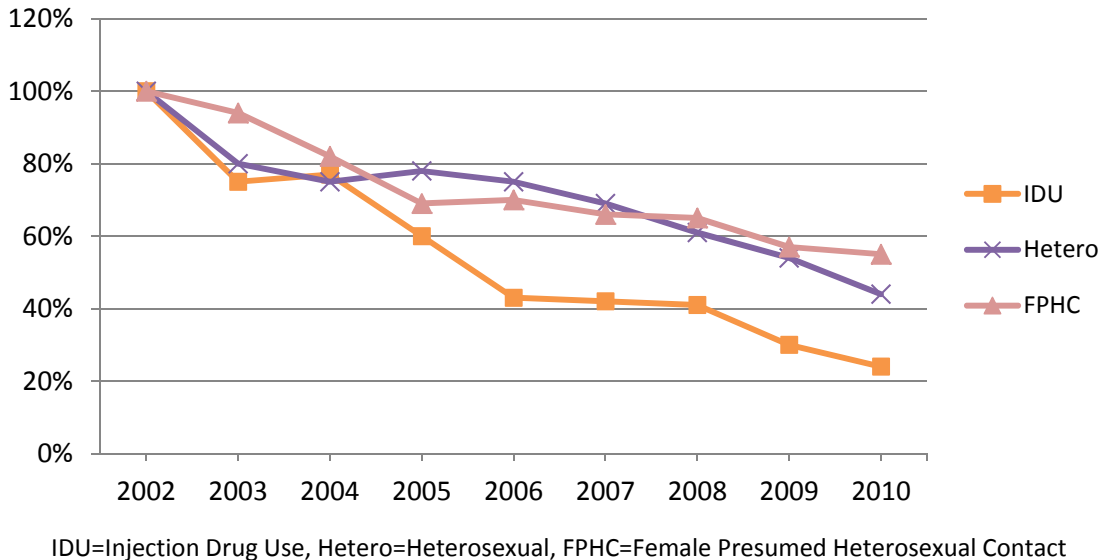


Figure C24a: Annual Newly Diagnosed HIV Cases among White, Black, and Hispanic MSM Ages 13-24, NYS, Compared to 2002

- Figure C24a displays trends in newly diagnosed HIV cases among white, black, and Hispanic persons with MSM risk only among those ages 13-24.
- Annual newly diagnosed HIV cases increased among MSM ages 13-24; young, black MSM increased at the highest rate, followed by Hispanic and white MSM.

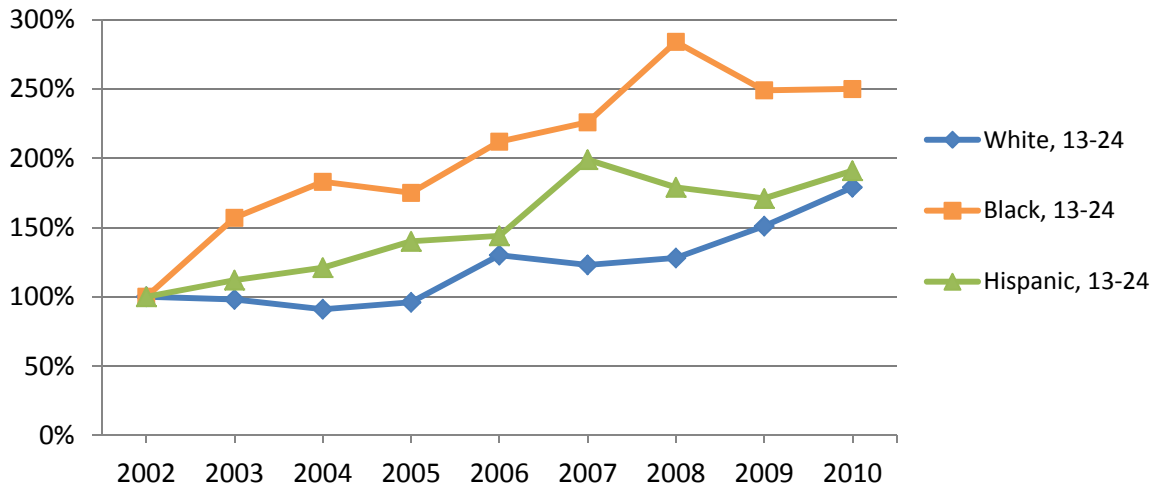


Figure C24b: Annual Newly Diagnosed HIV Cases among White, Black, and Hispanic MSM Ages 25 and Over, NYS, Compared to 2002

- In contrast, newly diagnosed HIV cases among Hispanic MSM aged 25 and over (Figure C24b) have remained mostly consistent from 2002 to 2010, while decreases of 25 and 22 percentage points were observed among white and black MSM aged 25 and over, respectively.

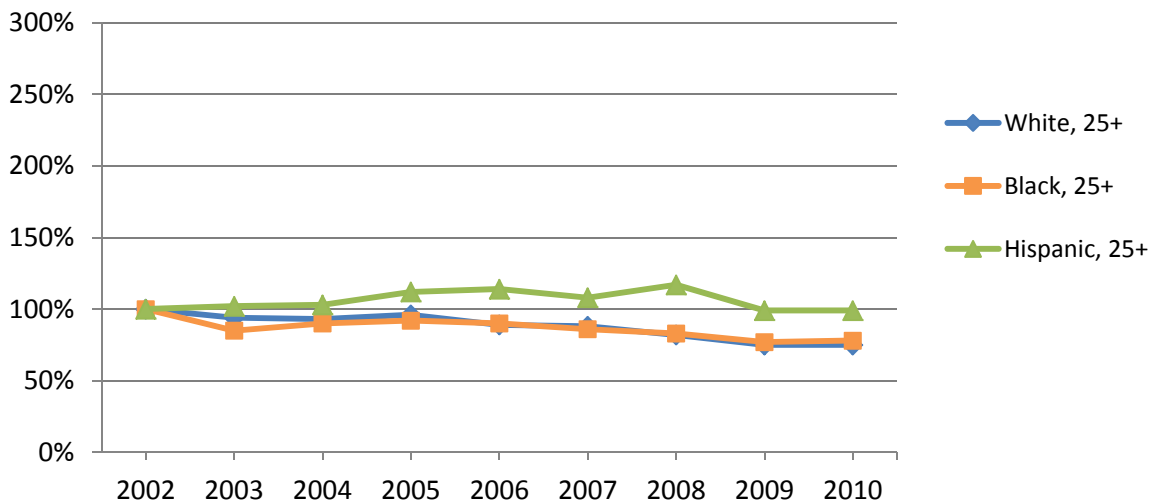


Figure C25: Newly Diagnosed HIV Cases among MSM, within Age Groups, by Race/Ethnicity, NYS, 2010

- Figure C25 displays the racial/ethnic distribution of newly diagnosed cases among MSM age 13-24 and 25 and over in 2010.
- This figure further illustrates the disproportionate impact of HIV among young black and Hispanic MSM, with 82% of cases occurring among these racial/ethnic groups, compared to 14% of cases among young white MSM and about 5% of cases among young Asian/Pacific Islander, Native American, and multi-race MSM.
- By comparison, white MSM ages 25 and over represented 36% of newly diagnosed HIV cases in 2010, although black and Hispanic MSM ages 25 and over were still disproportionately affected, representing 57% of newly diagnosed HIV cases in this age group.

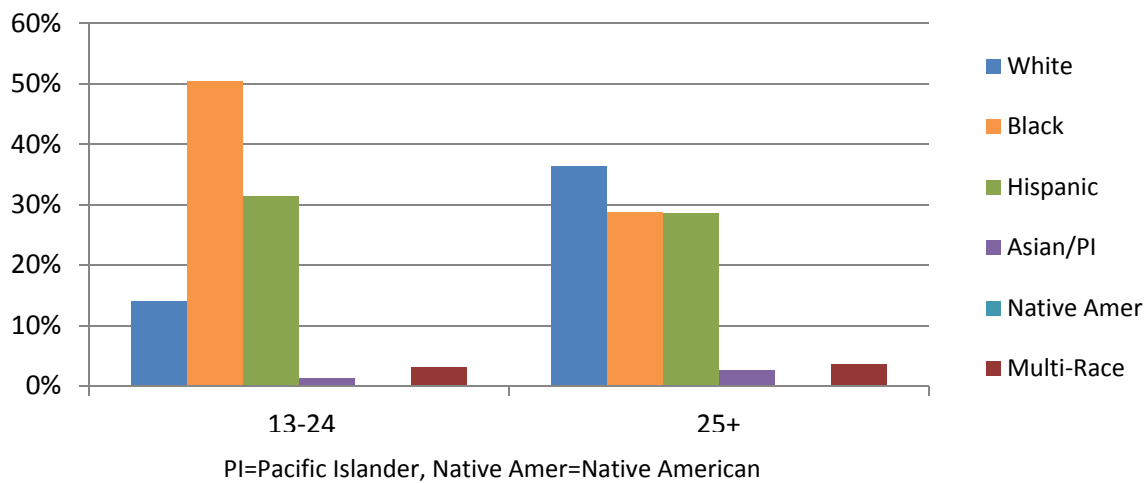


Figure C26: HIV/AIDS Prevalence Rates, by Gender and Race/Ethnicity, NYS, Through 2010

- Figure C26 shows the number of persons living with HIV/AIDS per 100,000 New Yorkers (prevalence rates) among males and females by race/ethnicity as of year-end 2010.
- Prevalence rates were consistently higher for males compared to females. However, the patterns in prevalence rates were similar for males and females, with black and Hispanic persons having substantially higher prevalence rates than whites, Asian/Pacific Islanders, and Native Americans.

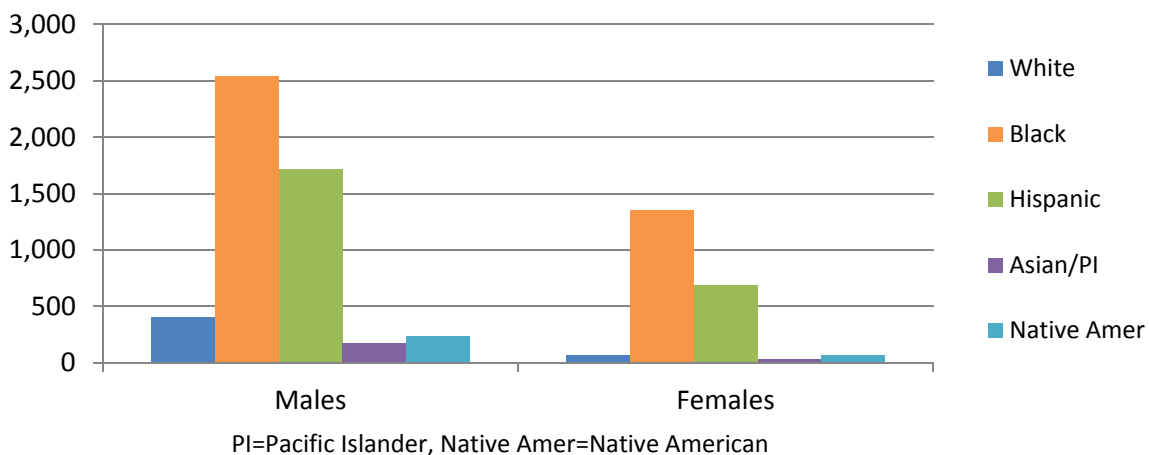


Figure C27: HIV Diagnosis Rates, by Gender and Race/Ethnicity, NYS, Through 2010

- Figure C27 displays the number of new diagnoses per 100,000 New Yorkers (HIV diagnosis rates) among gender subgroups by race/ethnicity as of year-end 2010.
- Similar to Figure C26, males had higher HIV diagnosis rates than females, and black and Hispanic males and females had substantially higher HIV diagnosis rates than whites, Asian/Pacific Islanders, and Native Americans.

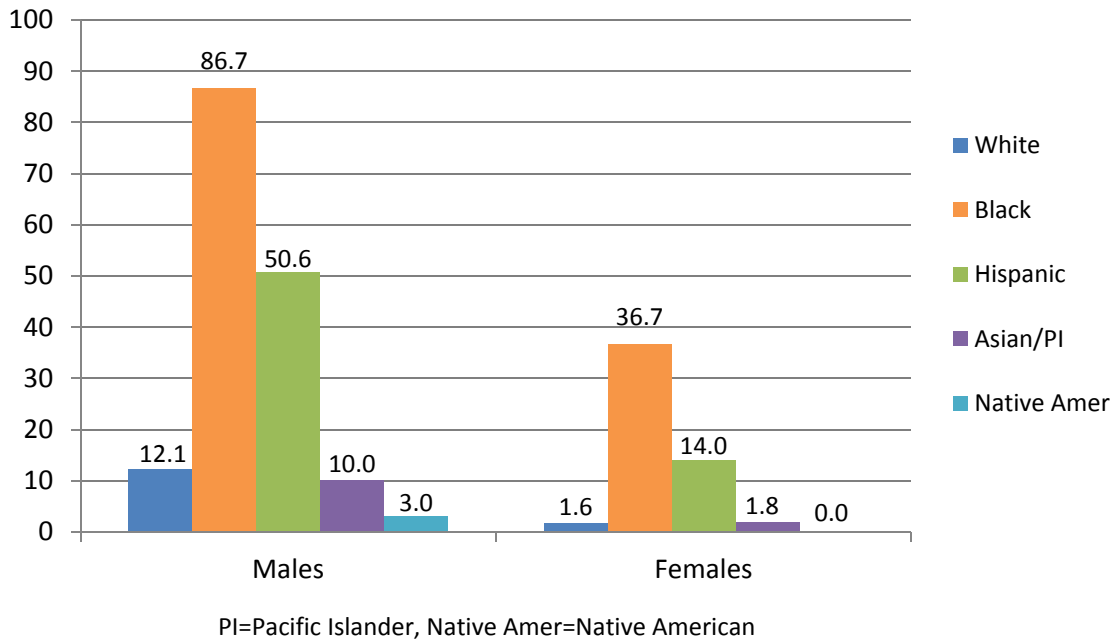


Figure C28: Percentage of Persons Newly Diagnosed with HIV with a Lab Test within 3 Months of HIV Diagnosis, NYC versus ROS, 2008

- Evidence of entry to care within 3 months of an HIV diagnosis was somewhat higher outside NYC (83%), than within the city (77%).

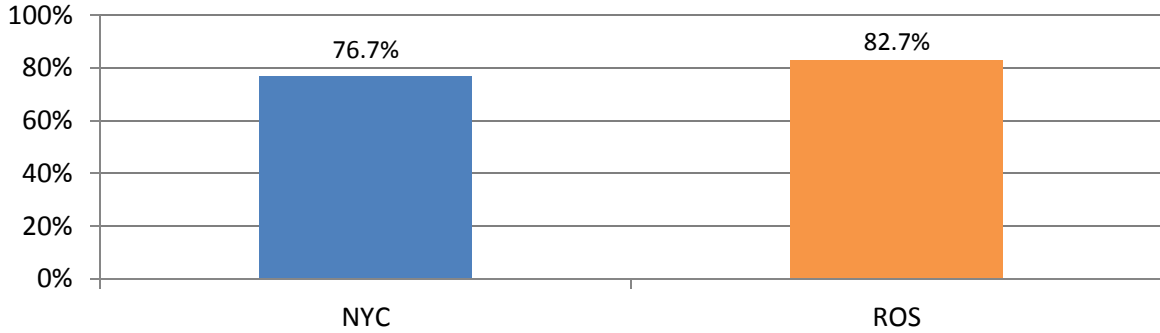


Figure C29: Percentage of Persons Newly Diagnosed with HIV with a Lab Test within 3 Months of HIV Diagnosis, by Gender, NYS, 2008

- Entry to care was slightly higher among females (81%), compared to males (77%).

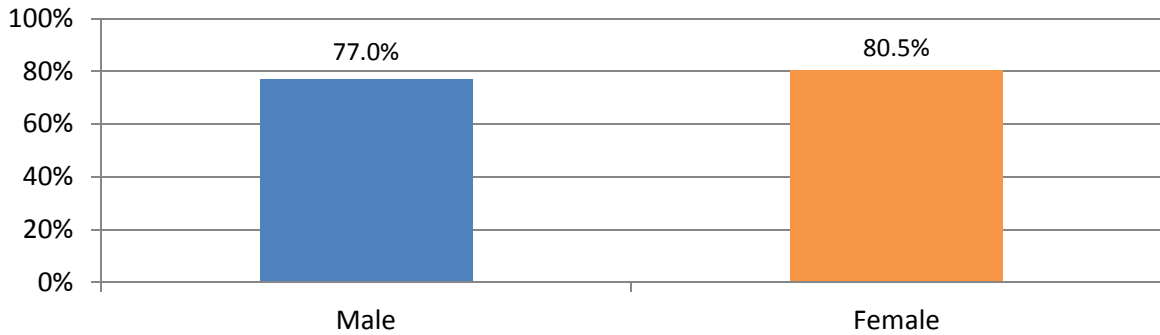


Figure C30: Percentage of Persons Newly Diagnosed with HIV with a Lab Test within 3 Months of HIV Diagnosis, by Race/Ethnicity, NYS, 2008

- Whites, with evidence of 85% entry to care, met the NHAS benchmark level; blacks, Hispanics and Asian/Pacific Islanders were in the 75% - 78% range. The number of diagnoses among Native Americans was too small to establish a reliable rate.

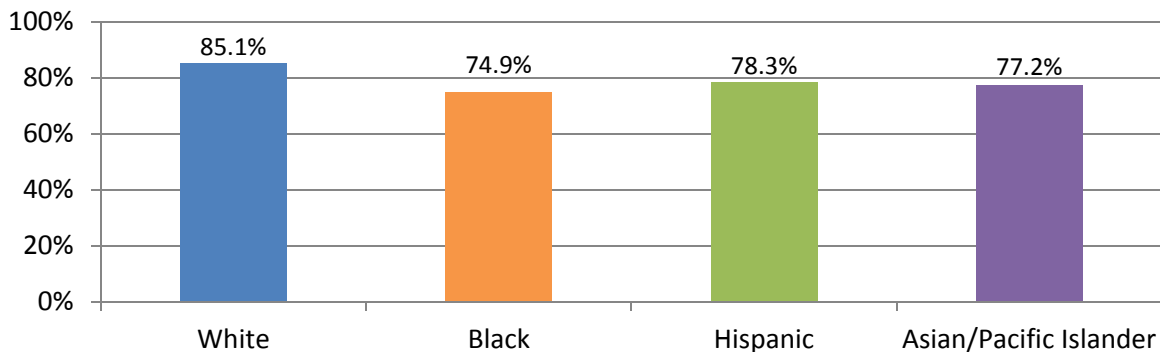


Figure C31: Percentage of Persons Newly Diagnosed with HIV with a Lab Test within 3 Months of HIV Diagnosis, by Age Group, NYS, 2008

- Entry to care was lowest for the youngest age groups (69%, age 13-19) and rose steadily to around 85% for ages 50 and over.

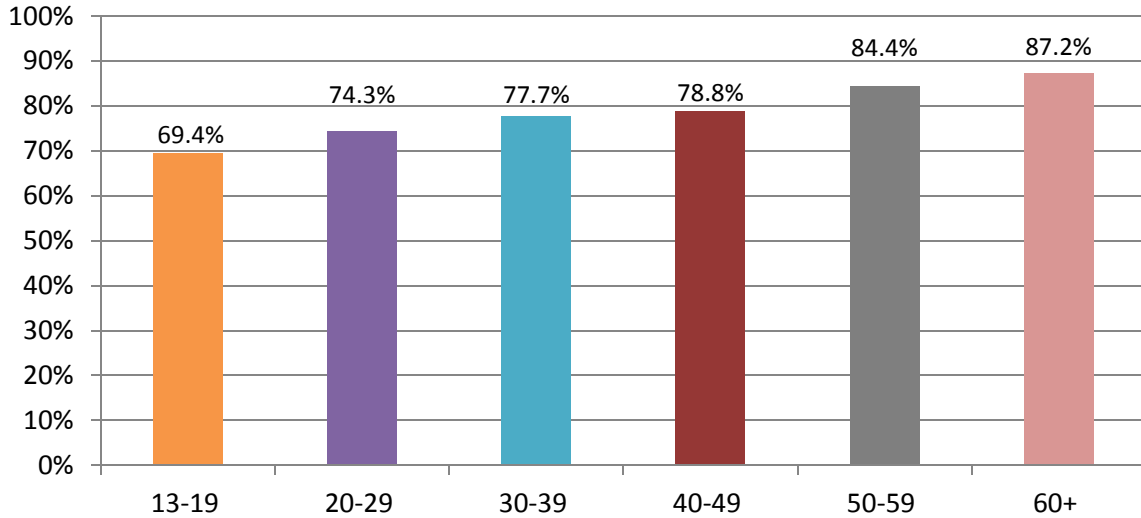


Figure C32: Percentage of Persons Newly Diagnosed with HIV with a Lab Test Within 3 Months of HIV Diagnosis, by Transmission Risk Category, NYS, 2008

- There was little variation with regard to entry to care across risk groups in 2008, although data from earlier years has shown slower entry to care for persons with IDU risk.

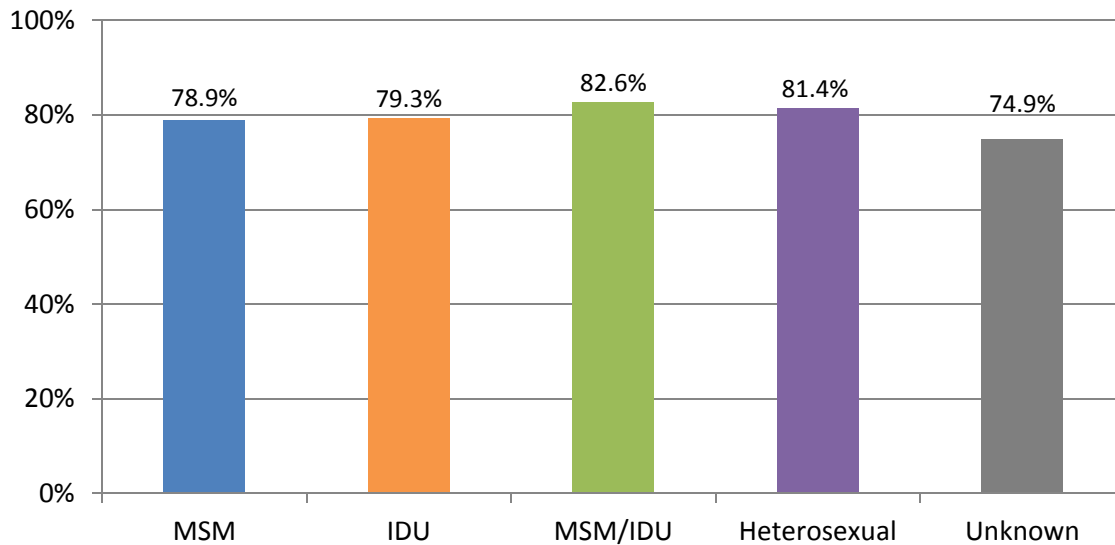


Figure C33: Percentage of Persons Living with HIV Infection in December 2009 with No Evidence of Care during 2010, NYC versus ROS

- The percentage of persons living with HIV infection with no reported evidence of HIV care was the same in NYC and the ROS (34%).

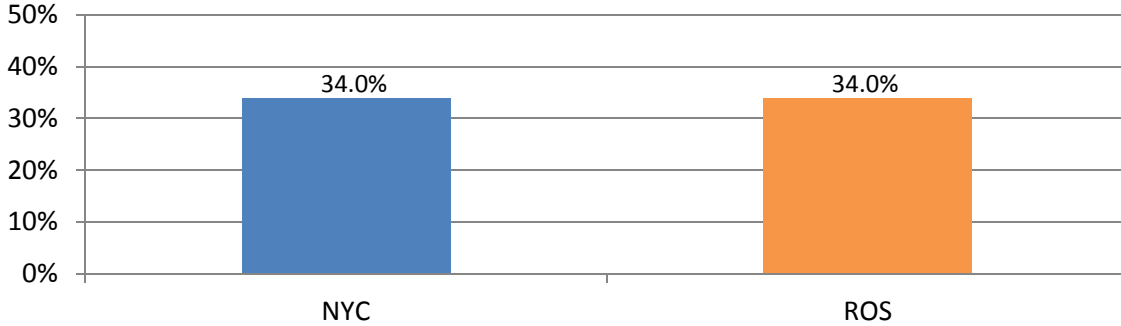


Figure C34: Percentage of Persons Living with HIV Infection in December 2009 with No Evidence of Care during 2010, by Gender, NYS

- Males (36%) were more likely to be out of care than females (31%).

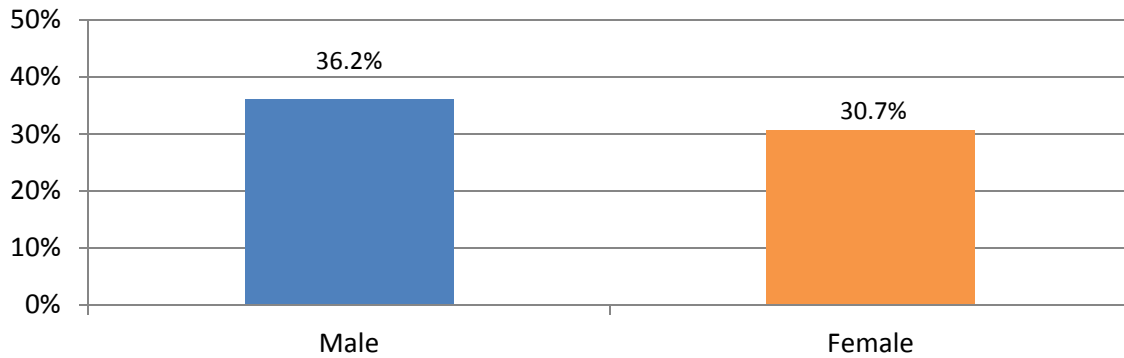


Figure C35: Percentage of Persons Living with HIV Infection in December 2009 with No Evidence of Care during 2010, by Race/Ethnicity, NYS

- The percentage out of care was similar across race/ethnicity groups, with the exception of Native Americans, whose high percentage (51%) may be unreliable because of the small number of Native Americans diagnosed with HIV in NYS (about 100).

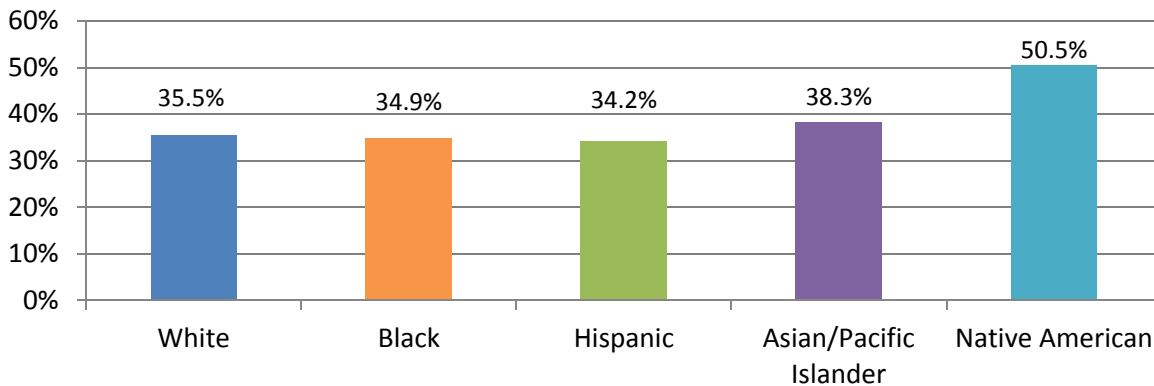


Figure C36: Percentage of Persons Living with HIV Infection in December 2009 with No Evidence of Care during 2010, by Age Group, NYS

- The highest percentage of persons with no evidence of care was observed among those aged 60 and over (39%), with levels ranging from 32-36% among ages 20-59.

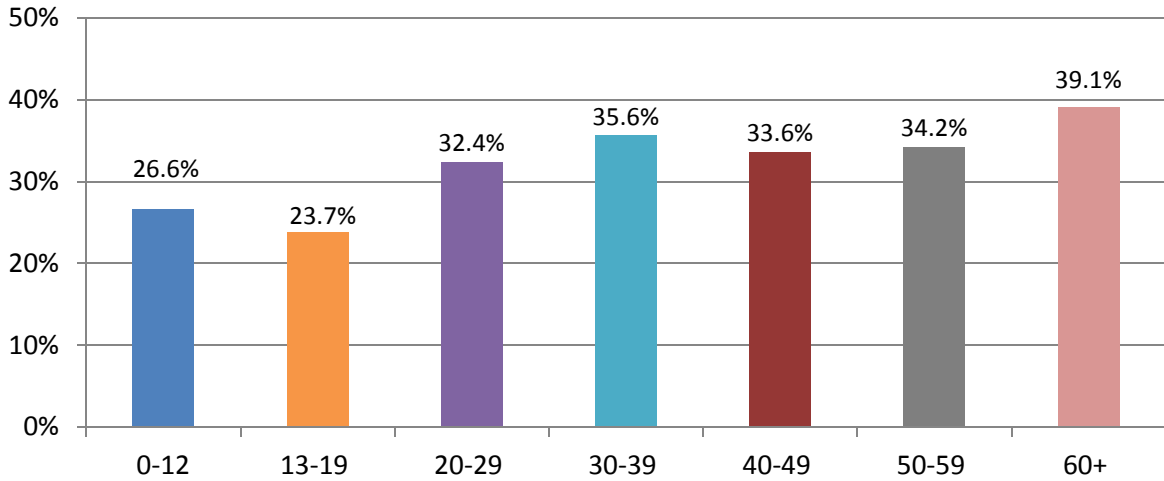
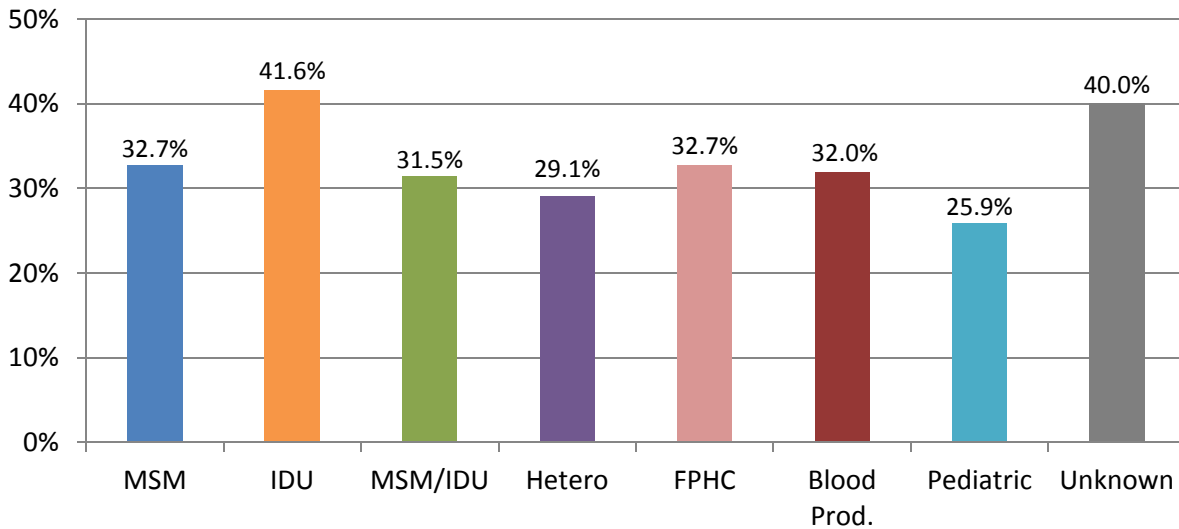


Figure C37: Percentage of Persons Living with HIV Infection in December 2009 with No Evidence of Care during 2010, by Transmission Risk Category, NYS

- Persons with IDU risk were more likely to be out of care (42%) than other transmission risk groups, while those with pediatric risk (26%) were least likely to be out of care.



MSM=Men who have Sex with Men, IDU=Injection Drug Use, Hetero=Heterosexual, FPHC=Female Presumed Heterosexual Contact, Blood Prod.=Blood Product

Table C1a: Living HIV/AIDS Cases in NYS, by Selected Characteristics, 2010*

New York State	Stage of Infection					
	AIDS		HIV		HIV & AIDS	
	#	%	#	%	#	%
Total	78,449	100.0%	50,204	100.0%	128,653	100.0%
Gender						
Male	55,137	70.3%	34,692	69.1%	89,829	69.8%
Female	23,312	29.7%	15,509	30.9%	38,821	30.2%
Unknown	0	0.0%	3	0.0%	3	0.0%
Age in 2010						
12 and Under	25	0.0%	374	0.7%	399	0.3%
13-19	614	0.8%	970	1.9%	1,584	1.2%
20-24	1,219	1.6%	2373	4.7%	3,592	2.8%
25-29	1,932	2.5%	3555	7.1%	5,487	4.3%
30-39	8,616	11.0%	10,088	20.1%	18,704	14.5%
40-49	27,457	35.0%	16,904	33.7%	44,361	34.5%
50-59	26,732	34.1%	11,495	22.9%	38,227	29.7%
60 and Over	11,846	15.1%	4,430	8.8%	16,276	12.7%
Unknown	8	0.0%	15	0.0%	23	0.0%
Race/Ethnicity						
White	14,886	19.0%	11,894	23.7%	26,780	20.8%
Black	34,106	43.5%	21,122	42.1%	55,228	42.9%
Hispanic	26,131	33.3%	14,770	29.4%	40,901	31.8%
Asian/Pacific Islander	824	1.1%	736	1.5%	1,560	1.2%
Native American	56	0.1%	47	0.1%	103	0.1%
Multi-Race	2,409	3.1%	1,276	2.5%	3,685	2.9%
Unknown	37	0.0%	359	0.7%	396	0.3%
Transmission Risk Category						
MSM	22,467	28.6%	18,296	36.4%	40,763	31.7%
IDU	17,975	22.9%	5,472	10.9%	23,447	18.2%
MSM/IDU	2,519	3.2%	939	1.9%	3,458	2.7%
Heterosexual	13,517	17.2%	8,081	16.1%	21,598	16.8%
FPHC	7,855	10.0%	6,987	13.9%	14,842	11.5%
Blood Product	242	0.3%	50	0.1%	292	0.2%
Pediatric	1,405	1.8%	1,520	3.0%	2,925	2.3%
Unknown	12,469	15.9%	8,859	17.6%	21,328	16.6%

*For cases diagnosed through December 31, 2010 (from data as of 3/8/12).

Table C1b: Living HIV/AIDS Cases in NYC, by Selected Characteristics, 2010*

New York City	Stage of Infection					
	AIDS		HIV		HIV & AIDS	
	#	%	#	%	#	%
Total	62,058	100.0%	39,144	100.0%	101,202	100.0%
Gender						
Male	43,350	69.9%	27,171	69.4%	70,521	69.7%
Female	18,708	30.1%	11,971	30.6%	30,679	30.3%
Unknown	0	0.0%	2	0.0%	2	0.0%
Age in 2010						
12 and Under	20	0.0%	306	0.8%	326	0.3%
13-19	533	0.9%	781	2.0%	1,314	1.3%
20-24	983	1.6%	1,872	4.8%	2,855	2.8%
25-29	1,590	2.6%	2,884	7.4%	4,474	4.4%
30-39	6,918	11.1%	8271	21.1%	15,189	15.0%
40-49	21,438	34.5%	13,137	33.6%	34,575	34.2%
50-59	20,948	33.8%	8,509	21.7%	29,457	29.1%
60 and Over	9,622	15.5%	3,379	8.6%	13,001	12.8%
Unknown	6	0.0%	5	0.0%	11	0.0%
Race/Ethnicity						
White	10,137	16.3%	8,246	21.1%	18,383	18.2%
Black	27,943	45.0%	17,205	44.0%	45,148	44.6%
Hispanic	21,921	35.3%	12,050	30.8%	33,971	33.6%
Asian/Pacific Islander	761	1.2%	651	1.7%	1,412	1.4%
Native American	39	0.1%	37	0.1%	76	0.1%
Multi-Race	1,220	2.0%	600	1.5%	1,820	1.8%
Unknown	37	0.1%	355	0.9%	392	0.4%
Transmission Risk Category						
MSM	18,088	29.1%	14,897	38.1%	32,985	32.6%
IDU	13,367	21.5%	3360	8.6%	16,727	16.5%
MSM/IDU	1683	2.7%	607	1.6%	2290	2.3%
Heterosexual	10,209	16.5%	5,772	14.7%	15,981	15.8%
FPHC	6,886	11.1%	5,949	15.2%	12,835	12.7%
Blood Product	151	0.2%	28	0.1%	179	0.2%
Pediatric	1,175	1.9%	1,259	3.2%	2,434	2.4%
Unknown	10,499	16.9%	7,272	18.6%	17,771	17.6%

*For cases diagnosed through December 31, 2010 (from data as of 3/8/12).

Table C1c: Living HIV/AIDS Cases in ROS, by Selected Characteristics, 2010*

Rest of State	Stage of Infection					
	AIDS		HIV		HIV & AIDS	
	#	%	#	%	#	%
Total	16,391	100.0%	11,060	100.0%	27,451	100.0%
Gender						
Male	11,787	71.9%	7,521	68.0%	19,308	70.3%
Female	4,604	28.1%	3,538	32.0%	8,142	29.7%
Unknown	0	0.0%	1	0.0%	1	0.0%
Age in 2010						
12 and Under	5	0.0%	68	0.6%	73	0.3%
13-19	81	0.5%	189	1.7%	270	1.0%
20-24	236	1.4%	501	4.5%	737	2.7%
25-29	342	2.1%	671	6.1%	1,013	3.7%
30-39	1,698	10.4%	1,817	16.4%	3,515	12.8%
40-49	6,019	36.7%	3,767	34.1%	9,786	35.6%
50-59	5,784	35.3%	2,986	27.0%	8,770	31.9%
60 and Over	2,224	13.6%	1,051	9.5%	3,275	11.9%
Unknown	2	0.0%	10	0.1%	12	0.0%
Race/Ethnicity						
White	4,749	29.0%	3,648	33.0%	8,397	30.6%
Black	6,163	37.6%	3,917	35.4%	10,080	36.7%
Hispanic	4,210	25.7%	2,720	24.6%	6,930	25.2%
Asian/Pacific Islander	63	0.4%	85	0.8%	148	0.5%
Native American	17	0.1%	10	0.1%	27	0.1%
Multi-Race	1,189	7.3%	676	6.1%	1,865	6.8%
Unknown	0	0.0%	4	0.0%	4	0.0%
Transmission Risk Category						
MSM	4,379	26.7%	3,399	30.7%	7,778	28.3%
IDU	4,608	28.1%	2,112	19.1%	6,720	24.5%
MSM/IDU	836	5.1%	332	3.0%	1,168	4.3%
Heterosexual	3,308	20.2%	2,309	20.9%	5,617	20.5%
FPHC	969	5.9%	1,038	9.4%	2,007	7.3%
Blood Product	91	0.6%	22	0.2%	113	0.4%
Pediatric	230	1.4%	261	2.4%	491	1.8%
Unknown	1,970	12.0%	1,587	14.3%	3,557	13.0%

*For cases diagnosed through December 31, 2010 (from data as of 3/8/12).

Table C2: Newly Diagnosed HIV Cases, by Selected Characteristics, NYS, 2010*

	New York State		New York City		Rest of State	
	#	%	#	%	#	%
Total	3,849	100.0%	2,999	100.0%	850	100.0%
Gender						
Male	2,895	75.2%	2,275	75.9%	620	72.9%
Female	954	24.8%	724	24.1%	230	27.1%
Age in 2009						
12 and Under	5	0.1%	4	0.1%	1	0.1%
13-19	161	4.2%	122	4.1%	39	4.6%
20-24	603	15.7%	458	15.3%	145	17.1%
25-29	572	14.9%	468	15.6%	104	12.2%
30-39	889	23.1%	710	23.7%	179	21.1%
40-49	892	23.2%	668	22.3%	224	26.4%
50-59	510	13.3%	411	13.7%	99	11.6%
60 and Over	217	5.6%	158	5.3%	59	6.9%
Race/Ethnicity						
White	780	20.3%	482	16.1%	298	35.1%
Black	1,769	46.0%	1,449	48.3%	320	37.6%
Hispanic	1,108	28.8%	943	31.4%	165	19.4%
Asian/Pacific Islander	86	2.2%	67	2.2%	19	2.2%
Native American	1	0.0%	1	0.0%	0	0.0%
Multi-Race	105	2.7%	57	1.9%	48	5.6%
Transmission Risk Category						
MSM	1,803	46.8%	1,406	46.9%	397	46.7%
IDU	159	4.1%	109	3.6%	50	5.9%
MSM/IDU	66	1.7%	42	1.4%	24	2.8%
Heterosexual	550	14.3%	337	11.2%	213	25.1%
FPHC	539	14.0%	474	15.8%	65	7.6%
Pediatric	8	0.2%	6	0.2%	2	0.2%
Unknown	724	18.8%	625	20.8%	99	11.6%
HIV Diagnosis (Dx)** Type						
Concurrent HIV & AIDS	977	25.4%	740	24.7%	237	27.9%
HIV Dx with AIDS Dx within 2-12 mos. of HIV Dx	268	7.0%	196	6.5%	72	8.5%
Other HIV Dx	2,604	67.7%	2,063	68.8%	541	63.6%

*For cases diagnosed January 1 through December 31, 2010 (from data as of 3/8/12); includes incarcerated individuals.

Section D. Sexually Transmitted Disease (STD) Epidemiology in New York State

Sexually Transmitted Diseases Introduction

STDs are a major public health challenge and continue to have a significant impact on the health, safety and welfare of the citizens of NYS. The CDC estimates that there are approximately 19 million new STD infections nationwide costing \$17 billion to the US health care system each year. More than 1.6 million cases of Chlamydia and gonorrhea were reported to the CDC in 2010, and as in prior years, STDs are overwhelmingly the leading category of reported communicable diseases in NYS. In 2010, NYS ranked #8 among states by case rates of reported primary and secondary syphilis, early latent syphilis and Chlamydia, and #23 by case rates of reported gonorrhea.¹

This section of the Epi Profile summarizes 2010 statewide data on trends in syphilis, gonorrhea and Chlamydia. These infections are required to be reported to the NYS local health department in the county in which the patient resides pursuant to NYS Public Health Law Article 21; Section 2102.² The 123,079 STD cases reported to NYS, including NYC, during 2010 comprise 79% of all communicable diseases reported statewide. These data, which are useful for examining overall trends and trends among specific populations at risk, represent only a percentage of the true burden of STDs in NYS. Many STDs go undiagnosed, and some highly prevalent viral STDs, such as human papilloma virus and genital herpes, are not required to be reported at all.

Sexually Transmitted Disease Data Definitions

The NYSDOH Bureau of STD Prevention and Epidemiology (BSTDPE) is responsible for generating the surveillance data presented in this report. Cases in this report were reported through December 31, 2010, with 2010 surveillance data finalized as of May 4, 2011. Additional information about STD surveillance data and data collection and reporting procedures is available in BSTDPE's Annual STD Statistical Abstract on the NYSDOH web site at <http://www.health.ny.gov/statistics/diseases/communicable/std/>.

- **STD Cases**

All NYS residents diagnosed with a reportable STD and meeting the case definition who are reported by providers or laboratories in the surveillance period. The list of reportable STDs includes: syphilis, gonorrhea, Chlamydia, lymphogranuloma venereum, chancroid, neonatal herpes simplex virus, and granuloma inguinale (NYC only). In this report, syphilis data are presented primarily for early, or infectious, syphilis which includes cases with primary, secondary or early latent stage of disease. The CDC and the Council of State and Territorial Epidemiologists have published case definitions for notifiable diseases which establish uniform criteria for reporting cases.

- **Sex of Sex Partner**

Information on sexual risk behaviors is typically gathered during a medical history conducted by a health care provider or during an interview with health department partner services specialists. On January 1, 2008, the CDC implemented requirements for collecting surveillance information on the sex of the partner(s) to whom the infected patient was exposed. Mandatory reporting of the “sex of sex partner” variable applies to syphilis cases only and this information is not available for other notifiable STDs. The following data categories are used to define “sex of sex partner”:

- Male
- Female
- Male and female
- Refused (patient refused to answer question)
- Unknown

In this report, the term MSM includes bisexual males.

- **Diagnosis Date**

The date on which a laboratory diagnosis of a reportable STD is documented on a provider report form or a laboratory report.

- **Case Rates**

Crude (unadjusted) and category-specific rates are based on the number of cases per 100,000 population using US Census 2010 Population with Bridged Race Categories estimates and obtained from the National Vital Statistics System at http://www.cdc.gov/nchs/nvss/bridged_race.htm.

- **Race/Ethnicity**

STD surveillance systems do not include requirements for mandatory reporting of race and ethnicity for STD cases. Availability of such information to surveillance systems relies on documentation on the provider report form or a laboratory report. The percentage of unknown, missing or invalid data for race/ethnicity varies from year to year and by disease for reported STDs. In this report, notations are made by disease about the percentage of missing race/ethnicity data.

- **Residence**

For purposes of disease reporting, STD cases are assigned to the county of the person’s “usual residence” at the time of diagnosis. The rules for assigning residence are modeled after guidelines used by the US Census Bureau and are intended to prevent the reporting of a case by multiple jurisdictions. For persons who are diagnosed with an STD while living in an

institution, e.g., drug treatment center, psychiatric facility, county or state jail/prison, residence reflects the county in which the institution is located.

- **Incarcerated Individuals**

In this report, as in other STD surveillance reports, the data include cases among incarcerated individuals who were diagnosed with a reportable STD while incarcerated in city/county jails or a NYS DOCCS facility. As described above, residence reflects the address of the correctional facility, rather than the pre-incarceration address.

Additional Information

Please direct questions about the information presented in this report or STD surveillance data, in general, to the Bureau of STD Prevention and Epidemiology, AIDS Institute, New York State Department of Health at 518-474-3598 or submit questions to stdc@health.state.ny.us

Sexually Transmitted Disease Figures and Tables

Figure D1: Reported Cases of Communicable Diseases, NYS, 2010

- In 2010, there were 123,079 cases of STDs reported in NYS accounting for 79% of all reportable communicable diseases.
- Chlamydia has been ranked as the #1 reportable communicable disease since reporting was implemented in 2000.
- Chlamydia, gonorrhea, and syphilis are the three notifiable STDs for which federally-funded control programs exist.

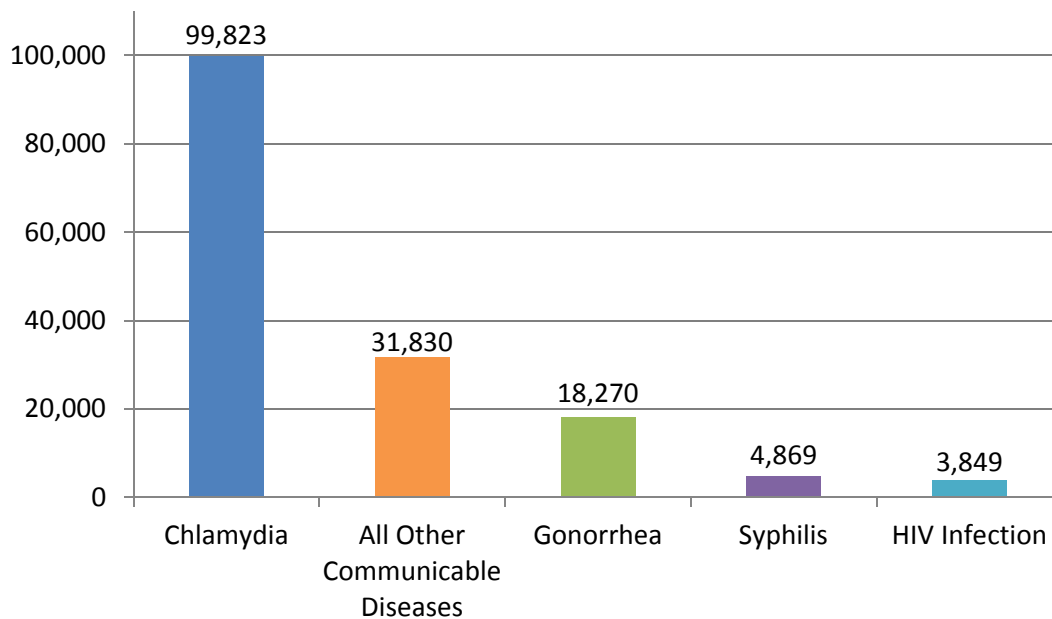


Figure D2: Reported Cases of Early Syphilis, NYS, 1992-2010

- In 2000, reported cases of early syphilis reached the lowest numbers on record. By 2008, the number of cases increased 300% in NYC and over 700% in the ROS. In 2009-2010, reported cases appear to have plateaued in both NYC and the ROS.

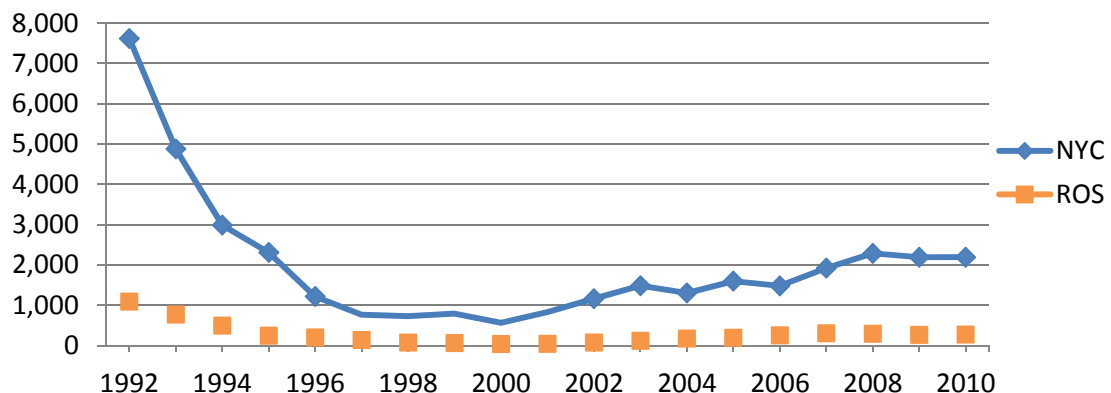
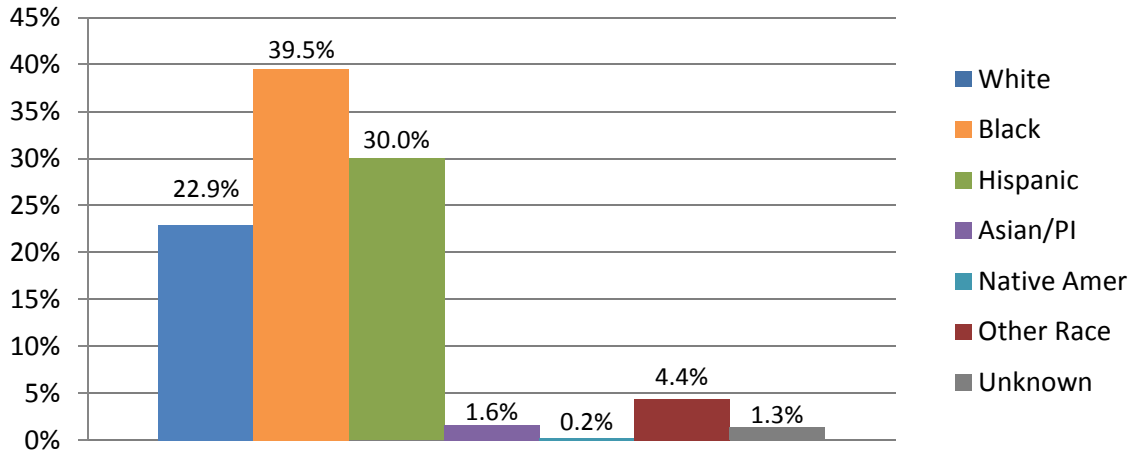


Figure D4: Reported Cases of Early Syphilis by Race/Ethnicity, NYS, 2010

- In 2010, 40% of early syphilis cases were reported among black non-Hispanic individuals, followed by 30% among Hispanic individuals and 23% among white non-Hispanics.
- Cases reported among Asian/Pacific Islanders and Native Americans accounted for less than 2% each.



PI=Pacific Islander, Native Amer=Native American

Figure D5: Reported Cases of Early Syphilis by Gender, NYS, 1992-2010

- Trends in reported cases of early syphilis declined 13-fold for both males and females from 1992 to 2000 when early syphilis cases reached an all-time low.
- Since 2000, the male to female case ratio has steadily increased over time from a ratio of four male cases for every female case reported in 2001 to 12 male cases for every female case reported in 2012.
- On an annual basis since 2001, males have accounted for more than 80% of the total number of reported cases of early syphilis.

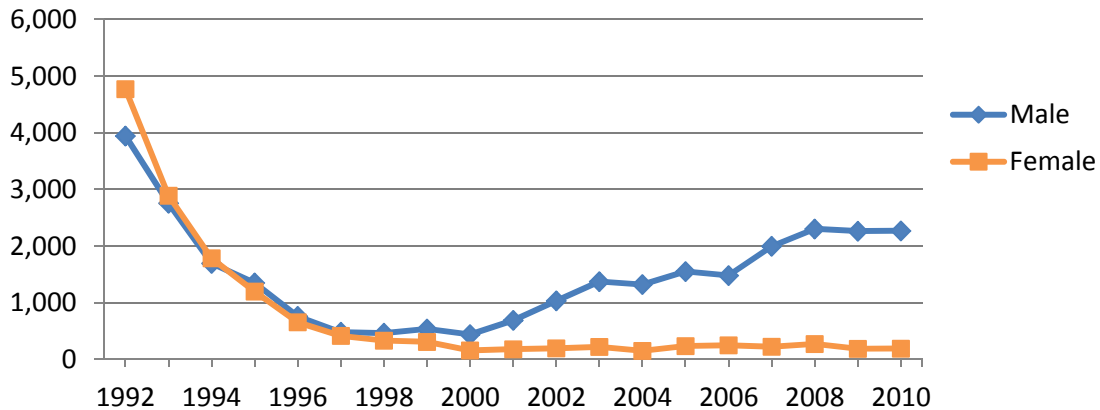


Figure D6: Reported Cases of Early Syphilis among Males, by Sex Partner Status, NYS, 2010

- In 2010, males accounted for 92% of early syphilis cases.
- Among male cases the highest percentage was reported among MSM, accounting for 86% of cases (based on reported data with known sex of sex partner).

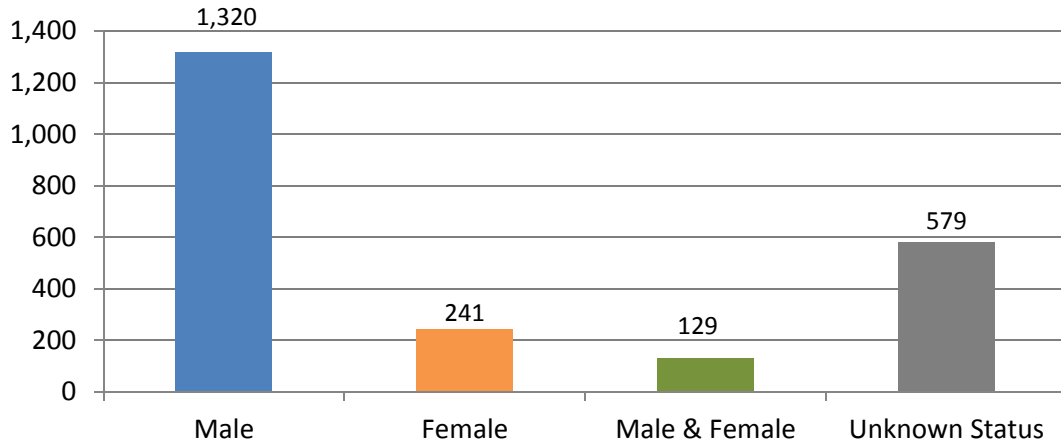


Figure D7: Early Syphilis Age- and Gender-Specific Rates, ROS, 2010

- In the ROS, 20-24 year old males had the highest age-specific rate of early syphilis (11.3 cases per 100,000 population), followed by 25-29 year old males (10.5 cases per 100,000 population).
- Regardless of age groups, age-specific case rates were higher among males compared to females.

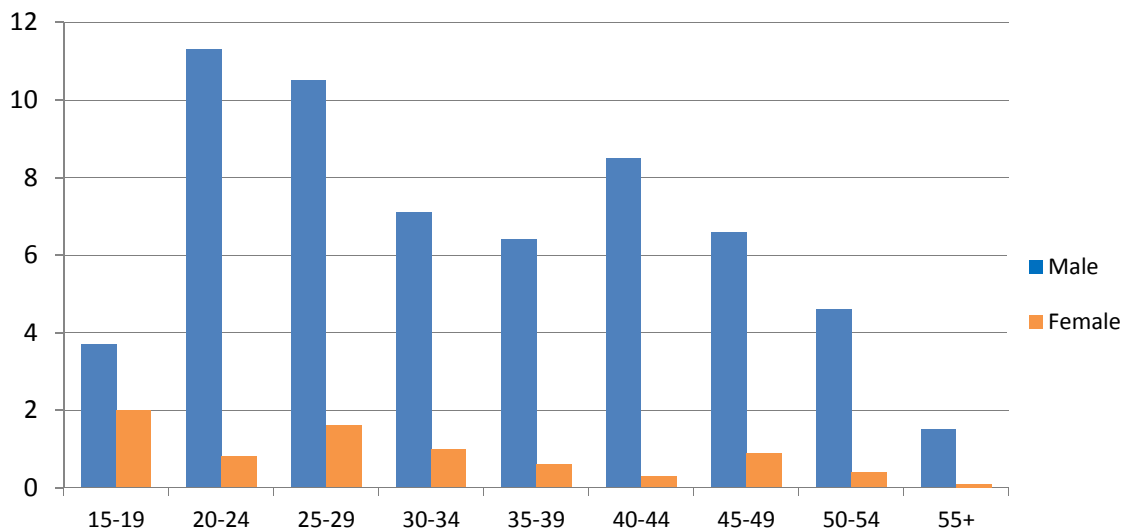


Figure D8: Early Syphilis Age- and Gender-Specific Rates, NYC, 2010

- In NYC, 40-44 year old males had the highest age-specific rate of early syphilis (126 cases per 100,000 population), followed by 35-39 year old males (109 cases per 100,000 population).
- For all age groups, age-specific case rates were much higher among males compared to females.

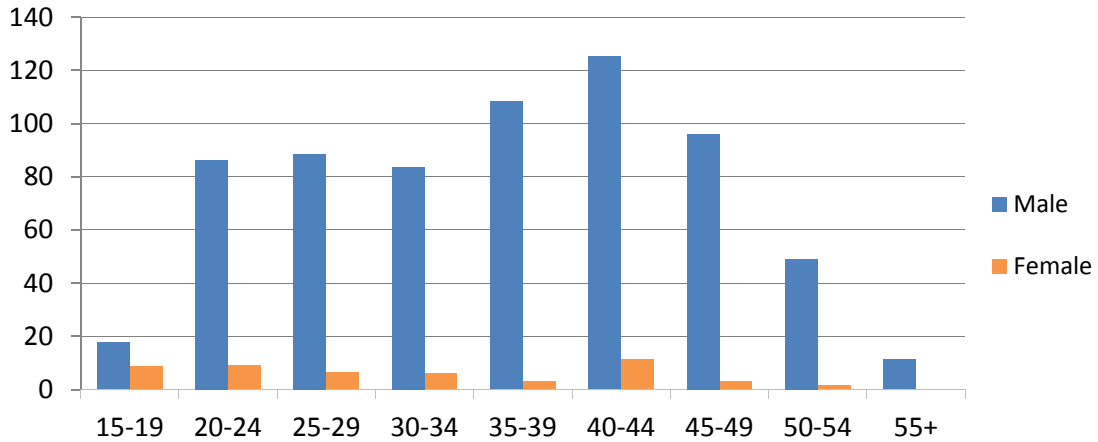


Figure D9: Reported Cases of Chlamydia, NYS, 2001-2010

- Since Chlamydia became reportable in 2000, it has been the #1 reportable STD in NYS and the number of reported cases continue to increase annually.
- Cases reported in 2010 represented an 8% increase over the 92,075 Chlamydia cases reported statewide in 2009.
- The continuing increases in Chlamydia diagnoses may reflect expanded screening efforts as well as increased use of more sensitive laboratory tests. It should be noted that most individuals with Chlamydia do not have symptoms; therefore screening may detect existing as well as new cases.

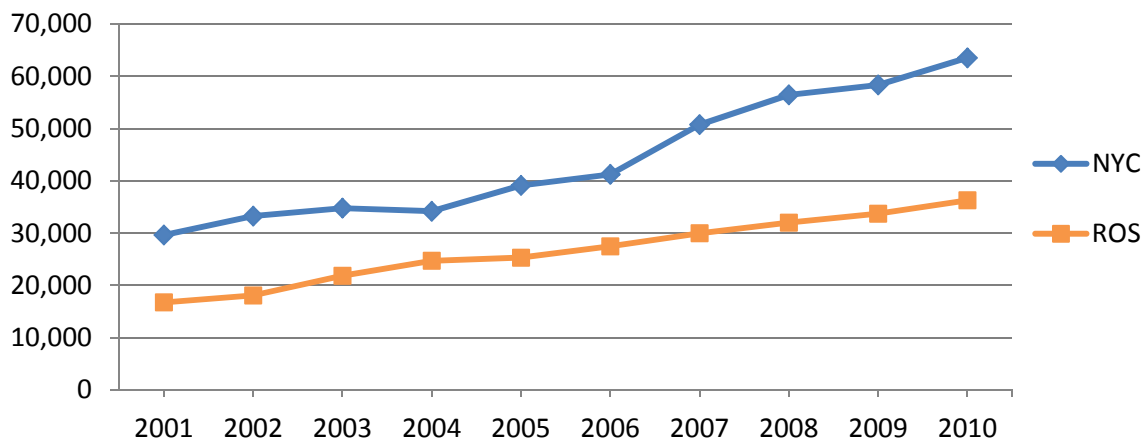
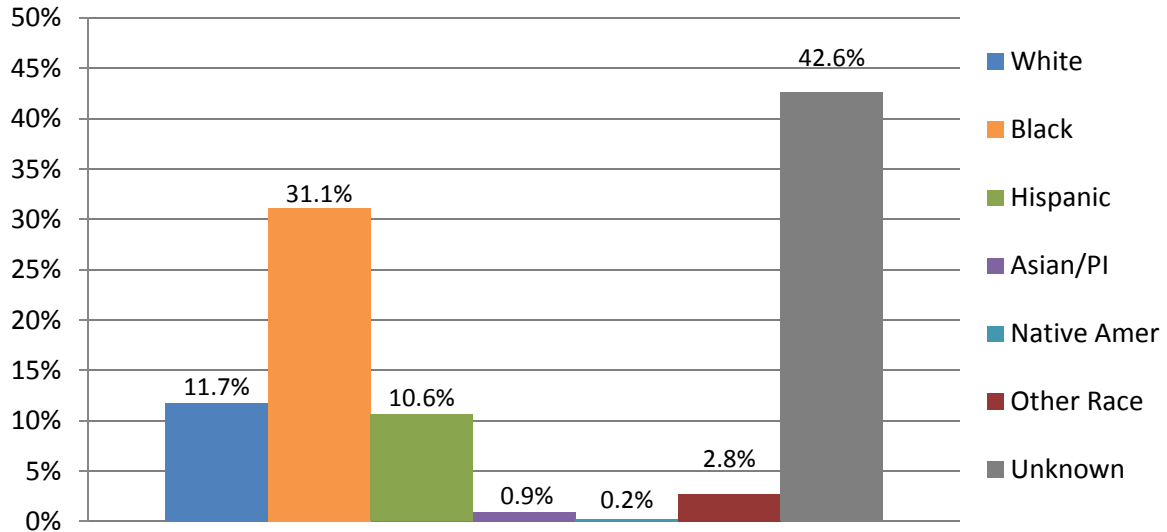


Figure D11: Reported Cases of Chlamydia by Race/Ethnicity, NYS, 2010

- In 2010, the highest percentage of Chlamydia cases was reported among black non-Hispanics, accounting for 31%, followed by 12% among white non-Hispanics, and 11% among Hispanics.
- 42% of reported Chlamydia cases in 2010 had missing or unknown race and/or ethnicity; therefore data must be interpreted with caution.



PI=Pacific Islander, Native Amer=Native American

Figure D12: Reported Cases of Chlamydia by Gender, NYS, 2001-2010

- Trends in reported Chlamydia cases by gender demonstrate that the number of cases has consistently been higher among females than males during each of the last ten years, which can be partially explained by federal recommendations promoting screening among women under age 26.³
- The number of reported Chlamydia cases has increased among both genders, with an 11% and 7% increase reported among males and females, respectively, for 2010 compared to 2009.

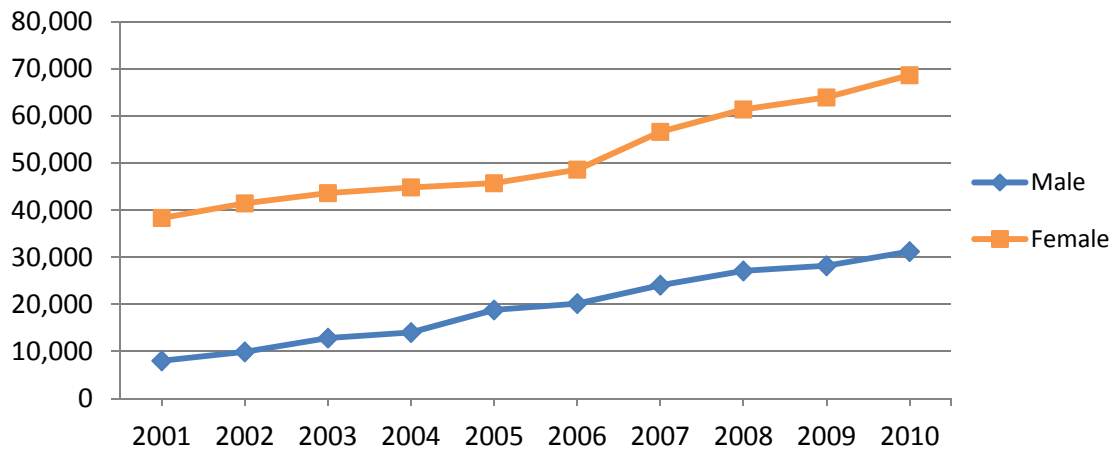


Figure D13: Chlamydia Case Rates by Age Group and Gender, NYS, 2010

- Age-and gender-specific case rates show that the burden of reported Chlamydia infections is highest among females, particularly among adolescents and young adults ages 15-24.
- Among females, 15-19 year olds had the highest rate with 3,799 cases per 100,000 population and among males, those 20-24 years of age had the highest rate with 1,513 cases per 100,000.
- Overall, the rate among females (686 per 100,000 population) was two times higher than that among males (333 per 100,000 population). Two factors may account for this finding: 1) federal recommendations promote screening among women under age 26, and 2) adolescent females are biologically at an increased risk of infection.

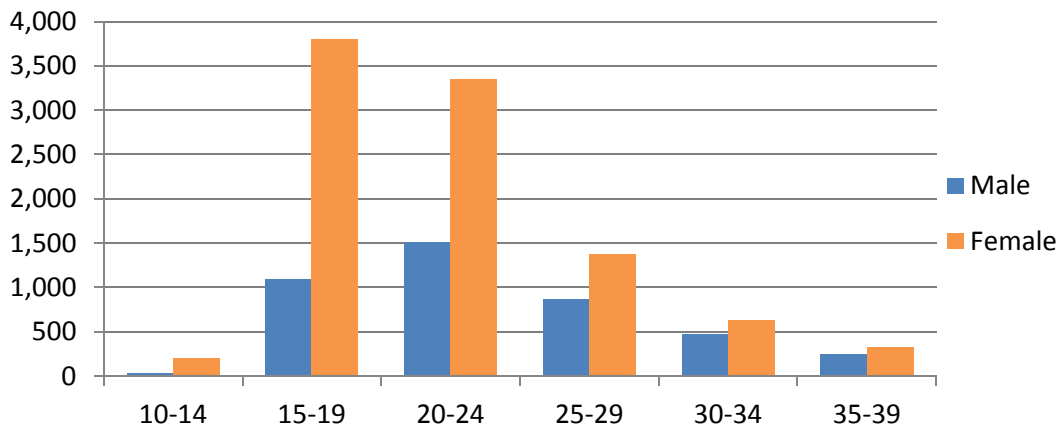


Figure D14: Reported Cases of Gonorrhea, NYS, 1992-2010

- Since 2003, the number of reported cases of gonorrhea has showed a general downward trend.
- However, the 18,270 cases reported statewide in 2010 represented a 7% increase over 2009, which was driven by a 13% increase in NYC.
- Even though the ROS continues to show a decrease in the number of cases of gonorrhea, NYC gonorrhea cases increased in 2009 and 2010; such increases historically precede increases in the ROS.

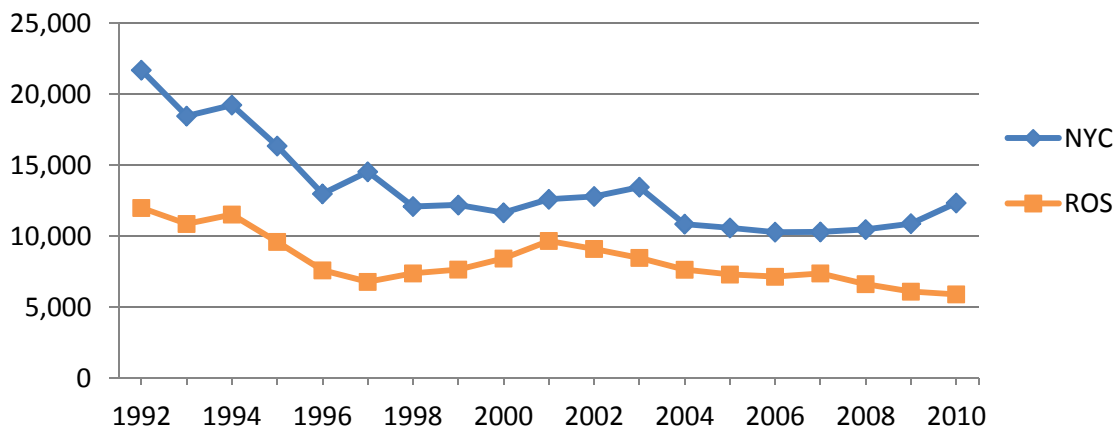


Figure D16: Reported Cases of Gonorrhea by Race/Ethnicity, NYS, 2010

- Among reported cases of gonorrhea in 2010, the highest percentage, 44%, was among black non-Hispanics, followed by 10% among white non-Hispanics, 9% among Hispanics, and 1% among Asian/Pacific Islanders. There were 25 cases of gonorrhea reported among Native American individuals, accounting for 0.1% of reported cases.
- 34% of reported cases of gonorrhea in 2010 had missing or unknown race and/or ethnicity values; therefore, these findings should be interpreted with caution.

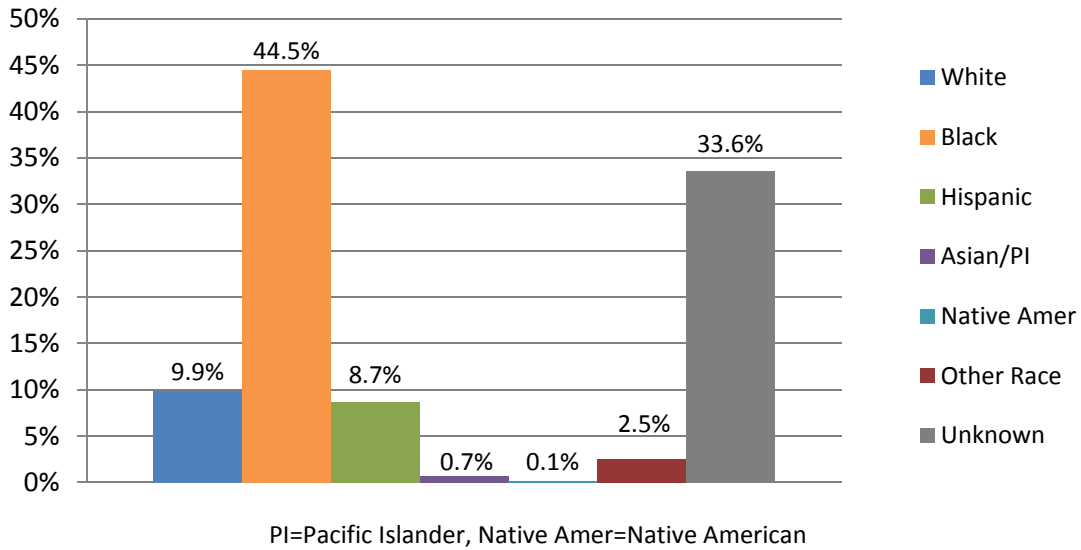


Figure D17: Reported Cases of Gonorrhea by Gender, NYS, 1992-2010

- Gonorrhea cases have shown a general downward trend from 1992 to 2005, when cases appear to have leveled off.
- However, cases of gonorrhea increased in the most recent reporting year; the 7% statewide increase in gonorrhea cases from 2009 to 2010 was attributable to a 6% increase among males and a 10% increase among females.

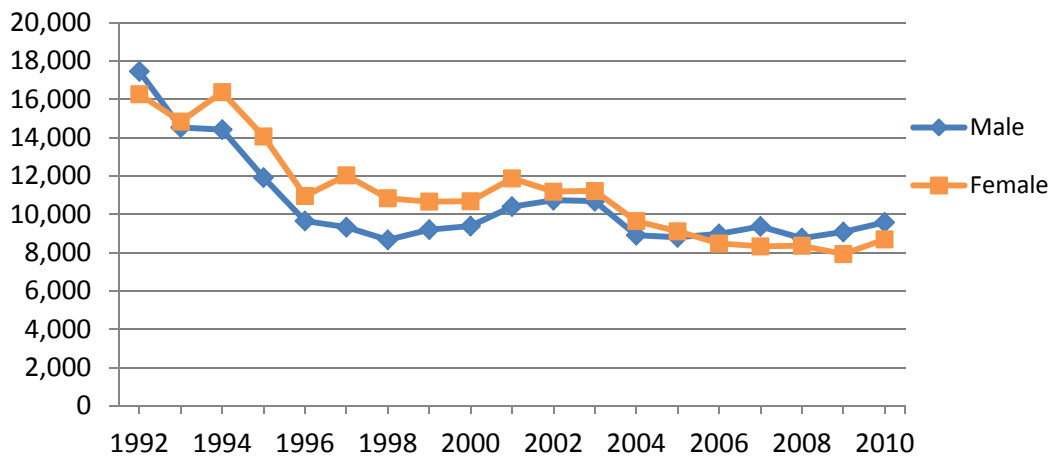


Figure D18: Gonorrhea Case Rates by Age Group and Gender, NYS, 2010

- The age- and gender-specific rate of 483 cases per 100,000 population among 15-19 year old females in 2010 was more than twice the rate among males in that age group (221 cases per 100,000 population).
- Age-specific case rates were higher among males than females for older age groups, with the highest male case rate of 410 cases per 100,000 population reported among 20-24 year old males.
- Two factors likely contribute to the higher rates in older males compared to females. First, males tend to be symptomatic which will cause them to seek testing. Second, targeted screening of females at increased risk of infection is recommended for those under age 25; consequently, there is less testing among older women.

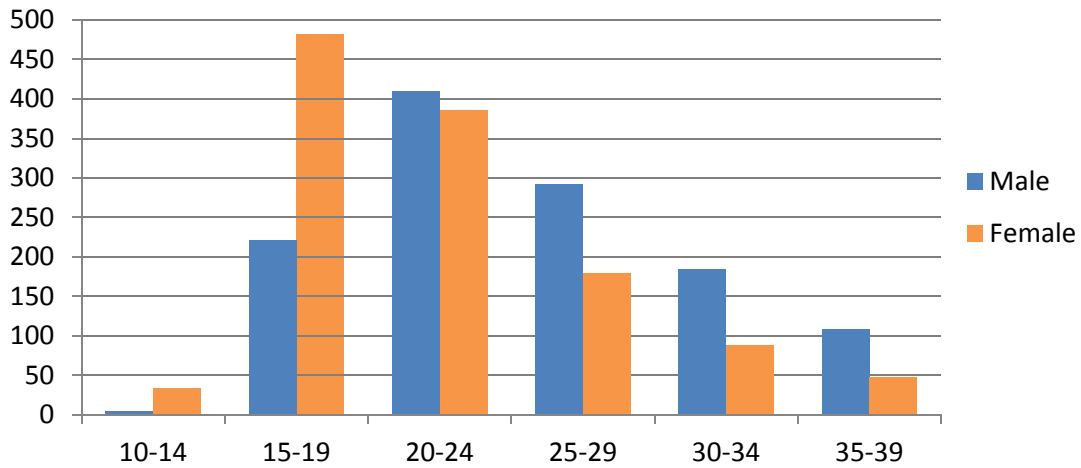
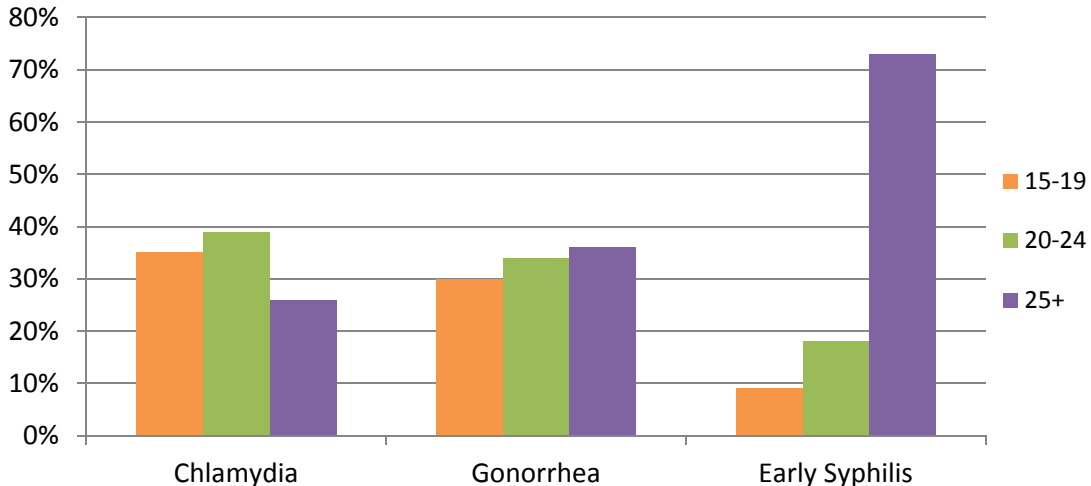


Figure D19: Burden of Reportable STDs among Adolescents and Young Adults, NYS, 2010

- Individuals aged 15-24 comprised 74% of reported Chlamydia cases, and 64% of reported gonorrhea cases in 2010.
- 73% of early syphilis cases were reported among persons aged 25 and older in 2010.



**Table D1: Reported Cases of Early Syphilis, Gonorrhea and Chlamydia
by Selected Categories, NYS, 2010**

	Early Syphilis		Gonorrhea		Chlamydia	
	#	%	#	%	#	%
Total	2,461	100.0%	18,270	100.0%	99,821	100.0%
Gender						
Male	2,269	92.2%	9,578	52.4%	31,198	31.3%
Female	192	7.8%	8,691	47.6%	68,616	68.7%
Area of Residence						
Rest of State	271	11.0%	5,916	32.4%	36,277	36.3%
New York City	2,190	89.0%	12,354	67.6%	63,544	63.7%
Age						
0-9	0	0.0%	10	0.1%	61	0.1%
10-14	1	0.0%	229	1.3%	1,396	1.4%
15-19	96	3.9%	4,765	26.1%	32,939	33.0%
20-24	349	14.2%	5,612	30.7%	34,134	34.2%
25-29	373	15.2%	3,242	17.7%	15,520	15.5%
30-34	314	12.8%	1,733	9.5%	7,072	7.1%
35-39	343	13.9%	970	5.3%	3,556	3.6%
40-44	412	16.7%	778	4.3%	2,147	2.2%
45-49	302	12.3%	499	2.7%	1,340	1.3%
50-54	152	6.2%	214	1.2%	680	0.7%
55+	118	4.8%	167	0.9%	638	0.6%

*The total number of cases for a disease may be larger than the sum of cases in each sub-category since cases with missing values for age and/or gender are only counted in the disease totals.

Section E. Hepatitis C Virus (HCV) Epidemiology in New York State

Hepatitis C Introduction

Hepatitis C Virus (HCV) infection, estimated to be the most common chronic blood borne infection in the US, causes liver inflammation and can lead to liver cirrhosis, liver cancer, liver failure and death.⁴⁻⁶ US residents infected with HCV numbers in the millions with estimates ranging from three to over five million with approximately 50 percent unaware of their positive status.⁷⁻¹⁰ HCV is the leading cause of liver transplants in the US and is the causative agent in 40 percent of chronic liver disease cases.^{4;6;11-13} HCV mortality rates have been rising for at least the last decade and nationally in 2006, the number of HCV related deaths exceeded that of HIV.^{11;14} Costs per patient for persons living with HCV in the US have been estimated to be on par with other chronic illnesses, such as asthma and cardiovascular disease; direct costs associated with HCV are expected to more than double to \$85 billion a year within the next two decades.¹⁵⁻¹⁸ In NYS, the prevalence has been estimated to exceed national estimates and the HCV related morbidity and mortality are estimated to rise for the next several years.^{19;20} Currently, the most common risk factor for acquiring HCV is injection drug use with HCV prevalence estimates among persons who inject drugs ranging between 40 and 90 percent.²¹

The following section summarizes the reported confirmed chronic/resolved HCV cases in NYS combining surveillance cases reported in NYC and the ROS from 2001 through 2009. The data presented reflects reported cases only and is not intended to represent incidence (all new infections) or prevalence (all persons currently infected with HCV). Surveillance data for HCV may less completely reflect the extent of disease than surveillance as already discussed for HIV and STDs. All of these surveillance systems reflect only diagnosed infections, and studies in select populations have shown that HCV testing rates are low, even among traditionally higher risk populations.^{9;10;22-24}

Hepatitis C Data Definitions

The HCV section includes results of a onetime match conducted in 2011 in the NYSDOH AI between the hepatitis surveillance data collected by the NYSDOH Bureau of Communicable Disease Control and the New York City Department of Health and Mental Hygiene (NYCDOHMH), Division of Disease Control, Bureau of Communicable Diseases. Because of the potential for individuals to be included in both surveillance systems, de-duplication was performed on confirmed chronic/resolved cases only. Cases were attributed to a geographic region based upon the earliest year in which they were reported. For more information on the surveillance activities of each department, please refer to their respective annual surveillance reports available for download at http://www.health.ny.gov/diseases/communicable/hepatitis/hepatitis_c/surveillance.htm and <http://www.nyc.gov/html/doh/html/cd/cd-hepabc-reports.shtml>.

- **Confirmed Chronic/Resolved HCV Case**

Reported cases are classified based upon laboratory testing results using the CDC/CSTE case definition for confirmed past or present HCV, referred to here as chronic/resolved, at <http://wwwn.cdc.gov/NNDSS/beta/bconditionssummary.aspx?CondID=84>.

This case definition includes individuals who are chronically infected and individuals who have resolved the infection either naturally or through treatment. For more information on the case definition please see the surveillance reports referenced above.

- **Case Year**

The case year presented is the year in which the local health department or laboratories reported the case to the NYSDOH or the NYCDOHMH.

- **Cases Over Time**

The number of cases reported over time is dynamic and should be interpreted with caution. Unconfirmed cases may be retrospectively updated to a confirmed case as new information becomes available. Therefore, the data presented here may not be the same as data presented in future years; thus, making conclusions regarding trends is difficult for more recent years. The data presented reflects newly reported cases and does not represent new infections or information on all persons currently infected.

- **Incarcerated Persons**

This report includes incarcerated individuals.

Incarcerated persons are generally counted as within the region in which they are incarcerated. For more information regarding reporting of incarcerated persons, please see the surveillance reports referenced above.

- **Age**

Age is calculated using case year and date of birth.

- **Race/Ethnicity**

Race/ethnicity is not a required field for HCV case reporting, and given most laboratories do not have this information, data are incomplete. Due to the high percentage of individuals with missing information on race/ethnicity, national level data within the racial/ethnic distribution provided from the National Health and Nutrition Examination Survey (NHANES)

are the best available data to demonstrate any racial/ethnic disparities. This should be interpreted with caution as NHANES sampling is restricted to non-institutionalized civilian populations only and therefore may underestimate the prevalence and additionally may not accurately reflect the prevalence within similar racial/ethnic groups in NYS.

Estimates from NHANES suggest that nationally:

- Prevalence is significantly higher among non-Hispanic blacks than both non-Hispanic whites and Mexican Americans for all survey years from 1988-2008²⁵ and,
- Prevalence among non-Hispanic whites and Mexican Americans does not significantly differ except for the survey years 1988-1994 in which the prevalence was significantly higher among Mexican Americans.²⁵

Additional Information

For further information on surveillance and reporting of HCV, contact the NYSDOH Bureau of Communicable Disease Control, at 518-473-4439. For further information on the data presented here, contact the Viral Hepatitis Section, Division of HIV and Hepatitis Health Care, AIDS Institute, New York State Department of Health, at 518-486-6806.

Hepatitis C Figures and Tables

Figure E1: Confirmed Chronic/Resolved HCV Cases Reported by Case Year, NY, 2001-2009

- Figure E1 shows the number of reported confirmed chronic/resolved HCV cases reported in NYS overall and within NYC and the ROS.
- For all years, there were more cases reported in NYC than the ROS; across all years, 62% of cases were reported in NYC.
- The ROS registry began in 2003, therefore data for 2001 and 2002 were retrospectively collected and are considered less complete. NYC began collecting data prior to 2001, but these data are not shown here.
- Because of the limitations already listed, these data are not considered to represent a trend. Rather, hepatitis reporting is considered stable; neither increasing nor decreasing over time.

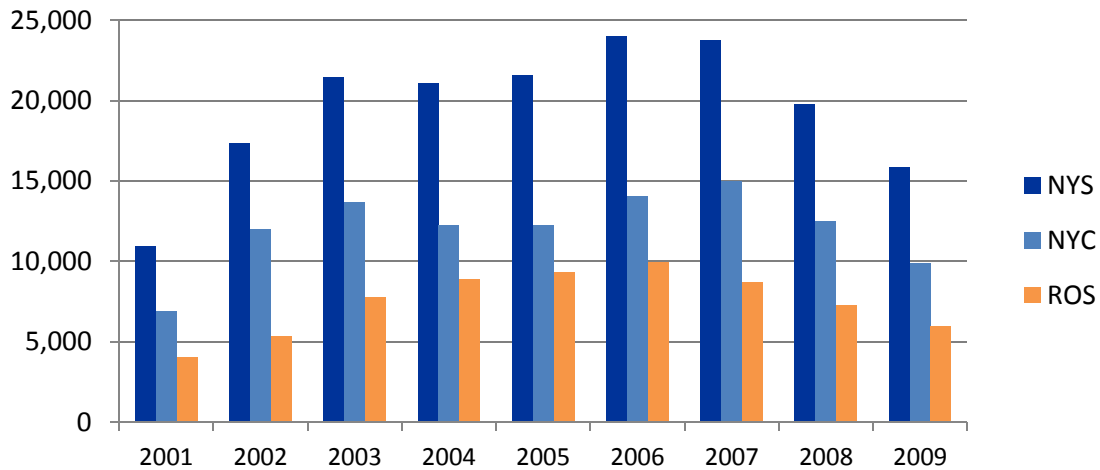
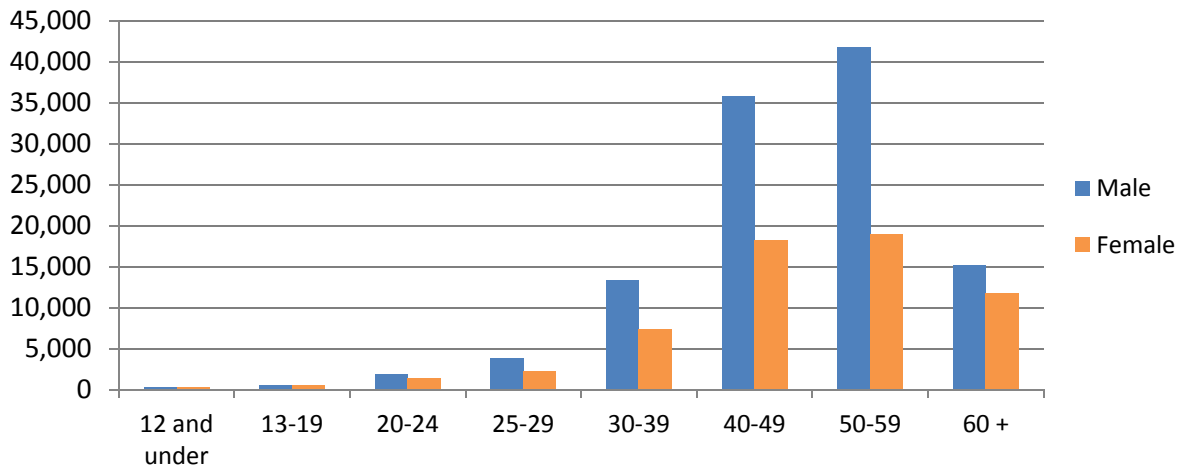


Figure E2: Number of Reported Confirmed Chronic/Resolved HCV Cases, by Gender and Age, NYS, through 2009

- Figure E2 shows that there were more male cases reported than female cases within all age groups excepting 13-19, in which the cases in females slightly exceeded those in males.
- In total, 82% of reported cases are over the age of 40.



Figures E3a and E3b: Distribution of Reported Confirmed Chronic/Resolved HCV Cases by Gender and Age, NYS, 2003 and 2009

- Figures E3a and E3b show the shift in the age distribution of reported cases over time comparing the percentage of total cases by gender in 2003 and 2009. Data from 2001 is considered less reliable, although the age distribution is similar to that of 2003.
- Although the majority of reported cases have been over the age of 40, there has been a shift in the age distribution over time.
- In 2003, the greatest percentage of cases peaks around the age of 50; in 2009, the figure has peaks around the ages of 55 and 30 with a greater percentage of cases reported in those under age 40 than occurred in 2003.

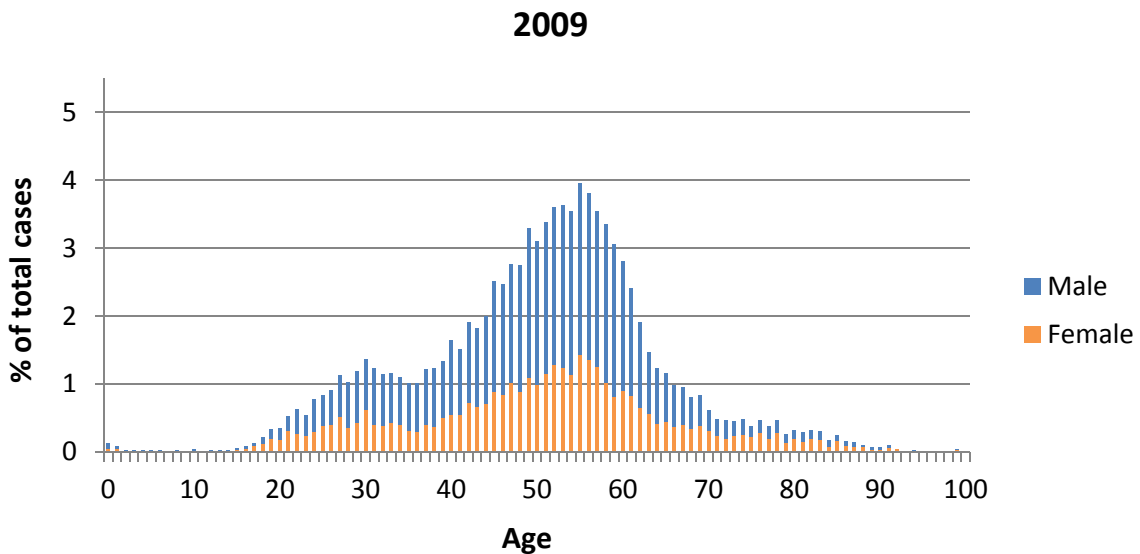
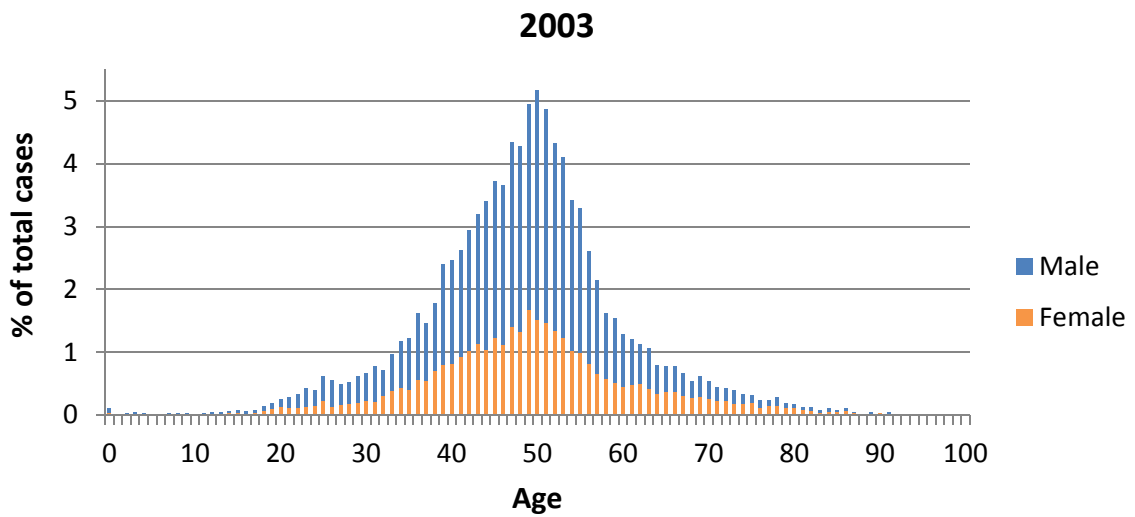


Table E1: Confirmed Chronic/Resolved HCV Cases Reported in NYS, 2001 - 2009

New York State	HCV Cases	
	#	%
Total	175,785	
Gender (2001-2009)		
Female	61,119	34.8%
Male	112,991	64.3%
Unknown	1,675	1.0%
Region (2001-2009)		
Rest of State	67,326	38.3%
New York City	108,459	61.7%
Age (2001-2009)		
12 and Under	615	0.4%
13-19	1,111	0.6%
20-24	3,403	1.9%
25-29	6,166	3.5%
30-39	20,973	11.9%
40-49	54,505	31.0%
50-59	61,340	34.9%
60 and Over	27,190	15.5%
Unknown	482	0.3%
Year		
2001	10,950	6.2%
2002	17,351	9.9%
2003	21,454	12.2%
2004	21,101	12.0%
2005	21,588	12.3%
2006	23,984	13.6%
2007	23,727	13.5%
2008	19,770	11.3%
2009	15,860	9.0%

Section F. Special Comment on Transgender Persons and HIV/AIDS

Introduction

During the process of planning for New York State's 2012 Epidemiologic Profile, the PPG was consulted to identify subgroups that were at particularly high risk for HIV/AIDS and would therefore receive special emphasis in the Epi Profile. The two main targeted communities that were identified were young MSM – particularly young black and Hispanic MSM – and women of color. These two subgroups have been reviewed in the main body of the Epi Profile. However, another group that received considerable attention during this consultation was transgender persons, particularly what are commonly referred to as male-to-female (MTF) transgender persons. It was recommended that while surveillance data do not currently include sufficient transgender information to adequately describe the HIV/AIDS epidemic in NYS with regard to transgender persons, the Epi Profile should include a special section devoted to a review of transgender HIV/AIDS surveillance in NYS, and in the absence of data specific to NYS, a review of the literature regarding transgender and HIV/AIDS. The purpose of this special section is to ensure that transgender persons are being adequately represented in the 2012 edition of the Epi Profile, so that efforts are undertaken to better understand the impact of HIV/AIDS among transgender persons in NYS, and to address any potential disparities with regard to this vulnerable population.

Transgender HIV/AIDS Surveillance in New York State

In recent years, New York State's HIV/AIDS surveillance system has been changed to allow documentation of transgender status. Forms used by providers and surveillance staff reviewing medical records have boxes for "transgender" that can be checked where applicable, although in reality very few cases in the surveillance system are labeled this way. In 2011, in an effort to improve the quality of data collected on diagnoses of HIV infection among transgender persons, the CDC revised the data elements for *sex assigned at birth* which is required for case reporting and *current gender* (which is not required). These changes were reflected in the new version of the CDC electronic surveillance system, known as eHARS, released in August, 2011. The NYSDOH BHAЕ subsequently sent a guidance document to staff responsible for data collection with instructions for collecting this information. Specifically, sex assigned at birth is intended to reflect the sex noted on the birth certificate, while current gender should reflect the current gender identification of the person. The acceptable values for current gender are as follows:

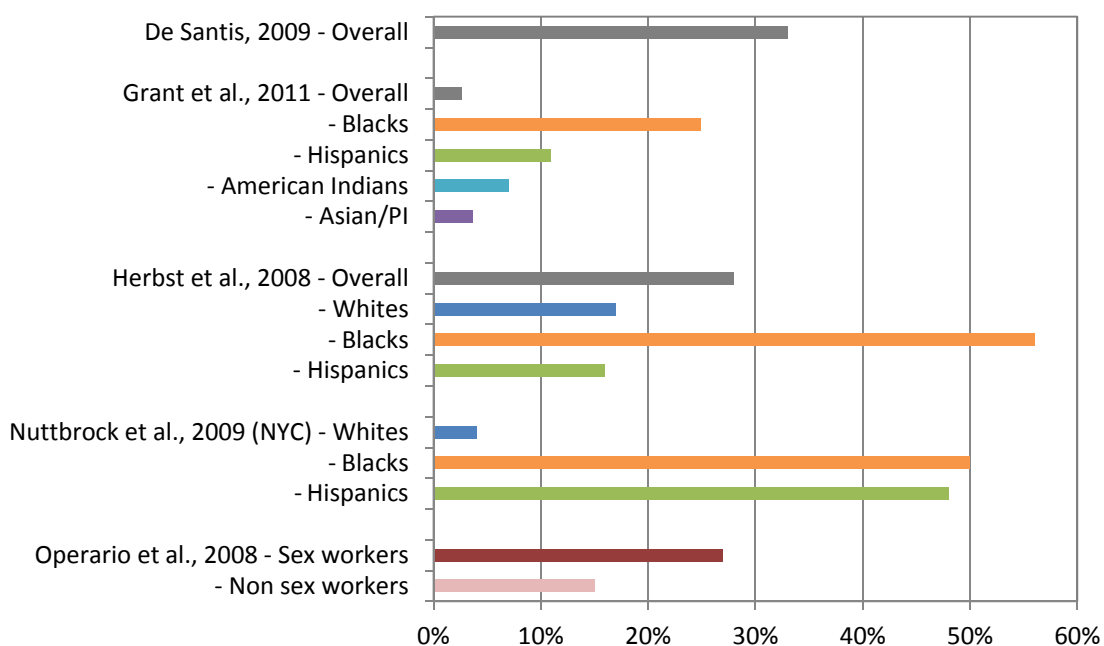
- Male
- Female
- Transgender MTF (male to female)
- Transgender FTM (female to male)
- Transgender – Unspecified
- Hermaphrodite, undetermined
- Unknown
- Refused/Declined to answer

A preliminary analysis of the NYS surveillance data indicates that in approximately 0.5% of living HIV cases through 2009, sex assigned at birth and current gender did not match, which may indicate transgender status. Further investigation and verification is needed.

Review of the Literature: Transgender Persons and HIV/AIDS

Several studies have been conducted to assess the extent and impact of HIV/AIDS among transgender persons.²⁶⁻³⁰ Most of the studies have focused on MTF transgender persons, referred to hence forward as transgender women.

Figure F1: Percent of Transgender Women with HIV: Results of 5 Major Studies



A study with the most relevance to NYS was published by Nuttbrock et al. in 2009, entitled “Lifetime Risk Factors for HIV/Sexually Transmitted Infections among Male-to-Female Transgender Persons.”²⁹ A total of 517 transgender women living in the New York Metropolitan area were interviewed about risk factors for HIV/STDs and were tested for HIV, syphilis, hepatitis B, and HCV. The percentage of white transgender women with HIV/STDs was 3.5% for HIV, 1.4% for syphilis, 6.5% for hepatitis B, and 3.6% for HCV. Meanwhile, nearly half of black and Hispanic transgender women were HIV positive (49.6% and 48.1%, respectively), and corresponding rates of syphilis (blacks: 21.6%; Hispanics: 14.7%), hepatitis B (blacks: 36.0%; Hispanics: 35.5%), and hepatitis C (blacks: 15.7%; Hispanics: 7.4%) were also substantially higher than their white counterparts. Black and Hispanic transgender women who openly disclosed their gender identity were at highest risk for HIV and hepatitis B.

Herbst et al. studied HIV prevalence and risk behaviors in 29 US studies of transgender persons (“Estimating HIV Prevalence and Risk Behaviors of Transgender Persons in the United States: A

Systematic Review”).²⁸ Among transgender women, HIV prevalence was 28% (range: 16-68%) when based on laboratory testing (four studies), and 12% (range: 3-60%) when it was based on self-report (18 studies). Black transgender women (56%) had a much higher prevalence than white (17%) and Hispanic (16%) transgender women. Overall, multiple sexual partners were reported by 32% of transgender women; 48% reported sex with casual partners; 44% reported unprotected receptive anal intercourse; 39% reported sex while being drunk or high; 27% injected hormones and 25% injected silicone; 42% reported commercial sex work; 54% reported suicidal thoughts; and 43% reported a history of physical abuse.

In 2008, Operario et al. reviewed 25 international studies conducted from 1990 to 2006 in a paper entitled “Sex Work and HIV Status among Transgender Women: Systematic Review and Meta-Analysis.”³⁰ It included 3,159 transgender women, of whom 2,139 were sex workers and 1,020 were non-sex workers. HIV prevalence was 27% among transgender women sex workers and 15% among non-sex workers. In 2009, a review of seven studies published between 2001 and 2008 explored HIV infection risk factors among 1,757 transgender women.²⁶ Overall HIV prevalence was 33% (range: 20-52%), and one study reported an annual rate of new HIV infections of 12% among transgender women.

Lastly, in a groundbreaking study entitled “Injustice at Every Turn: A Report of the National Transgender Discrimination Survey” Grant et al. from the National Center for Transgender Equality and the National Gay and Lesbian Task Force reported findings from a comprehensive national survey of 6,450 transgender and gender non-conforming persons throughout the US.²⁷ Their report provided stark figures that highlight the pervasive stigma, discrimination, abuse, and neglect faced by transgender persons in their everyday lives. The survey found that these barriers affected nearly every facet of transgender persons’ lives, and included: harassment and discrimination in education; employment discrimination and economic insecurity; housing discrimination and homelessness; discrimination in public accommodations; barriers to receiving updated identification documents; abuse by police and in jail/prison; and discrimination in health care and poor health outcomes. HIV prevalence, measured solely by self-report, was 2.6% overall, 0.8% among whites, but 24.9% among blacks, 10.9% among Hispanics, 7.0% among Native Americans, and 3.7% among Asian Americans. A limitation of the study was that racial/ethnic minorities were under-represented (and whites were subsequently over-represented) in the survey, which strongly influenced the low overall self-reported HIV prevalence of 2.6%. Furthermore, reported HIV prevalence most likely represents an underestimate as the CDC estimates that approximately 20-25% of infected persons are unaware of their HIV status.

Conclusion

Transgender women are clearly at high risk for acquisition of HIV/AIDS and other infectious diseases, with some studies reporting HIV prevalence figures among black and Hispanic transgender women that are among the highest observed of any population group in the US. However, the extent of HIV/AIDS among transgender persons in NYS is not currently known. Although options for documentation of transgender status are currently available in the surveillance system, documentation is rare. Also, approximately 50% of newly diagnosed cases are not reported by their medical providers, limiting the transfer of provider knowledge of transgender status to the surveillance system. As the number of transgender persons is small relative to the overall NYS population, it is difficult to determine how completely and accurately transgender status is reported. Other possible barriers to documentation of the impact of HIV in transgender persons include the lack of disclosure of transgender status to medical providers, and lack of provider comfort and awareness regarding discussion and documentation of gender identity.

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Section F. Special Comment on Transgender Persons and HIV/AIDS

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