# HIV/AIDS
# Epidemiologic Profile for the State of New Jersey 2008

*Preventing Disease With Care*

THE GREAT SEAL OF THE STATE OF NEW JERSEY

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**NEW JERSEY DEPARTMENT of HEALTH and SENIOR SERVICES**

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# Division of HIV, STD and TB Services
## *Preventing disease with care.*

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**Questions?  Contact New Jersey HIV/AIDS Hotline** . . . . . . . . . . . . . . **1-800-624-2377**

# The Division of HIV, STD and TB Services

## MISSION STATEMENT

The Division of HIV, STD and TB Services' (DHSTS) mission is to prevent, treat, and reduce the spread of HIV in New Jersey. In keeping with this mission, the DHSTS will monitor the epidemic and assure through its resources that individuals who are at risk or infected with HIV have access to culturally competent, community-based networks that provide qualitative and comprehensive services.

## VISION

Consistent with the mission, the DHSTS vision for providing HIV services is a coordinated community and statewide effort supported by public and private partnerships to provide comprehensive services that assure:

- All residents, regardless of age, race, gender, class, sexual orientation, or ethnic background, are equipped with appropriate information to make informed behavioral decisions and choices that will not place them and those with whom they interact at risk for HIV infection;

- Support for strong, positive community attitudes and social norms;

- Communities have the necessary resources for prevention, testing, and interventions to reduce the spread of HIV/AIDS, and

- Communities have the necessary comprehensive, community-based, culturally competent, affordable network of care services to maximize the quality of life for those individuals living with HIV/AIDS.

# HIV/AIDS EPIDEMIOLOGIC PROFILE

# FOR THE STATE
# OF NEW JERSEY 2008

## Acknowledgements

**We gratefully acknowledge the following for their work on the 2008 profile.**

# LIST OF ABBREVIATIONS

| | |
|---|---|
| ADDP | AIDS Drug Distribution Program |
| ADADS | New Jersey Alcohol and Drug Abuse Data System |
| AIDS | Acquired Immunodeficiency Syndrome |
| AUS | Anonymous Unlinked Surveys |
| AZT | Zidovudine |
| BRFSS | Behavioral Risk Factor Surveillance System |
| CARE | Comprehensive AIDS Resources Emergency (Act) |
| CDC | Centers for Disease Control and Prevention |
| CD | Division of Communicable Diseases |
| DHSTS | Division of HIV, STD and TB Services |
| DHSS | New Jersey Department of Health and Senior Services |
| EIP | Early Intervention Program |
| EMA | Eligible Metropolitan Area |
| eHARS | Enhanced HIV/AIDS Reporting System |
| GA | General Assistance |
| HAART | Highly Active Antiretroviral Therapy |
| HCV | Hepatitis C Virus |
| HITS | HIV Testing Survey |
| HIV | Human Immunodeficiency Virus |
| HRH | High-risk Heterosexual |
| ICD-10 | International Classification of Diseases Tenth Revision |
| IDU | Injection Drug Use(r) |
| MSM | Male-to-Male Sex/Men Who Have Sex with Men |
| MMWR | Morbidity and Mortality Weekly Report |
| NHBS | National HIV Behavioral Surveillance |
| PAAD | Pharmaceutical Assistance to the Aged and Disabled |
| PLWHA | People Living with HIV/AIDS |
| RVCT | Report of a Verified Case of Tuberculosis |
| RWCA | Ryan White CARE Act |
| SCBW | Survey of Childbearing Women |
| STD | Sexually Transmitted Disease |
| TB | Tuberculosis |
| UB | Uniform Billing |
| ZDV | Zidovudine (also known as AZT) |

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# EXECUTIVE SUMMARY

The New Jersey statewide epidemiologic profile was developed to assist groups planning HIV/AIDS services in the state. It summarizes the socio-demographic characteristics of New Jersey, describes the scope of the HIV/AIDS epidemic, identifies those at risk for HIV/AIDS, examines services that are needed, and highlights our successes and challenges.

New Jersey is the most densely populated state in the nation with a racially and ethnically diverse population. New Jersey's median household income ranks second in the nation in 2008. Less than nine percent of the households (8.7% in 2005, 8.5% in 2007 on Figure 3) have incomes below the poverty line. However, in eight of New Jersey's 21 counties, more than nine percent of residents have income below the poverty level. Approximately 19 percent of New Jersey residents between the ages of 19 and 64 are uninsured in 2007-2008 (Table 4).

Over 72,000 New Jersey residents have been reported with HIV/AIDS and approximately half of these individuals were deceased by the end of 2008. Nationally, New Jersey ranks fifth in cumulative AIDS cases, third in cumulative pediatric AIDS cases, and has one of the third highest proportions of women among those living with AIDS through 2007. Ten counties account for 82 percent of persons living with HIV/AIDS (PLWHA) in the state in 2008 with Essex and Hudson Counties having the highest rates of infection. Fifty-nine percent of the PLWHA in 2008 were aged 45 and older, and in 2006, 34 percent of newly diagnosed HIV/AIDS cases occurred in individuals 45 years of age and older.

As of December 31, 2008: one in 62 Black non-Hispanics, one in 181 Hispanics, and one in 705 White non-Hispanics was living with HIV/AIDS. The greatest proportion of PLWHA in 2008 were exposed through sexual contact (male-to-male sex or heterosexual sex), however, injection drug use continues to be a major mode of transmission.

Advances in treatment have led to a decline in the number of pediatric infections, and have slowed the progression from HIV to AIDS and enhanced survival after AIDS. The number of deaths due to HIV disease has declined, and over half of the HIV infected population is living more than ten years after diagnosis with AIDS. However, HIV disease remains the fourth leading cause of death for Black males, the seventh leading cause of death for Black females and the first leading cause of death for Black men and women, between the ages of 25 and 44 in 2005.

We have identified and provided care for many HIV-infected individuals in New Jersey. However, individuals are still being infected with a preventable disease, and an analysis of unmet need indicates that many individuals may not be in care. Self-reported survey and other data, increasing rates of sexually transmitted diseases, increased comorbidity between HIV and STD, and HIV and hepatitis C, as well as admissions to drug treatment in New Jersey demonstrate that risky behavior still occurs. Our challenge is to continue to care for those already infected while reducing the rate of new infections.

# INTRODUCTION

This epidemiologic profile provides a comprehensive analysis of the HIV/AIDS epidemic in New Jersey. It is a useful tool for planners and providers working to prevent and reduce the spread of HIV and care for those already infected. Specifically, the profile summarizes the socio-demographic characteristics of the population; describes the impact of HIV/AIDS on the population; identifies those at risk for becoming HIV infected; and describes the geographic distribution of the epidemic. The epidemiologic profile is written for use by all individuals interested in understanding, planning for, or providing services to those affected by HIV/AIDS in New Jersey.

**The profile addresses the following questions:**

- **What are the socio-demographic characteristics of the general population in New Jersey?**

- **What is the scope of the HIV/AIDS epidemic and its impact on communities, families and individuals in New Jersey?**

- **What are the indicators of risk for HIV/AIDS infection among New Jersey residents?**

- **What is the unmet need for HIV services in New Jersey?**

- **What are the barriers and challenges to preventing the spread of HIV and providing treatment for persons living with HIV in New Jersey?**

## Profile Strengths and Limitations

When making planning decisions, it is important to consider the overall strengths and limitations of the available data.

**Some of the strengths of this profile are:**

- **New Jersey has had a comprehensive HIV/AIDS reporting system for over 20 years that includes information on demographic characteristics, clinical and laboratory findings, and transmission risk for men, women and children infected with HIV/AIDS.**

- **New Jersey has had Enhanced Perinatal Surveillance since 1995, a system that follows children born to HIV positive mothers.**

- **New Jersey participated in several studies of risk taking and testing behaviors.**

**Some of the limitations of this profile are:**

- **Information is not available on persons who are HIV positive but not reported, or who have not been tested.**

- **Information may be incomplete due to reporting delays and missing data on a person's exposure to HIV.**

- **Information may be incomplete on those persons who are diagnosed with HIV in New Jersey and reported to the data system but relocate out-of-state.**

# Data Sources

In order to present an accurate description of the epidemic we have used data from multiple sources. The most current analysis available is presented for each source of data; however the time frames differ from one source to another. Due to a lag in reporting, data for new diagnoses are presented through 2006. Data for persons living with HIV/AIDS are presented through 2008 as the reporting lag has minimal effect on this value. Data from the United States Census Bureau July 1, 2007 Bridged Population Estimates is used for calculating rates by race/ethnicity, gender distribution and county. When population data are not available for 2007, data from the 2000 Census are used.

**Below is a list of the data sources used in this profile. A more detailed description of each data source can be found in Appendix A.**

- **Behavioral Surveys;**
- **Enhanced Perinatal Surveillance (EPS);**
- **HIV/AIDS Reporting System (eHARS);**
- **National Sexually Transmitted Disease Surveillance;**
- **New Jersey Alcohol and Drug Abuse Data System (ADADS);**
- **New Jersey Death Certificate Data;**
- **Tuberculosis Surveillance;**
- **Uniform Billing Hospital Discharge Data (UB-92);**
- **United States Census Bureau;**
- **Urban Institute and Kaiser Commission on Medicaid and the Uninsured;**
- **New Jersey Department of Labor's Division of Labor Market and Demographic Research, and**
- **Communicable Disease Services (Hepatitis C and Sexually Transmitted Diseases surveillance).**

## Definitions

Some of the definitions used in this Epidemiologic Profile are provided to assist in understanding HIV/AIDS data and to provide information on why some data are included.

- An **HIV case** is a person diagnosed and reported to the state's HIV/AIDS Reporting System (HARS) with HIV infection.  An **AIDS case** is a person with HIV infection who has an opportunistic infection or a CD4+ count of less than 200 cells/mm or whose proportion of CD4 (+) T-lymphocytes is less than 14 percent of their total lymphocytes and who has been reported to the HARS.  All AIDS cases are persons infected with HIV, but not all persons infected with HIV are AIDS cases.

**Note**:  Since the HIV disease may be seen as a continuum, throughout this profile the data will be shown on HIV/AIDS when possible.  In addition, when New Jersey is compared to the rest of the nation, only AIDS cases can be reported because a standardized national system of named reporting of HIV cases is not available.

- **Cumulative cases** include all cases that have been diagnosed and reported since 1982, including those individuals who have died.

- **Prevalence** is the total number of individuals who have been diagnosed with HIV/AIDS, minus those who have died.  This profile provides data on **estimated prevalence** by using the number of persons **living with HIV or AIDS** who have been diagnosed, reported to the eHARS and are not known to have died.  It does not include data on persons who are infected, but who have not been diagnosed and/or reported to eHARS.

- A **rate** is the number of cases (of a condition or event) divided by the total population exposed to the condition or event in a given time period.  A rate is often expressed as cases per 100,000.  In this profile, **estimated prevalence rates** are based on HIV/AIDS cases that were reported to eHARS and are not known to have died.  Actual prevalence rates are reported only for specific sub-populations for which special studies were conducted.  **Estimated incidence rates** are based on the number of cases reported as diagnosed during the year.  Incident infections can only occur if prevalent infections exist.  In other words, the disease must be transmitted from someone who already has it.  Although **incidence** and **prevalence** are different, they are related and both are important to consider in planning for prevention, as well as, for care and treatment.

- **Incidence** is the number of new cases within a given period of time. This profile includes **estimated incidence**, the number of persons who have been diagnosed during the year and reported to the eHARS. Since the actual date of HIV infection is not known, the date of diagnosis is used.

**Note**: Because rates account for differences in the size of sub-populations, the use of rates is essential for comparing different population categories at different times or places.

- **Risk exposures** - Although we usually cannot determine exactly how or when a person was infected, it is possible to determine which behaviors put a person at risk for infection. In the 1980s the Centers for Disease Control and Prevention (CDC) established a hierarchy to categorize modes of exposure for persons reported with AIDS based on their risk exposures. Behaviors most likely to lead to infection are higher in the hierarchy than those less likely to lead to infection.

Individuals are categorized as follows. Men who report sexual contact with other men, and men who report sexual contact with both men and women are placed in the 'male-to-male sex" (MSM) category. Persons reporting having injected drugs anytime since 1978 are placed in the "injection drug use" (IDU) category. Men with both a history of sexual contact with other men and injection drug use are placed in the "MSM-IDU" category. Then follows persons with hemophilia/coagulation disorder. Persons who report specific heterosexual sex with a person with, or at increased risk for, HIV infection (e.g., an injection drug user or person known to be infected with HIV) are placed in the "Heterosexual" category. Heterosexual sex with a person of unknown risk or unknown HIV status is reported as "heterosexual sex with partners of unknown HIV risk," and heterosexual risk with persons of known risk will be reported by the risk status of the partner. Persons who received a transfusion prior to March 1985 were then placed in the "other/unknown" category. The ascertainment of exposure category is incomplete, especially for cases reported recently. Some cases currently in the "other/unknown" category may be redistributed later to known exposure as follow-up investigations are completed.

Individuals diagnosed under the age of 13 are considered pediatric cases. Perinatal transmission occurs when the virus is passed from mother to child during pregnancy or delivery.

# SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE GENERAL POPULATION IN NEW JERSEY

Lying between New York City and Philadelphia, in the heart of a highly urbanized area, New Jersey is a geographically small, but heavily populated state. With over 8.6 million people in 2007 (three percent of the total national population), New Jersey is the eleventh most populated state, but the fifth smallest geographically. New Jersey is one of the most urbanized states in the nation. According to the United States Census Bureau, New Jersey is the most densely populated state, with 1,170 people per square mile in 2007 and is the only state in which all counties are officially classified as metropolitan.
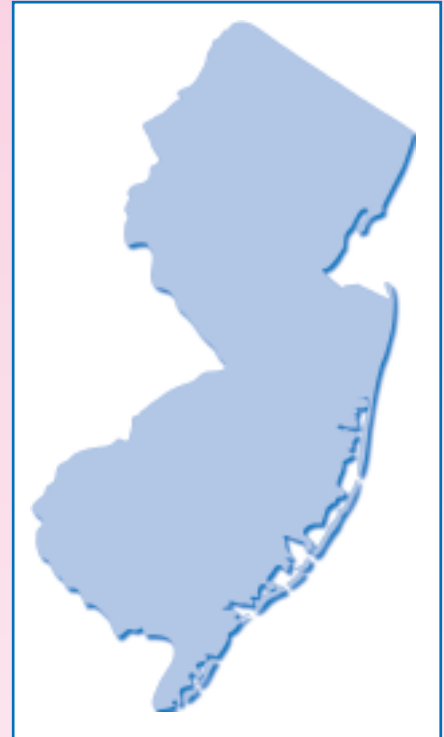
The state includes vast wetlands and undisturbed stretches of the Delaware Bay, as well as many farms, and scenic and rugged terrain.

One of the state's most treasured prizes is its 127 miles of white sand beaches that draw thousands of visitors and families each year to enjoy the surf, sand, sun, fun and excitement of the famous Jersey Shore.

## Demographics

Slightly more residents of New Jersey were female (51.1%) than male (48.99%) in 2007. Just below one third of New Jersey residents were between 25 and 44 years of age (Figure 1). A larger proportion of males is under 45 years of age compared to females (62.8% for males versus 58.2% for females). The larger number of females in the 65 and older age category is a reflection of the longer life expectancy of females. According to the 2007 population estimate, New Jersey's population is older than the national average (median age 38 years in New Jersey compared to 36 years nationally). The percentage of the population aged 65 and older is 13.1 percent in New Jersey compared to 12 percent nationally. Similar to the national trend, the oldest age group (85 years and over) is growing at the fastest rate in New Jersey. With 8,685,920 residents, New Jersey was the nation's eleventh most populous state in 2006. As of the July 1, 2007 population estimates, New Jersey had a 0.23 percent growth rate between 2006 and 2007. This growth rate is ranked forty-third among the nation's 50 states. New Jersey's net gain of almost 20,000 residents between 2006 and 2007 was the twenty-ninth largest numerical increase in the nation.

**Figure 1.**
**Percentage Distribution of the Population of New Jersey by Age Group and Gender –**
**Estimates as of July 1, 2007**
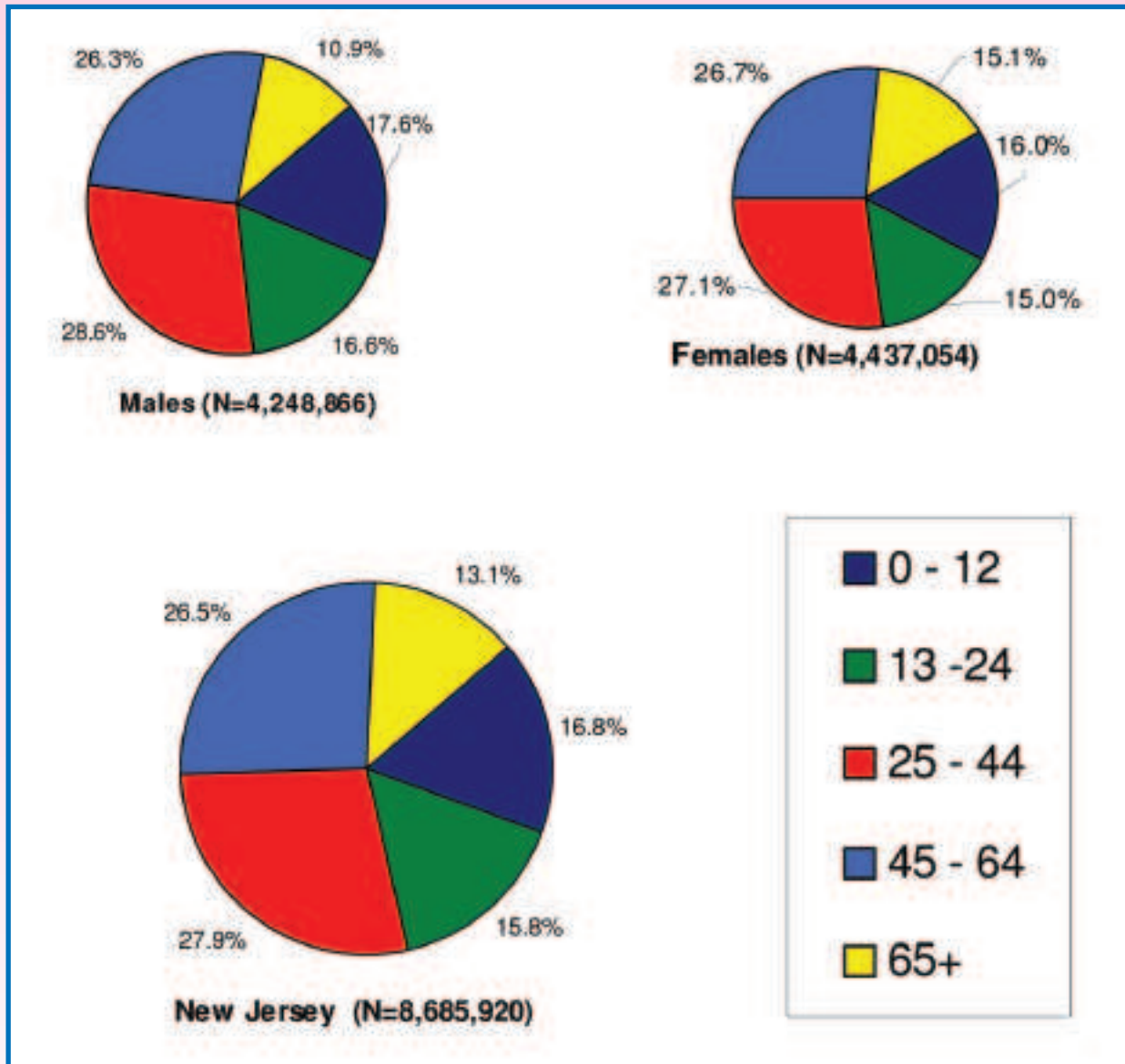


*Source: U.S. Census Bureau July 1, 2007 Bridged-Race Population Estimates*

According to the 2007 population estimates (Figure 2), 62.7 percent of the population of New Jersey were White non-Hispanic; 13.6 percent were Black non-Hispanic; 7.6 percent were Asian/Pacific Islander; 15.9 percent were Hispanic; and fewer than one percent were Native American/Alaska Native. New Jersey is more racially and ethnically diverse than most other states in the nation. Approximately 15 percent of New Jersey's residents were foreign immigrants as of 2000 and it ranks fifth in percentage of foreign-born persons in the nation.

**Figure 2.**
**Percentage Distribution of the Population of New Jersey by Race/Ethnicity and Gender –**
**Estimates as of July 1, 2007**
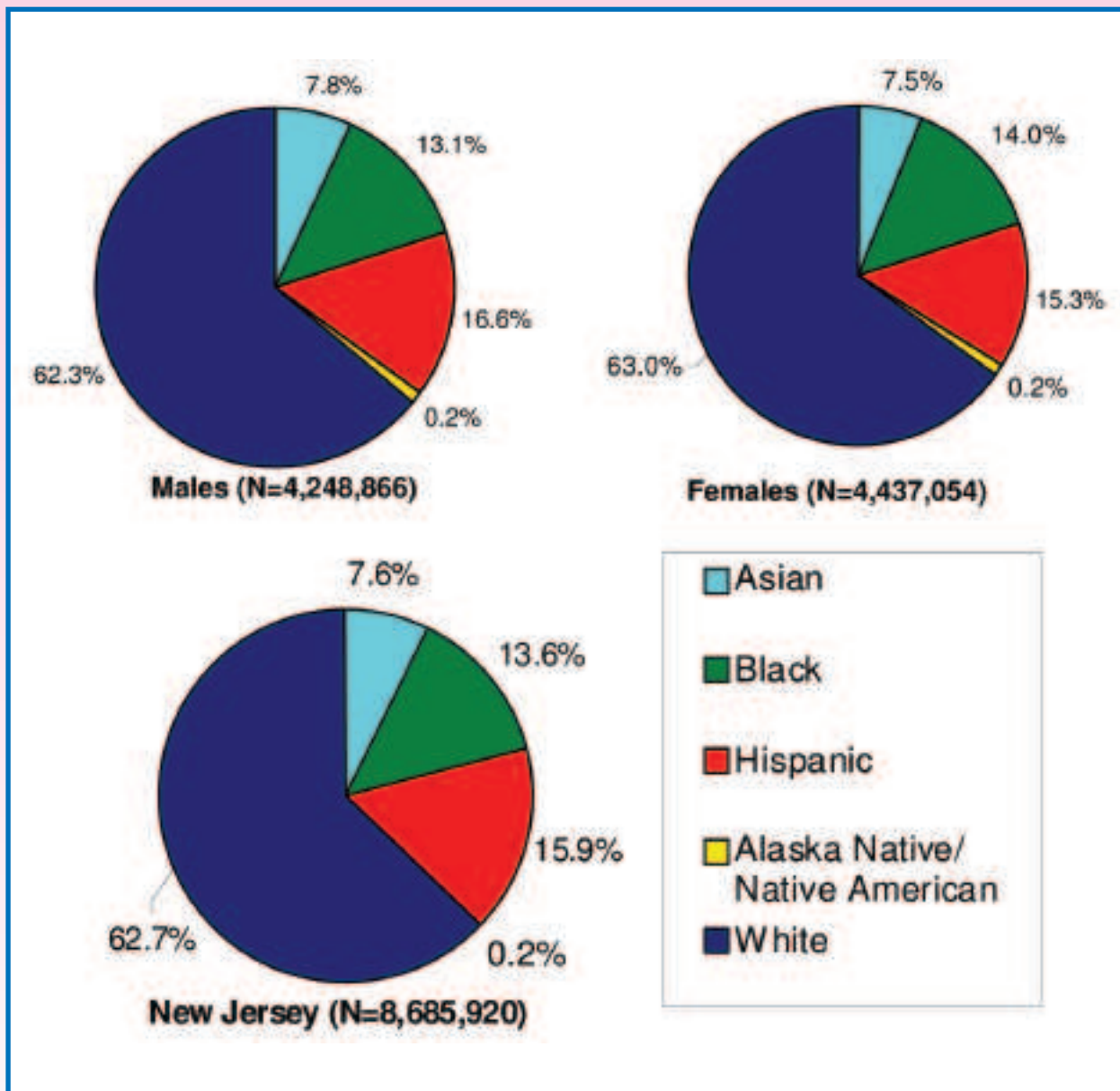


Source: *U.S. Census Bureau July 1, 2007 Bridged-Race Population Estimates.*

According to the 2000 Census, New Jersey had the seventh highest population of Hispanics in the United States. Hispanics represented 9.6 percent of the state's population in 1990 and 15.9 percent in 2007. Persons of Hispanic origin (of any race) accounted for approximately 55.2 percent of New Jersey's total population growth from 1990 through 2000. The Hispanic population grew 51.0 percent during this period outpacing the 4.4 percent growth rate in the non-Hispanic population. By 1997, there were estimated to be more than one million Hispanic residents in the state, and the population grew to 1,117,191 according to the 2000 Census.

During the decade of the 1990s, however, the fastest growing population in New Jersey was Asian/Pacific Islander (85.7% increase).  This was a continuation of the high growth rate among this population during the 1980s.  With an estimated population of 514,273 persons of Asian or Pacific Islander background, New Jersey ranked fifth nationally in numbers of Asian or Pacific Islander residents in the 2000 Census.  New Jersey's six percent of the total population was the highest proportion of Asian or Pacific Islanders outside the nation's West Coast.  Based on data from the New Jersey Department of Labor's Division of Labor Market and Demographic Research, only California had a higher proportion of Asian or Pacific Islanders as of 2000.

From the 1990 to the 2000 censuses, the Black population in New Jersey increased by 16.8 percent.  Blacks (including black Hispanics) represented 14.8 percent of the state's population in 2000.  With a population of 1,124,469 in 2000, New Jersey's Black population ranked thirteenth in the nation.  In 2007, however, the Black population accounted for 13.6 percent of the state's population.  The Native American and Alaska Native population is estimated to have grown by 82.1 percent in the state between the censuses of 1990 and 2000.  Current estimates reveal that there are 16,957 residents of Native American/Alaska Native origin (including Hispanics) in the state, representing 0.2 percent of the total population in 2007.

Between 1990 and 2000, New Jersey's White population (including Hispanics) increased by 4.1 percent.  With a population of 6,629,830, New Jersey had the ninth highest White population among the 50 states in 2000.  Based on the 2007 population estimate, the state's majority racial/ethnic group (White non-Hispanic) is the minority in Essex and Hudson Counties.  In Essex County the largest racial/ethnic group is Black non-Hispanic; in Hudson County the largest racial/ethnic group is Hispanic (Table 1).  The largest concentrations of Hispanics are in Hudson, Passaic, Union and Cumberland Counties.  The largest concentrations of Black non-Hispanics are in Essex, Union, Mercer, and Cumberland Counties.  The largest concentrations of Asian/Pacific Islanders are in Middlesex, Bergen and Somerset Counties.

## Table 1.
## Percentage Distribution of the Population of New Jersey by Race/Ethnicity and County of Residence – Estimates as of July 1, 2007

| County | Population No. | Hispanic N= 1,382,031 | White non-Hispanic N= 5,441,852 | Black non-Hispanic N= 1,181,124 | American Indian/ Alaska Native N= 16,957 | Asian/ Pacific Islander N= 663,956 |
|---|---|---|---|---|---|---|
| Atlantic | 270,644 | 14.4 | 62.3 | 16.5 | 0.2 | 6.6 |
| Bergen | 895,744 | 14.5 | 65.5 | 5.6 | 0.2 | 14.2 |
| Burlington | 446,817 | 5.4 | 73.4 | 16.7 | 0.2 | 4.3 |
| Camden | 513,769 | 11.9 | 63.9 | 19.2 | 0.2 | 4.7 |
| Cape May | 96,422 | 4.3 | 89.6 | 5.0 | 0.2 | 0.9 |
| Cumberland | 155,544 | 23.3 | 54.4 | 20.3 | 0.7 | 1.2 |
| Essex | 776,087 | 18.4 | 36.2 | 40.7 | 0.2 | 4.5 |
| Gloucester | 285,753 | 3.6 | 83.5 | 10.3 | 0.2 | 2.4 |
| Hudson | 598,160 | 40.5 | 35.1 | 12.5 | 0.3 | 11.6 |
| Hunterdon | 129,348 | 4.3 | 89.2 | 2.9 | 0.1 | 3.5 |
| Mercer | 365,449 | 12.8 | 59.0 | 20.0 | 0.2 | 8.1 |
| Middlesex | 788,629 | 17.1 | 54.2 | 9.7 | 0.2 | 18.8 |
| Monmouth | 642,030 | 8.5 | 78.5 | 7.8 | 0.1 | 5.2 |
| Morris | 488,475 | 10.6 | 77.5 | 3.2 | 0.1 | 8.6 |
| Ocean | 565,493 | 6.8 | 87.8 | 3.4 | 0.1 | 1.9 |
| Passaic | 492,115 | 34.6 | 48.3 | 12.2 | 0.2 | 4.6 |
| Salem | 66,016 | 5.1 | 78.6 | 15.0 | 0.4 | 0.9 |
| Somerset | 323,552 | 12.1 | 66.6 | 8.7 | 0.1 | 12.5 |
| Sussex | 151,478 | 5.7 | 90.4 | 1.9 | 0.1 | 2.0 |
| Union | 524,658 | 25.1 | 48.6 | 21.6 | 0.2 | 4.6 |
| Warren | 109,737 | 6.3 | 87.6 | 3.4 | 0.1 | 2.7 |
| Total | 8,685,920 | 15.9 | 62.7 | 13.6 | 0.2 | 7.6 |

*Source:  U.S. Census Bureau July 1, 2007 Bridged-Race Population Estimates.*

New Jersey residents are more likely to speak languages other than English than United States residents overall. In the United States as a whole, Spanish is the most frequently spoken language other than English; the same is true in New Jersey (Table 2).

**Table 2.**
**Major Languages Spoken at Home in New Jersey**

| | New Jersey % Residents N=8,125,179 | United States % Residents N=283,149,507 |
|---|---|---|
| Spanish | 14.0% | 12.2% |
| Other Indo-European | 8.3% | 3.7% |
| Asian/Pacific Island | 4.2% | 3.0% |
| Other Language | 1.3% | 0.8% |

*Source: U.S. Census Bureau: 2008 American Community Survey*
*Note: These data are collected from persons five years of age and older*

## Socio-economic Status

According to the American Community Survey (ACS) reports, the median household income estimates in the 2008 ACS ranged from a median of $70,545 for Maryland to $37,790 for Mississippi. The New Jersey 2008 median household income ($70,378) is well above the national median household income ($52,029), and is ranked the second highest among all states. Not unexpectedly given the average income levels, the percentage of New Jersey's population living in poverty is lower than in the nation as a whole. Less than nine percent of New Jersey's residents (8.5%) had incomes below the level of poverty in 2007 compared to 13.0 percent nationally. However, in seven of New Jersey's 21 counties, more than 10 percent of the residents have incomes below the poverty line (Figure 3). Above all, four counties, (Essex, Passaic, Hudson and Cumberland) have 13 percent or more of its residents below the poverty level. Especially, Cumberland County has 17.4 percent of its residents below the poverty level in 2007 according to the Census estimates released in December 2008.

According to the 2006 American Community Survey (ACS), in New Jersey, 86.1 percent of the state's residents (aged 25 years and over) have high school diplomas (Table 3), compared to 84.1 percent nationally (data not shown). In the 2006 survey, 33.4 percent of New Jersey residents were found to have bachelor's degrees, compared to 27.0 percent nationally. The counties with the lowest percentages of high school graduates are Cumberland, Hudson, and Passaic. The counties with the highest percentage of high school graduates and bachelor's degrees or higher are Hunterdon, Morris and Somerset.

From the ACS conducted in 2006 and 2007, it was found that for individuals 19 through 64 years of age, 19.4 percent of New Jersey residents do not have health insurance coverage compared to 19.7 percent of United States residents as a whole. Most persons (69.5%) in New Jersey were covered by employer based health care insurance. However, coverage through individual plans was small (4%). New Jersey's Medicaid program insured 5.2 percent, of the population nationally. Medicaid accounts for eight percent of health insurance coverage for adults (Table 4).

**Figure 3.**
**Percentage of New Jersey Residents under the Poverty Level**
**by County in 2007**
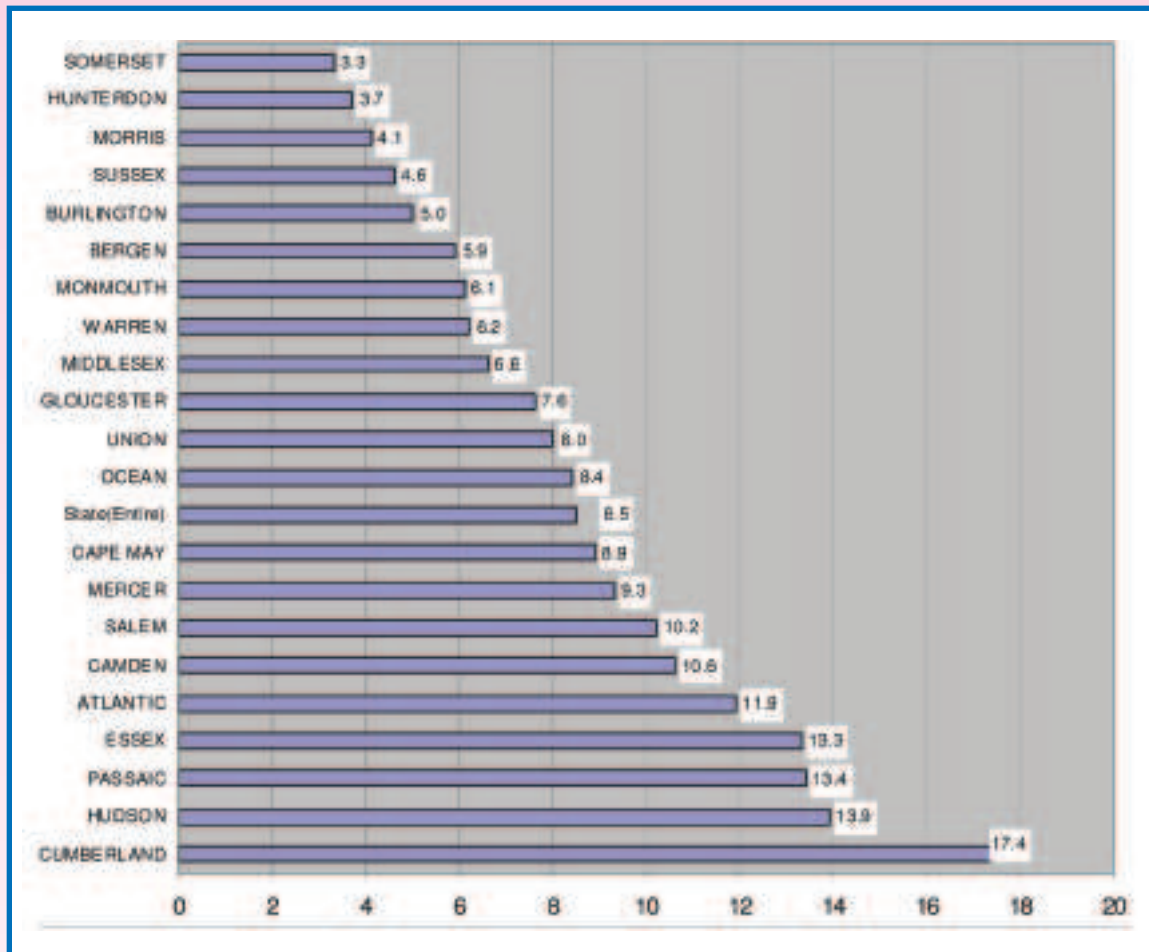


*Source:  Small Area Income and Poverty Estimates Program, U.S. Bureau of the Census, December 2008.*

**Table 3.**
**Percentage of Population 25 Years or Older in New Jersey with High School Diplomas or Higher by County**

| County | High school diploma or higher | Bachelor's degree or higher |
|---|---|---|
| Atlantic | 84.4 | 23.2 |
| Bergen | 90.7 | 44.3 |
| Burlington | 90.6 | 32.8 |
| Camden | 84.7 | 27.1 |
| Cape May | 88.5 | 27.2 |
| Cumberland | 74.6 | 12.5 |
| Essex | 80.8 | 31.7 |
| Gloucester | 89.1 | 26.3 |
| Hudson | 79.3 | 32.3 |
| Hunterdon | 94.2 | 47.7 |
| Mercer | 86.3 | 38.1 |
| Middlesex | 87.6 | 37.6 |
| Monmouth | 91.1 | 38.7 |
| Morris | 92.5 | 47.5 |
| Ocean | 88.6 | 24.5 |
| Passaic | 81.0 | 23.6 |
| Salem | 85.8 | 17.0 |
| Somerset | 92.8 | 49.2 |
| Sussex | 93.0 | 30.2 |
| Union | 84.0 | 30.5 |
| Warren | 89.0 | 28.5 |
| **State of N.J.** | **86.9** | **34.0** |
| **Entire U.S.A** | **84.5** | **27.4** |

*Source: U.S. Census Bureau, 2006-2008 American Community Survey.*

**Table 4.**
**Health Insurance Coverage of Adults 19-64, New Jersey (2007–2008), United States (2008)**

| | N.J.% N=5,242,200 | U.S.% N=184,079,200 |
|---|---|---|
| Employer | 68.3 | 62.0 |
| Individual | 4.3 | 5.8 |
| Medicaid | 6.3 | 8.6 |
| Other Public | 2.1 | 3.2 |
| Uninsured | 18.9 | 20.4 |
| **Total** | **100.0** | **100.0** |

*Source: Urban Institute and Kaiser Commission on Medicaid and the Uninsured: Health Facts.*

# SCOPE OF THE EPIDEMIC

## Reported Cases

The reported data underestimates true incidence, prevalence because the individuals who are infected but not tested and diagnosed are not included in the reported cases.  It is estimated that undiagnosed or unreported cases comprise approximately one-quarter of all infections.



## Overview

In the third decade of the HIV epidemic in the United States, there is still no vaccine or cure.  Although successful public health efforts have reduced the number of annual new infections from over 150,000 in the late 1980s to the estimated 56,000 HIV infections in 2008, the fight to end HIV/AIDS related illness and death continues.

Following the introduction of combination antiretroviral therapy in the 1990s, the number of deaths and new AIDS cases in the United States began to decline for the first time in the history of the epidemic.  Between 1995 and 1998, the annual number of new AIDS cases, fell by 38 percent (from 69,242 to 42,832) and deaths by 63 percent (from 51,760 to 18,823).  According to the Centers for Disease Control and Prevention (CDC), declines in morbidity and mortality have stabilized in more recent years.

Nationally, minorities have been disproportionately affected by the HIV/AIDS epidemic.  Black non-Hispanics, who represented only 12.6 percent of the United States 2008 population, accounted for 41 percent of the cumulative AIDS cases through 2008 and 50.2 percent of estimated new HIV infections in 2008.  Hispanics, who comprised about 15.4 percent of the United States population, accounted for 19.2 percent of the cumulative AIDS cases and 19.2 percent of the estimated new HIV infections in 2008.

By the end of December 2008, over 72,000 New Jersey residents have been reported with HIV/AIDS and approximately half of these individuals have died.  As of December 31, 2008, New Jersey had a cumulative total of 52,393 AIDS cases reported.  There were also 20,281 persons reported with HIV (not AIDS) in the state as of that date.  Nationally, New Jersey ranked fifth in cumulative AIDS cases, and third in cumulative pediatric AIDS cases through 2008.  New Jersey also has one of the highest proportions (32.4%) of females among those living with AIDS in 2007 compared to a national figure of 23.5% of cases.

From the beginning of the HIV/AIDS epidemic, New Jersey differed from the national profile. In the early years of the epidemic, injection drug users represented the largest proportion of AIDS cases in New Jersey, while men who have sex with men represented the largest proportion of AIDS cases nationally. New Jersey reported HIV infections in large numbers of women and minorities in the mid to late 1980s, well before most of the country saw large numbers in those populations. As of December 31, 2008, women represent 35.2 percent of persons living with HIV/AIDS, and minorities represent 77.9 percent of persons living with HIV/AIDS.

Overall, diagnosed cases and deaths have declined slightly in the last few years following dramatic declines during the 1990s. The number of people living with HIV/AIDS has increased. Prior to 1992, AIDS, but not HIV-only cases were reported. The number of AIDS cases increased steadily from 1985 through 1991. The implementation of named HIV reporting in 1992 led to a spike in diagnosed cases of HIV/AIDS in that year as HIV cases were added to the count. Diagnoses of new HIV/AIDS cases decreased from 1992 through 2006 with a slight increase occurring in 2000. The increase in 2000 may be due to the fact that viral load reporting was initiated in that year and the fact that additional laboratory reports were added to the registry, rather than because of a change in the epidemic. Deaths (from any cause) of persons with HIV/AIDS rose steadily until 1995. Improved treatments led to a sharp decline in deaths after 1995 and smaller decreases since 1997 (Figure 4).

**Figure 4.**
**Diagnosed HIV/AIDS Cases, Deaths and Persons Living with HIV/AIDS by Year 1987-2006 in New Jersey**
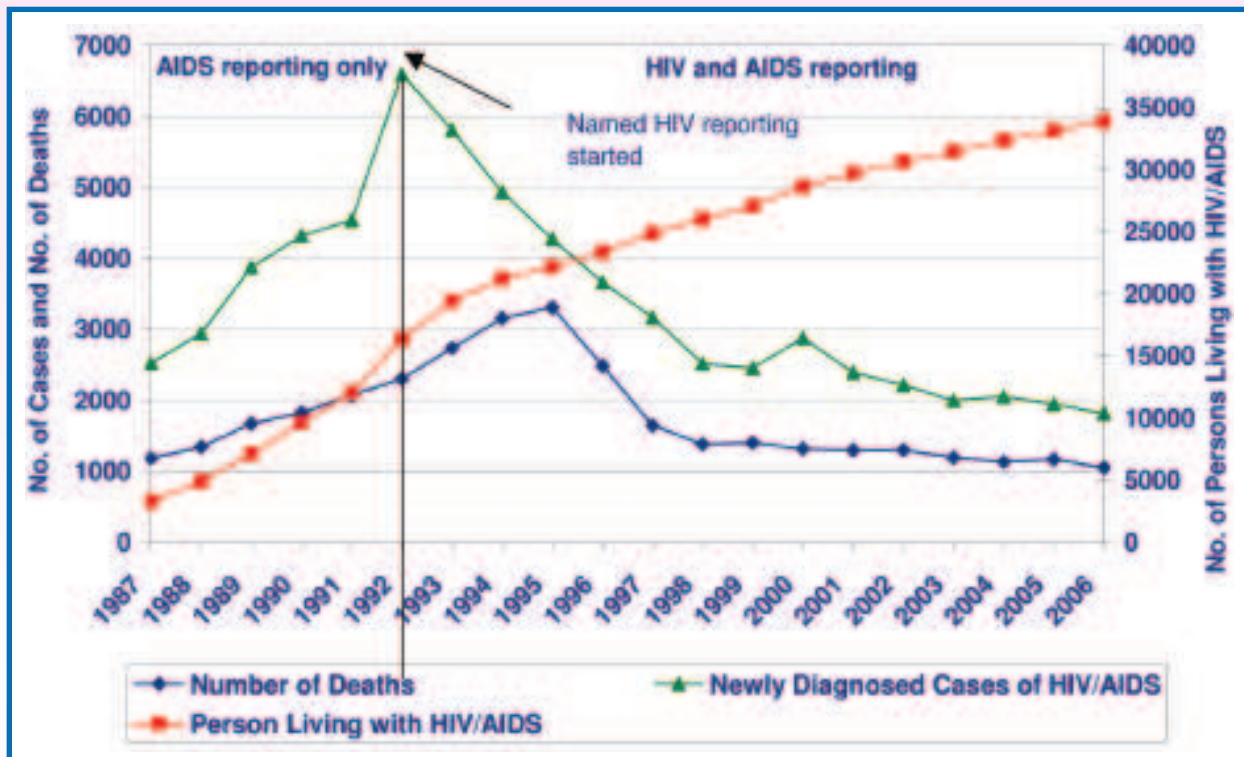


*Data Source: New Jersey eHARS as of December 31, 2008.*

The epidemic differs geographically and across racial/ethnic groups, gender, age groups and exposure categories.  An overview of the epidemic is shown in Table 5.  Discussions on the impact of geographic location, gender, race/ethnicity, age, and exposure category follow.

**Table 5.**
**Overview of HIV/AIDS in New Jersey**

| | Living with HIV/AIDS in 2008 | | | | | | Diagnosed HIV/AIDS in 2006 | | | | | |
| | Male | | Female | | Total | | Male | | Female | | Total | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Race/Ethnicity** | | | | | | | | | | | | |
| **Black, non-Hispanic** | 11,233 | 50 | 7,791 | 64 | 19,024 | 54 | 583 | 47 | 369 | 63 | 952 | 53 |
| **Hispanic** | 5,300 | 23 | 2,318 | 19 | 7,618 | 22 | 304 | 25 | 118 | 20 | 422 | 23 |
| **White, non-Hispanic** | 5,724 | 25 | 1,991 | 16 | 7,715 | 22 | 321 | 26 | 90 | 16 | 411 | 23 |
| **Other/Unknown [a,b]** | 384 | 2 | 174 | 1 | 558 | 2 | 24 | 2 | 6 | 1 | 30 | 2 |
| **Age Group** | Age at 12/31/2008 | | | | | | Age at the first diagnosis | | | | | |
| **0 – 12** | 85 | 1 | 92 | 1 | 177 | 1 | 2 | 0 | 4 | 1 | 6 | 0 |
| **13 – 24** | 665 | 3 | 478 | 4 | 1,143 | 3 | 132 | 11 | 69 | 12 | 201 | 11 |
| **25 – 44** | 8,051 | 36 | 5,063 | 41 | 13,114 | 38 | 689 | 56 | 328 | 56 | 1,017 | 56 |
| **45 – 64** | 12,962 | 57 | 6,237 | 51 | 19,199 | 55 | 386 | 31 | 173 | 30 | 559 | 31 |
| **65+** | 878 | 4 | 404 | 3 | 1,282 | 4 | 23 | 2 | 9 | 1 | 32 | 2 |
| **Exposure** | | | | | | | | | | | | |
| **MSM** | 7,231 | 32 | N/A | N/A | 7,231 | 20 | 397 | 32 | N/A | N/A | 397 | 22 |
| **IDU** | 5,671 | 25 | 3,182 | 26 | 8,853 | 26 | 139 | 11 | 71 | 12 | 210 | 11 |
| **MSM/IDU** | 815 | 4 | N/A | N/A | 815 | 2 | 18 | 2 | N/A | N/A | 18 | 1 |
| Heterosexual sex with: | | | | | | | | | | | | |
| -Injection Drug User | 399 | 2 | 1,333 | 11 | 1,732 | 5 | 13 | 1 | 18 | 3 | 31 | 2 |
| -Bisexual male | N/A | N/A | 117 | 1 | 117 | 1 | N/A | N/A | 3 | 1 | 3 | 0 |
| -HIV+ partner with other risk | 1,998 | 9 | 3,118 | 25 | 5,116 | 15 | 92 | 8 | 124 | 21 | 216 | 12 |
| -Partner with unknown risk | 3,725 | 16 | 3,171 | 26 | 6,896 | 19 | 334 | 27 | 267 | 46 | 601 | 33 |
| **Other/Unknown [b]** | 2,802 | 12 | 1,353 | 11 | 4,155 | 12 | 239 | 19 | 100 | 17 | 339 | 19 |
| **Total** | **22,641** | **100** | **12,274** | **100** | **34,915** | **100** | **1,232** | **100** | **583** | **100** | **1,815** | **100** |

a.  Other includes Asian/Pacific Islander and American Indian/Alaska Native.
b.  Other/Unknown are combined due to the low number of cases in the 'other' category.
Source:  New Jersey eHARS as of December 31, 2008

## Geographic Impact By County

Cases of HIV/AIDS are not equally distributed across the state. Patterns of Persons Living with HIV/AIDS (PLWHA) in 2008 and those newly diagnosed in 2006 are similar (Figures 5 and 6). The highest concentration of PLWHA is along the New York City to Philadelphia corridor. This includes the Counties of Passaic, Bergen, Hudson, Union, Essex, Middlesex, Monmouth, and Mercer. The second highest concentration of HIV/AIDS cases is in the Philadelphia to Atlantic City corridor that includes Camden and Atlantic Counties. The counties with the highest AIDS incidence rate in 2006 are Essex, Hudson, Atlantic and Salem.

**Figure 5.**
**Estimated Persons Diagnosed With HIV/AIDS in New Jersey, 2006**



Sussex 9
Passaic 118
Bergen 92
Warren 4
Morris 41
Essex 505
Union 133
Hudson 248
Hunterdon 7
Somerset 29
Middlesex 96
Mercer 72
Monmouth 74
Ocean 32
Burlington 43
Gloucester 25
Camden 99
Salem 16
Atlantic 80
Cumberland 23
Cape May 11
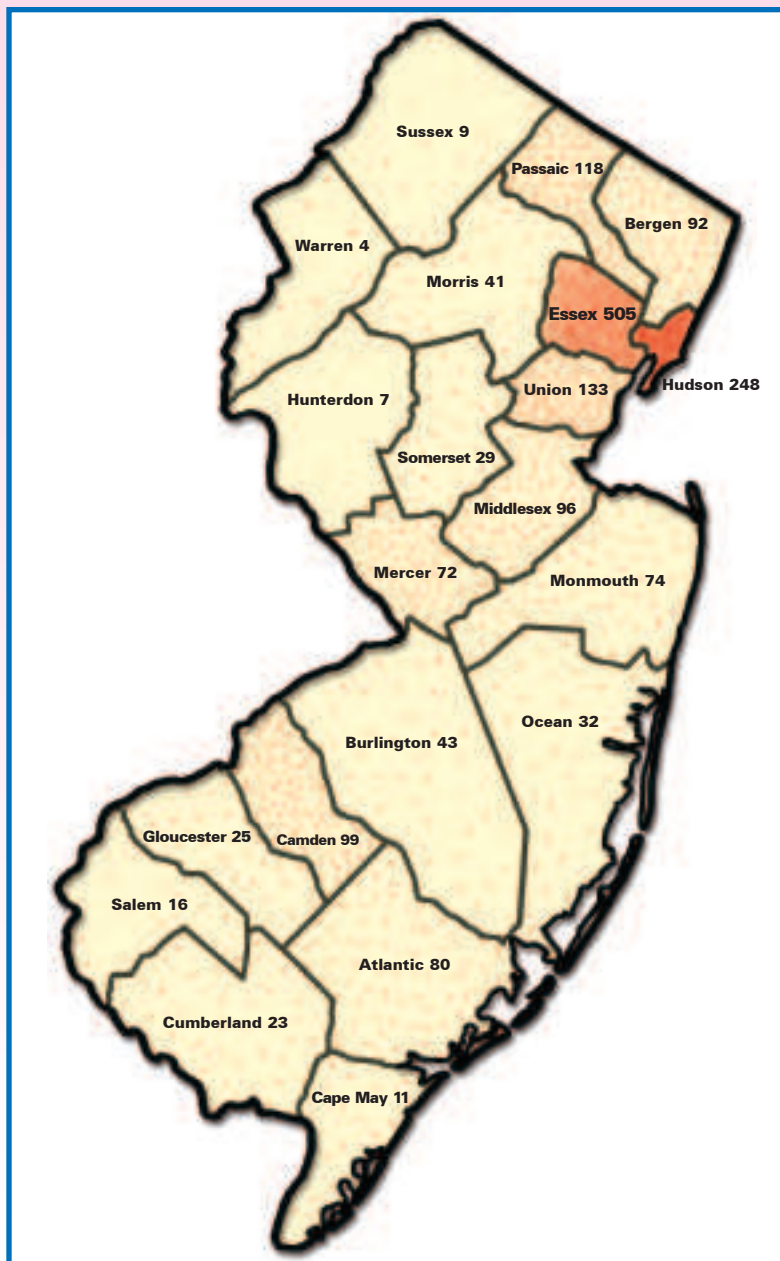
*Note: One dot equals one person. Dots are randomly placed within each county.*
*Source: New Jersey eHARS as of December 31, 2008.*

## Figure 6
## Estimated Rate of Persons Living with HIV/AIDS in New Jersey
## as of December 31, 2008
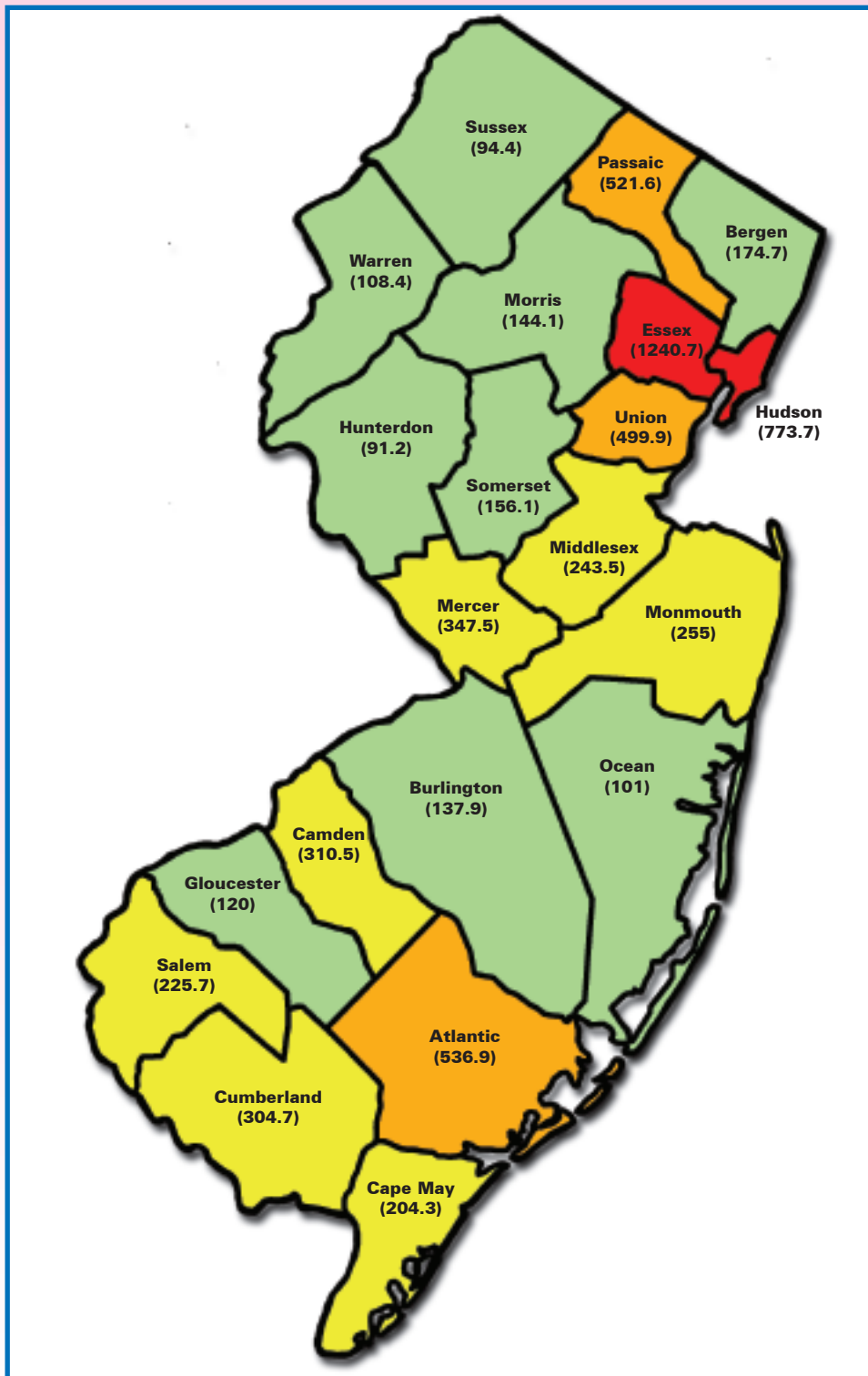


Sussex
(94.4)

Passaic
(521.6)

Bergen
(174.7)

Warren
(108.4)

Morris
(144.1)

Essex
(1240.7)

Hudson
(773.7)

Hunterdon
(91.2)

Union
(499.9)

Somerset
(156.1)

Middlesex
(243.5)

Mercer
(347.5)

Monmouth
(255)

Burlington
(137.9)

Ocean
(101)

Camden
(310.5)

Gloucester
(120)

Salem
(225.7)

Atlantic
(536.9)

Cumberland
(304.7)

Cape May
(204.3)

*Note: Rates are per 100,000 population based on the July 2007 Bridged Race Estimates.*
*Source: New Jersey eHARS as of December 31, 2008.*

All 21 counties in New Jersey are classified by the United States Census Bureau as "metropolitan," but only ten counties (Atlantic, Bergen, Camden, Essex, Hudson, Mercer, Middlesex, Monmouth, Passaic and Union) account for 81.5 percent of persons living with HIV/AIDS in the state in 2008. Five of these counties (Essex, Hudson, Passaic, Union and Atlantic) are disproportionately affected, this is most dramatic in Essex and Hudson Counties. Statewide, one in 249 individuals were living with HIV/AIDS in 2008. In Essex County that number was one in 81 persons, and in Hudson County one in 129 individuals was living with HIV/AIDS in 2008.

## Project IMPACT

Intensive Mobilization to Promote AIDS Awareness through Community-based Technologies (IMPACT) is a city-by-city community mobilization initiative designed to galvanize and support African American leaders to reduce the spread of HIV/AIDS in cities with the highest prevalence of HIV/AIDS. These ten cities have the highest prevalence rates of African Americans living with HIV/AIDS. About 62.4 percent of the state's African Americans living with HIV/AIDS resided in one of the ten IMPACT cities in 2008. However, these cities show a wide variation in HIV/AIDS prevalence (Figure 7). Atlantic City and Newark have the highest prevalence rates of African Americans living with HIV/AIDS. One in 34 African American residents in Atlantic City, and one in 31 African American residents in Newark were living with HIV/AIDS as of December 31, 2008. Newark had the highest number (4,623) of African Americans living with HIV/AIDS among the ten IMPACT cities in 2008. Over one in four (26%) African Americans living with HIV/AIDS in the state resided in Newark.

**Figure 7**
**Persons Living with HIV/AIDS in Top 10 Cities with Highest Number of**
**People Living with HIV/AIDS**



Paterson (1722)   Newark (5914)
East Orange (1315)
Irvington (977)   Jersey City (2877)
Elizabeth (1091)
Plainfield (519)
Trenton (1050)
Camden (808)
Atlantic City (794)

*Source: New Jersey eHARS as of December 31,2008.*

## HIV/AIDS Services Planning

The Division of HIV, STD and TB Services (DHSTS) holds the primary responsibility for program development, as well as planning and resource allocation for HIV care and treatment, counseling and testing, and prevention services.  Three major funding sources are utilized to support direct client services, planning and evaluation activities, and administrative costs as follows:  1) Ryan White Part B funds from the Health Resources and Services Administration (HRSA) support a wide array of care and treatment, case management and support services for individuals living with HIV disease; 2) Funds from the CDC are used for HIV counseling, testing and prevention programs, and 3) Financial support from the state of New Jersey allows the DHSTS to more fully fund the major cost categories mentioned above and to respond to emerging needs as they are identified.

To provide a comprehensive and efficient system of addressing the HIV epidemic, the state has established the New Jersey HIV/AIDS Planning Group (NJHPG).  The NJHPG is a collaborative formed by the New Jersey Department of Health and Senior Services (NJDHSS), DHSTS that combines HIV Care and Treatment and HIV Prevention effort in order to make the best use of resources for both, while improving efficiency and effectiveness in planning in the state of New Jersey.

The NJHPG is comprised of up to 40 members; membership is diverse and includes health care providers, case managers, governmental representatives, as well as persons from the affected and infected community.  The group meets monthly to address ongoing concerns and emerging issues in the fight against HIV.

Six New Jersey epicenters receive Part A funds and all six have active community planning councils to prioritize services and allocate HRSA funding for primary medical care and support services.  The Ryan White Part A regions in New Jersey are:

- Bergen and Passaic Counties;
- Hudson County;
- Middlesex-Somerset-Hunterdon Counties;
- Essex, Morris, Sussex, Union, and Warren Counties;
- Cumberland County, and
- Burlington, Camden, Gloucester and Salem Counties (Philadelphia region).

**Figure 8**
**Rate per 100,000 of HIV/AIDS Cases Diagnosed in 2006 by Planning Area**



Bergen-Passaic
Title I EMA
15.2

Newark
Title I EMA
33.7

Jersey City
Title I EMA
41.4

Middlesex-Somerset-Hunterdon
EMA
10.7

**Incidence Rate: HIV/AIDS cases
Newly Diagnosed in Calendar Year
2006 per 100,000 total population**

0 - 11

12 - 18

19 - 29

30 - 45

Mercer Title II
Consortium
19.7

Monmouth-Ocean
Title II Consortium
8.8

Southern NJ Portion of
Phila Title I EMA and
Title II Consortium
14.0

Atlantic-Cape May
Title II Consortium
24.8

Cumberland County
Title I EMA
14.9

*Note: State of New Jersey as a whole Year 2006 Incidence Rate=21 new HIV/AIDS cases per 100,000
population as of July 1, 2006 Bridged estimates.*
*Source: New Jersey eHARS as of December 31, 2008*

# Race/Ethnicity

## Living With HIV/AIDS

A pattern of disparity of HIV/AIDS among the various racial/ethnic groups has been relatively consistent. By 2008 Black non-Hispanics represented 55 percent of the total number of persons reported living with HIV/AIDS, although they represent only 14 percent of the 2007 population of New Jersey. Hispanics accounted for 21 percent of those living with HIV/AIDS in 2008 while representing just 15 percent of the New Jersey population in 2007. White non-Hispanics represented 22 percent of persons living with HIV/AIDS, but represented 64 percent of the total population. Latinos are infected with HIV/AIDS at a rate three times greater than White non-Hispanic. Asians, Native Americans and those with unknown race/ethnicity accounted for two percent of the infected population and seven percent of the state's total population (Table 6). In New Jersey HIV/AIDS affects the African American community more than any other racial, ethnic or demographic group. The infection rates below more clearly illustrate this disparity.

As of December 31, 2008:

- **One in 62 Black non-Hispanics was living with HIV/AIDS;**
- **One in 181 Hispanics was living with HIV/AIDS, and**
- **One in 705 White non-Hispanics was living with HIV/AIDS.**

The prevalence rate among Black non-Hispanic men living with HIV/AIDS in 2008 is almost ten times greater than for White non-Hispanic men. This disparity is even greater among women. Table 6 shows that the prevalence rate among Black non-Hispanic females in 2008 is 17.6 times greater than of White non-Hispanic females. Black non-Hispanic females represent 40.9 percent of cases living with HIV/AIDS among Black non-Hispanic (males and females combined); Hispanic females represent 30.4 percent of Hispanics living with HIV/AIDS; and White non-Hispanic females represent 25.8 percent of cases living with HIV/AIDS among White non-Hispanic in 2008 (Table 6). This may be related to the fact that the mode of exposure varies across racial and ethnic groups as discussed in the section on Risk Exposure.

### Table 6.
### Persons Living with HIV/AIDS in New Jersey by Race/Ethnicity and Gender in 2008

| Race | Male | | | Female | | | Total | | |
|------|------|------|------|--------|------|------|-------|------|------|
| | No. | % | Rate | No. | % | Rate | No. | % | Rate |
| Black, non-Hispanic | 11,233 | 50 | 2,009 | 7,791 | 64 | 1,253 | 19,024 | 55 | 1,611 |
| Hispanic | 5,300 | 23 | 752 | 2,318 | 19 | 342 | 7,618 | 22 | 551 |
| White, non- Hispanic | 5,724 | 25 | 216 | 1,991 | 16 | 71 | 7,715 | 22 | 142 |
| Other[a] | 384 | 2 | 114 | 174 | 1 | 51 | 558 | 2 | 82 |
| Total | 22,641 | 100 | 533 | 12,274 | 100 | 277 | 34,915 | 100 | 402 |

a. Other includes Asian/Pacific Islander and American Indian/Alaska Native.
Note: Rates are per 100,000 population based on the July 2007 Bridged Race Estimates.
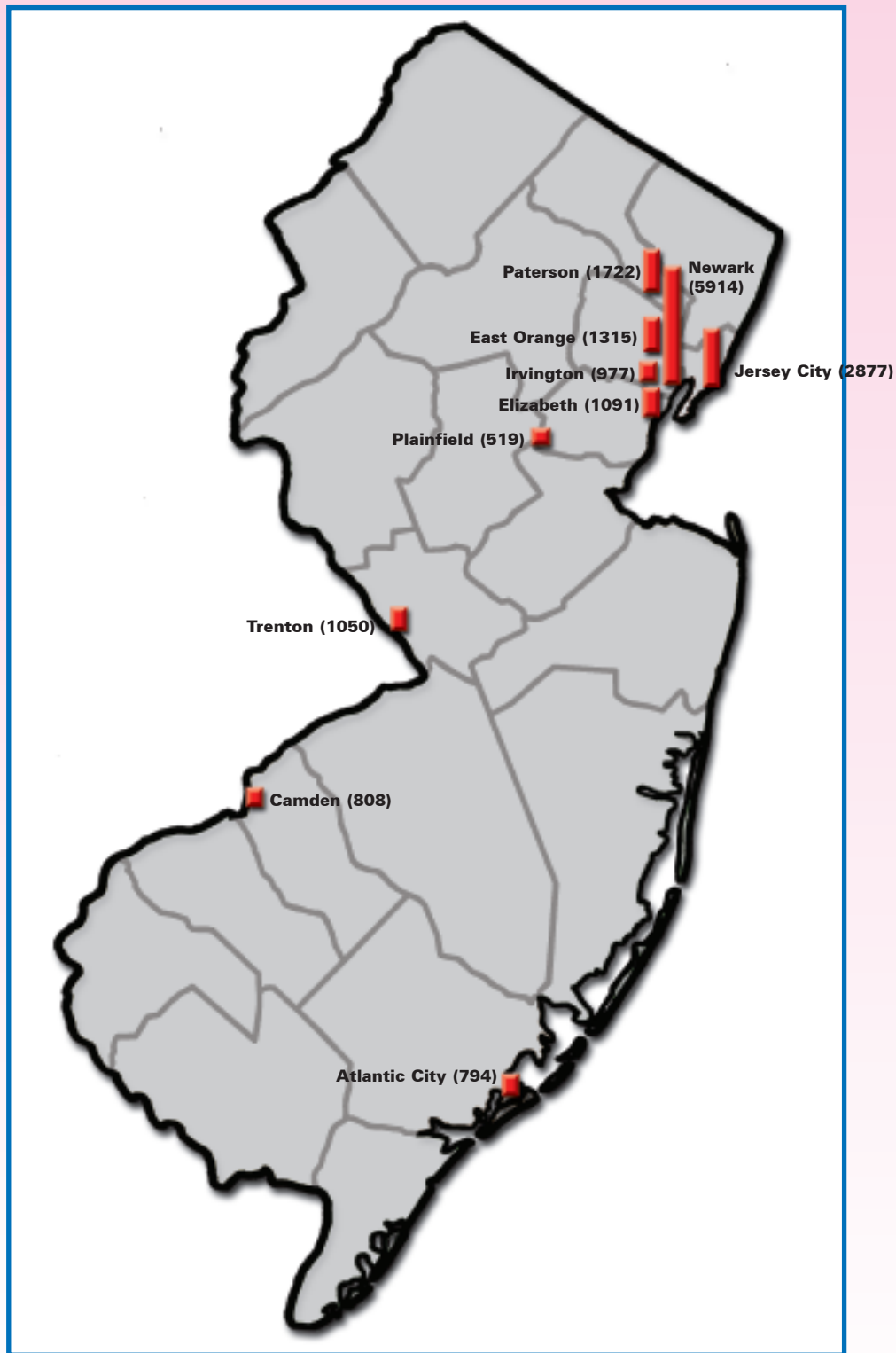Source: New Jersey eHARS as of December 31, 2008.

## Trends in New Diagnoses

This same disparity in the impact of HIV/AIDS among the various racial/ethnic groups is also reflected in the pattern of infections diagnosed from 2002 to 2006 (Figure 9).  Although generally, the number of HIV infections has decreased in each racial/ethnic group, minorities still comprise the majority of new infections.  Blacks account for 52.5% of new infections, but only 13.6% of the New Jersey population in 2006; and Hispanics accounted for 23.3% of new infections, but only15.6% of the New Jersey population in 2006.  The number of infections has decreased from 460 in 2002 to 411 in 2006 among White non-Hispanics, and from 1,254 in 2002 to 952 in 2006 among Black non-Hispanics.  Among Hispanics the decline was from 470 in 2002 to 422 in 2006.

**Figure 9.**
**Estimated Number of Individuals Diagnosed with HIV/AIDS in New Jersey by Race/Ethnicity and Year of Diagnosis:  2002-2006**



| | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|
| White | 460 | 384 | 405 | 418 | 411 |
| Black | 1,254 | 1,132 | 1,139 | 1,032 | 952 |
| Hispanic | 470 | 424 | 465 | 468 | 422 |
| Other | 31 | 54 | 41 | 26 | 30 |
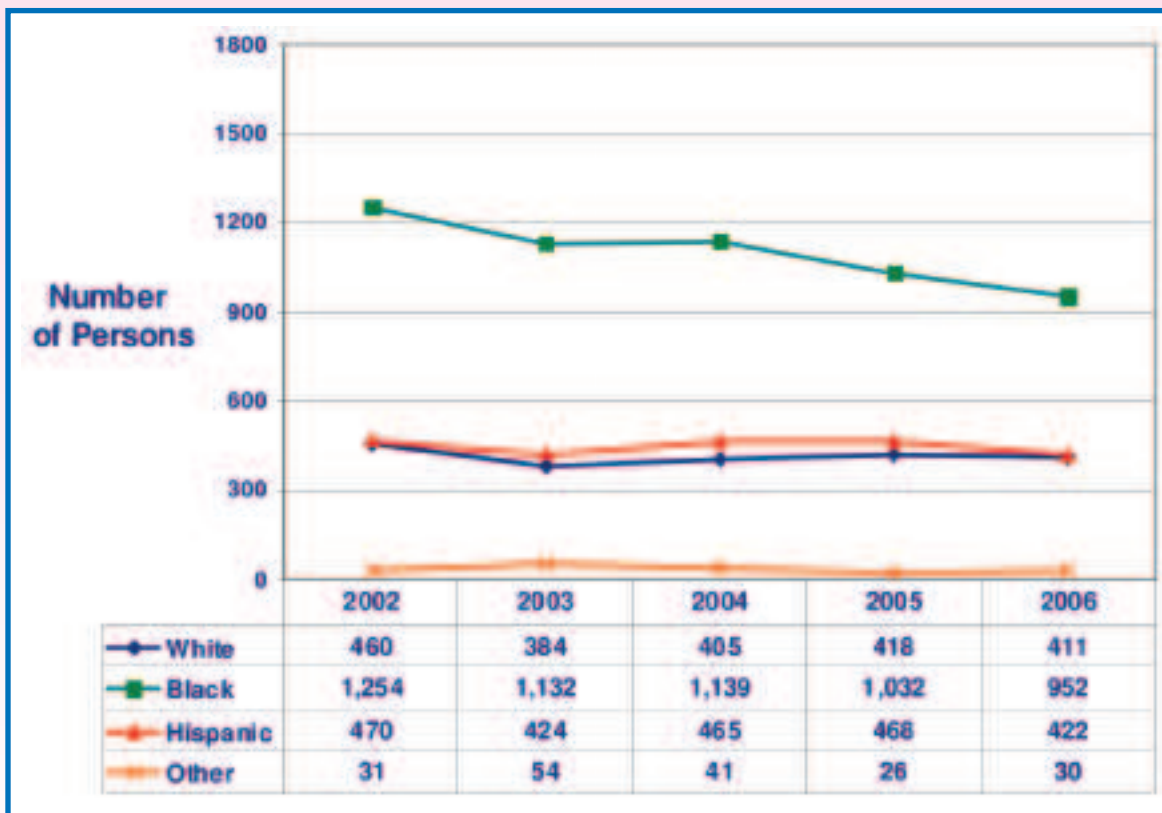
*Source:  New Jersey eHARS as of December 31, 2008.*

# Exposure Category

## Living With HIV/AIDS

At the beginning of the epidemic, the highest proportion of AIDS cases in New Jersey were exposed through IDU.  In 2008 persons exposed through IDU (25.5% IDU, and 2.3% IDU and MSM) and IDU associated (4.9% heterosexual sex with an IDU) continue to account for a large proportion of cases (32.7%).  Those exposed through sexual contact (heterosexual gender and male-to-male) accounted for 61 percent of all persons living with HIV/AIDS in 2008 (Tables 7 and 8).  The high percentages in reported exposures due to heterosexual sex is in part due to the fact that this report classifies heterosexually active persons with partners of unknown risk as exposed through heterosexual sex.  Previously these individuals were classified as having an unknown risk.  Sixty one percent of men reporting heterosexual exposure as their mode of exposure had partners with unknown risk, compared to just 41 percent of women (Table 7).

### Table 7.
### Adult/Adolescent Persons Living with HIV/AIDS in New Jersey by Risk Exposure, 2008

| Risk Exposure | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| MSM[a] | 7,231 | 32 | N/A | N/A | 7,231 | 21 |
| IDU[b] | 5,671 | 25 | 3,182 | 26 | 8,853 | 26 |
| MSM/IDU | 815 | 4 | N/A | N/A | 815 | 2 |
| Heterosexual sex | 6,122 | 27 | 7,739 | 63 | 13,861 | 39 |
| Adult Other/Unknown[c] | 2,414 | 11 | 947 | 8 | 3,361 | 10 |
| Pediatric Exposure | 303 | 1 | 314 | 3 | 617 | 2 |
| Total | 22,556 | 100 | 12,182 | 100 | 34,738 | 100 |

Note:  Does not include individuals under the age of 13 as of December 31, 2008.
a.   MSM=Male-to-male sex
b.   IDU=Injection drug use
c.   Other/Unknown are combined due to the low number of cases in the 'other' category.
Source:  New Jersey eHARS as of December 31, 2008.

### Table 8.
### Adult/Adolescent Persons Living with HIV/AIDS in New Jersey
### Exposed by Heterosexual, by Partner Risk, 2008

| Risk of Heterosexual Partner | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Injection Drug User | 399 | 6 | 1,333 | 17 | 1,732 | 12 |
| Bisexual Male | N/A | N/A | 117 | 2 | 117 | 1 |
| HIV+ Partner with Unspecified Risk | 1,998 | 33 | 3,118 | 40 | 5,116 | 37 |
| Partner with Unknown Risk | 3,725 | 61 | 3,171 | 41 | 6,896 | 50 |
| Total | 6,122 | 100 | 7,739 | 100 | 13,861 | 100 |

Note:  Does not include individuals under the age of 13 as of December 31, 2008.
Source:  New Jersey eHARS as of December 31, 2008.

The proportion of men and women living with HIV/AIDS in 2008 varied by exposure category and racial/ethnic group.  The greatest percentage of Hispanic and Black non-Hispanic men living with HIV/AIDS in 2008 were exposed through injection drug use.  However, the greatest percentage of White non-Hispanic men were exposed through sex with another man (Table 9).  The lower proportion of White non-Hispanic men indicating sex with men, and the higher proportion of White non-Hispanic men indicating exposure through heterosexual sex and IDU, may explain the greater racial disparity in women.  The risks of the partners of men who reported heterosexual exposure were comparable across all races and ethnic groups with most being exposed with a partner of unknown HIV risk (Table 10)..

### Table 9.
### Number and Percent of Men Living with HIV/AIDS in New Jersey
### Exposure Category and Race/Ethnicity in 2008

| Risk of Heterosexual Partner | White non- Hispanic | | Black non-Hispanic | | Hispanic | | Other[a] | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| MSM[b] | 2,861 | 50 | 2,641 | 24 | 1,630 | 31 | 99 | 26 | 7,231 | 32 |
| IDU[c] | 982 | 17 | 3,226 | 29 | 1,439 | 27 | 24 | 6 | 5,671 | 25 |
| MSM/IDU | 244 | 4 | 384 | 3 | 179 | 3 | 8 | 2 | 815 | 4 |
| Heterosexual Contact | 942 | 17 | 3,561 | 32 | 1,509 | 29 | 110 | 29 | 6,122 | 27 |
| Other/Unknown[d] | 646 | 11 | 1,164 | 10 | 462 | 9 | 142 | 37 | 2,414 | 11 |
| Pediatric Exposure | 42 | 1 | 195 | 2 | 65 | 1 | 1 | 0 | 303 | 1 |
| Total | 5,717 | 100 | 11,171 | 100 | 5,284 | 100 | 384 | 100 | 22,556 | 100 |

*Note:  Does not include individuals under the age of 13 as of December 31, 2008.*
*a.  Other includes Asian/Pacific Islander and American Indian/Alaska Native.*
*b.  MSM=Male-to-male sex*
*c.  IDU=Injection drug use*
*d.  The categories of other exposure and unknown exposure are combined due to the small number of cases in the 'other' category.*
*Source:  New Jersey eHARS as of December 31, 2008.*

### Table 10.
### Number and Percent of Men Living with HIV/AIDS in New Jersey
### Exposed by Heterosexual Sex by Risk of Partner and Race/Ethnicity in 2008

| Risk of Heterosexual Partner | White non-Hispanic | | Black non-Hispanic | | Hispanic | | Other[a] | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Injection Drug User | 46 | 5 | 249 | 7 | 101 | 7 | 3 | 3 | 399 | 7 |
| HIV+ Partner with Undetermined Risk | 281 | 30 | 1,163 | 33 | 523 | 35 | 31 | 28 | 1,998 | 33 |
| Partner with Unknown Risk | 615 | 65 | 2,149 | 60 | 885 | 58 | 76 | 69 | 3,725 | 60 |
| Total | 942 | 100 | 3,561 | 100 | 1,509 | 100 | 110 | 100 | 6,122 | 100 |

*Note:  Does not include individuals under the age of 13 as of December 31, 2008.*
*a.  Other includes Asian/Pacific Islander and American Indian/Alaska Native.*
*Source:  New Jersey eHARS as of December 31, 2008.*

A different pattern of known exposure emerges for women living with HIV/AIDS in 2008 (Table 11) as compared to men.  For all racial and ethnic groups, women are most likely to have been exposed through heterosexual sex (64%).  However, IDU associated exposures are still a major risk (37% which includes 26% IDU plus 11% heterosexual sex with an IDU), particularly among White non-Hispanic women.  The majority (49%) of White non-Hispanic women were exposed through IDU (35%) and sexual contact with an IDU (13.5%).  In contrast, Black non-Hispanic and Hispanic women living with HIV/AIDS were more likely to have been exposed through heterosexual sex as through IDU or IDU associated exposure.  Black non-Hispanic women who reported exposure through heterosexual sex were less likely to know the risk of their partner than Hispanics and White non-Hispanics (Table 12).  This may be due to a reluctance of Black non-Hispanic men to identify as gay, and hence have sex with both men and women.

### Table 11.
### Number and Percent of Women Living with HIV/AIDS in New Jersey by Race/Ethnicity and Exposure Category in 2008

| Exposure Category | White non-Hispanic | | Black non-Hispanic | | Hispanic | | Other[a] | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Injection Drug Use | 701 | 35 | 1,995 | 26 | 471 | 21 | 15 | 9 | 3,182 | 26 |
| Heterosexual sex | 1,077 | 54 | 4,927 | 64 | 1,634 | 71 | 101 | 58 | 7,739 | 64 |
| Other/Unknown[b] | 160 | 8 | 597 | 8 | 135 | 6 | 55 | 32 | 947 | 8 |
| Pediatric Exposure | 45 | 2 | 207 | 2 | 60 | 2 | 2 | 1 | 314 | 2 |
| Total | 1,983 | 100 | 7,726 | 100 | 2,300 | 100 | 173 | 100 | 12,182 | 100 |

*Note:  Does not include individuals under 13 years of age as of December 31, 2008.*
*a.  Other includes Asian/Pacific Islander and American Indian/Alaska Native.*
*b.  The categories of other exposure and unknown exposure are combined due to the small number of cases in the 'other' category.*
*Source:  New Jersey eHARS as of December 31, 2008.*

### Table 12.
### Number and Percent of Women Living with HIV/AIDS in New Jersey Exposed by Heterosexual Sex by Risk of Partner and Race/Ethnicity in 2008

| Risk of Heterosexual Partner | White non-Hispanic | | Black non-Hispanic | | Hispanic | | Other[a] | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Injection Drug User | 271 | 25 | 741 | 15 | 316 | 19 | 5 | 5 | 1,333 | 17 |
| Bisexual male | 19 | 2 | 76 | 2 | 21 | 1 | 1 | 1 | 117 | 2 |
| HIV+ partner with Undetermined | 408 | 38 | 1,971 | 40 | 691 | 42 | 48 | 48 | 3,118 | 40 |
| Partner with unknown risk | 379 | 35 | 2,139 | 43 | 606 | 37 | 47 | 46 | 3,171 | 41 |
| Total | 1,077 | 100 | 4,927 | 100 | 1,634 | 100 | 101 | 100 | 7,739 | 100 |

*Note:  Does not include individuals under 13 years of age as of December 31, 2008.*
*a.  Other includes Asian/Pacific Islander and American Indian/Alaska Native.*
*Source:  New Jersey eHARS as of December 31, 2008.*

# Targeted at Risk Populations

Some populations of HIV infected individuals are of special interest for planning purposes. These include persons exposed to HIV through injection drug use, women exposed to HIV through sexual contact with men, and men exposed to HIV through sexual contact with men or women. Characteristics of these populations can be seen in Tables 13-17. Generally, persons exposed through IDU are more likely to be 50 years of age or older than men or women exposed through sexual contact. The percent of 50+ men and women living with HIV/AIDS exposed through IDU increased from the previous years, although the IDU men and IDU women living with HIV/AIDS decreased. This may reflect the fact that the early epidemic in New Jersey was predominately among persons exposed through IDU.

Black non-Hispanics represent the greatest percentage of cases in all groups except men who were exposed through sex with men. Among the other populations, the disparity is greater among women who were exposed through sex with men. Men exposed through IDU tend to be older than women. For women IDU, the most prevalent age group is 40-49 (45.4%) followed by those aged 50 and over. Among men, the larger percentage of HIV infected through IDU are 50 or over (Tables 13). White non-Hispanic men exposed by sexual contact with women tend to be older than other men exposed through sexual contact with women and Hispanics tend to be younger. The heterosexually exposed population also shows the greatest racial disparity for men (Table 15). The proportion of heterosexual men living with HIV/AIDS in 2008 who were aged 50 and older was greater than in previous years. Women show the same disparity as men (Table 16). White non-Hispanic men who were exposed through sexual contact with other men also tend to be older (% of 50+ on Table 17 become greater than in previous years). Black non-Hispanics and Hispanics have similar age distributions (Table 17).

## Table 13.
### Number and Percent of Men (Aged 13+ as of December 31, 2008) Exposed through IDU Living with HIV/AIDS in New Jersey by Age and Race/Ethnicity, 2008

| Age Group as of December 31, 2008 | White non-Hispanic | | Black non-Hispanic | | Hispanic | | Other/ Unknown* | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 13-24 | 0 | 0 | 1 | 0.1 | 0 | 0 | 0 | 0 | 1 | 0.1 |
| 25-29 | 11 | 1.1 | 8 | 0.2 | 12 | 0.8 | 0 | 0 | 31 | 0.5 |
| 30-39 | 77 | 7.8 | 103 | 3.2 | 175 | 12.2 | 0 | 0 | 355 | 6.3 |
| 40-49 | 362 | 36.9 | 864 | 26.8 | 683 | 47.5 | 9 | 37.5 | 1,918 | 33.8 |
| 50+ | 532 | 54.2 | 2,250 | 69.7 | 569 | 39.5 | 19 | 62.5 | 3,366 | 59.4 |
| Total | 982 | 100 | 3,226 | 100 | 1,439 | 100 | 24 | 100 | 5,671 | 100 |

*Source: New Jersey eHARS as of December 31, 2008.*
*\* Other includes Asian/Pacific Islander and American Indian/Alaska Native.*

**Table 14.**

**Number and Percent of Women (Aged 13+ as of December 31, 2008) Exposed through IDU Living with HIV/AIDS in New Jersey by Age and Race/Ethnicity, 2008**

| Age Group as of December 31, 2008 | White non-Hispanic No. | White non-Hispanic % | Black non-Hispanic No. | Black non-Hispanic % | Hispanic No. | Hispanic % | Other/Unknown* No. | Other/Unknown* % | Total No. | Total % |
|---|---|---|---|---|---|---|---|---|---|---|
| 13-24 | 5 | 0.7 | 3 | 0.2 | 0 | 0 | 0 | 0 | 9 | 0.3 |
| 25-29 | 24 | 3.4 | 16 | 0.8 | 13 | 2.8 | 0 | 0 | 57 | 1.7 |
| 30-39 | 114 | 16.3 | 253 | 12.7 | 105 | 22.3 | 2 | 13.3 | 558 | 14.9 |
| 40-49 | 311 | 44.4 | 909 | 45.6 | 218 | 46.3 | 6 | 40.0 | 1,581 | 45.4 |
| 50+ | 247 | 35.2 | 814 | 40.8 | 135 | 28.7 | 7 | 46.7 | 1,091 | 37.8 |
| Total | 701 | 100 | 1,995 | 100 | 471 | 100 | 15 | 100 | 3,296 | 100 |

Source: New Jersey eHARS as of December 31, 2008.
* Other includes Asian/Pacific Islander and American Indian/Alaska Native.

**Table 15.**

**Number and Percent of Men (Aged 13+ as of December 31, 2008) Exposed through Sex with Females Living with HIV/AIDS in New Jersey by Age and Race/Ethnicity, 2008**

| Age Group as of December 31, 2008 | White non-Hispanic No. | White non-Hispanic % | Black non-Hispanic No. | Black non-Hispanic % | Hispanic No. | Hispanic % | Other/Unknown* No. | Other/Unknown* % | Total No. | Total % |
|---|---|---|---|---|---|---|---|---|---|---|
| 13-24 | 9 | 1.0 | 55 | 1.5 | 20 | 1.3 | 0 | 0 | 84 | 1.4 |
| 25-29 | 16 | 1.7 | 105 | 2.9 | 67 | 4.4 | 5 | 4.5 | 193 | 3.2 |
| 30-39 | 105 | 11.1 | 537 | 15.1 | 358 | 23.7 | 25 | 22.7 | 1,025 | 16.7 |
| 40-49 | 367 | 39.0 | 1,444 | 40.6 | 563 | 37.3 | 51 | 46.4 | 2,425 | 39.6 |
| 50+ | 445 | 47.2 | 1,420 | 39.9 | 501 | 33.2 | 29 | 26.4 | 2,395 | 39.1 |
| Total | 942 | 100 | 3,561 | 100 | 1,509 | 100 | 110 | 100 | 6,122 | 100 |

Source: New Jersey eHARS as of December 31, 2008.
* Other includes Asian/Pacific Islander and American Indian/Alaska Native.

**Table 16.**

**Number and Percent of Women (Aged 13+ as of December 31, 2008) Exposed through Sex with Men Living with HIV/AIDS in New Jersey by Age and Race/Ethnicity, 2008**

| Age Group as of December 31, 2008 | White non-Hispanic No. | White non-Hispanic % | Black non-Hispanic No. | Black non-Hispanic % | Hispanic No. | Hispanic % | Other/Unknown* No. | Other/Unknown* % | Total No. | Total % |
|---|---|---|---|---|---|---|---|---|---|---|
| 13-24 | 15 | 1.4 | 119 | 2.4 | 31 | 1.9 | 1 | 0 | 166 | 2.14 |
| 25-29 | 43 | 4.0 | 246 | 5.0 | 88 | 5.4 | 9 | 8.9 | 386 | 5.0 |
| 30-39 | 162 | 15.0 | 1,119 | 22.7 | 375 | 22.9 | 29 | 28.7 | 1,685 | 21.8 |
| 40-49 | 478 | 44.4 | 1,951 | 39.6 | 667 | 40.8 | 36 | 35.6 | 3,132 | 40.5 |
| 50+ | 379 | 35.2 | 1,492 | 30.3 | 473 | 28.9 | 26 | 25.7 | 2,370 | 30.6 |
| Total | 1,077 | 100 | 4,927 | 100 | 1,634 | 100 | 101 | 100 | 7,739 | 100 |

Source: New Jersey eHARS as of December 31, 2008.
* Other includes Asian/Pacific Islander and American Indian/Alaska Native.

**Table 17.**
**Number and Percent of Men (Aged 13+ as of December 31, 2008) Exposed through Sex with Men Living with HIV/AIDS in New Jersey by Age and Race/Ethnicity, 2008**

| Age Group as of December 31, 2008 | White non-Hispanic | | Black non-Hispanic | | Hispanic | | Other/ Unknown* | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 13-24 | 28 | 1.0 | 176 | 6.7 | 56 | 3.4 | 1 | 1.0 | 261 | 3.6 |
| 25-29 | 76 | 2.7 | 265 | 10.0 | 119 | 7.3 | 6 | 6.1 | 443 | 6.4 |
| 30-39 | 355 | 12.4 | 606 | 22.9 | 408 | 25.0 | 25 | 25.3 | 1,424 | 19.3 |
| 40-49 | 1,277 | 44.6 | 1,042 | 39.5 | 710 | 43.6 | 42 | 42.4 | 2,980 | 42.5 |
| 50+ | 1,125 | 39.3 | 552 | 20.9 | 337 | 20.7 | 25 | 25.3 | 1,781 | 28.2 |
| Total | 2,861 | 100 | 2,641 | 100 | 1,630 | 100 | 99 | 100 | 6,836 | 100 |

*Source: New Jersey eHARS as of December 31, 2008.*
*\*. Other includes Asian/Pacific Islander and American Indian/Alaska Native.*

# Trends in New Diagnoses

From 2002 through 2006, of the men and women diagnosed with HIV/AIDS who have a reported mode of exposure, a higher proportion were exposed through sexual contact than by any other mode of exposure (68% for men and 66% for women) (Figures 10 and 11). For men, male-to-male sex (regardless of whether male-to-female sex also occurred) accounted for 33 percent of all exposures and heterosexual sex (sex with women but not men) for 35 percent of all exposures. The proportion of newly diagnosed women exposed through IDU declined from 19 percent in 2002 to 12 percent in 2006. The proportion of newly diagnosed men exposed through IDU declined from 21 percent in 2002 to 13 percent in 2006. The proportion of individuals exposed through heterosexual contact increased slightly for men and women. Similar to the modes of exposure for PLWHA a greater proportion of men diagnosed from 2002 through 2006 who reported heterosexual exposure did not know the risk of their partner compared to women (see Figures 10 and 11 insert).

**Figure 10.**
**Estimated Number of Men (Age 13+ at Diagnosis) Diagnosed with HIV/AIDS in**
**New Jersey by Mode of Exposure and Year of Diagnosis**



| | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|
| MSM | 446 | 416 | 429 | 401 | 397 |
| IDU | 297 | 208 | 189 | 154 | 139 |
| MSM and IDU | 33 | 28 | 26 | 21 | 18 |
| Heterosexual | 512 | 470 | 481 | 448 | 439 |
| Other/Unknown | 149 | 185 | 251 | 251 | 237 |
| Pediatric Exposure | 1 | 0 | 4 | 2 | 0 |
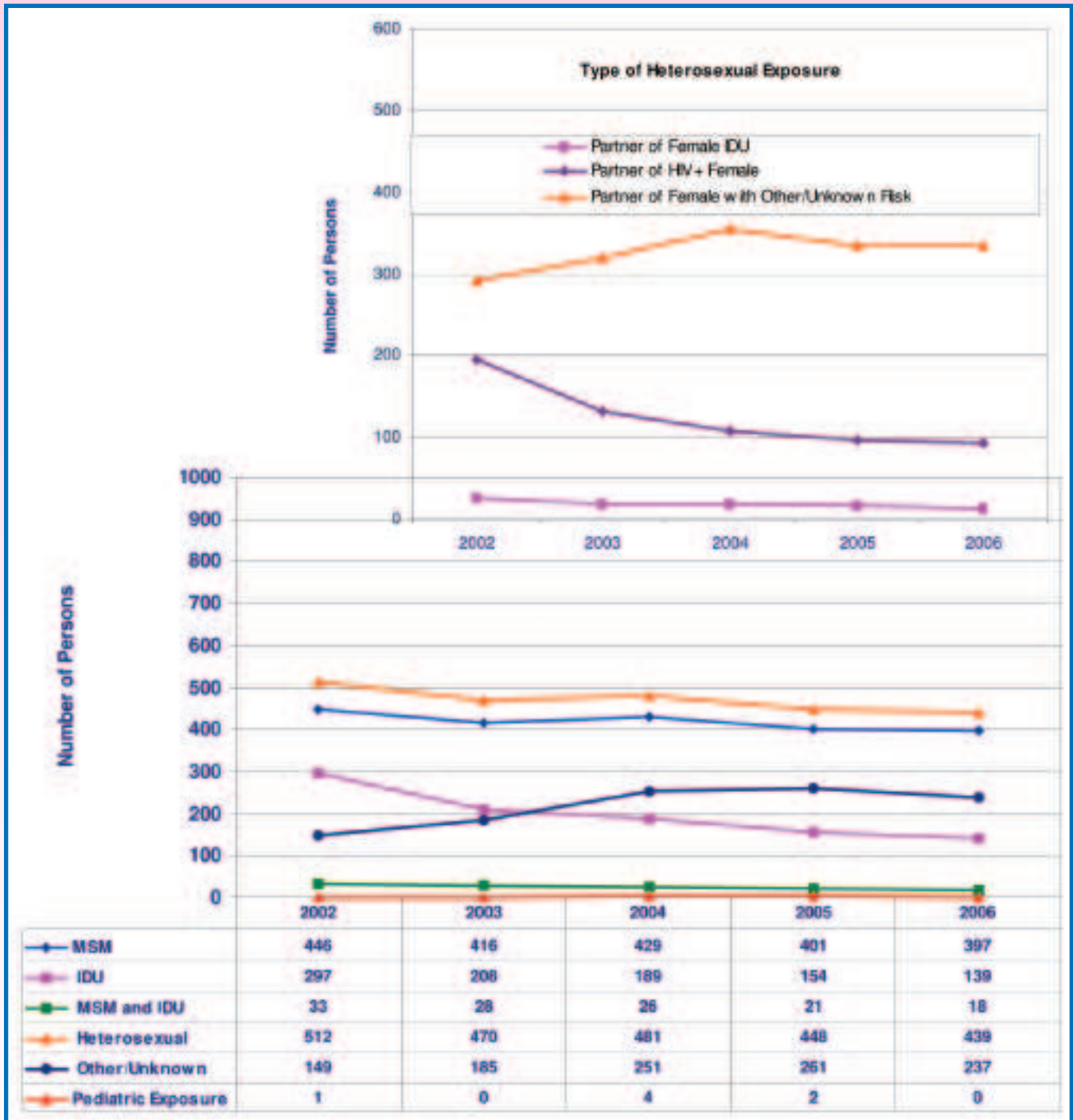
*Source: New Jersey eHARS as of December 31, 2008.*

**Figure 11.**
**Estimated Number of Women (13+ at Diagnosis) Diagnosed with**
**HIV/AIDS in New Jersey by Mode of Exposure and Year of Diagnosis**



| | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|
| IDU | 146 | 108 | 103 | 90 | 71 |
| Heterosexual | 556 | 506 | 471 | 413 | 412 |
| Other/Unknown | 52 | 54 | 78 | 115 | 95 |
| Pediatric Exposure | 0 | 0 | 2 | 2 | 1 |
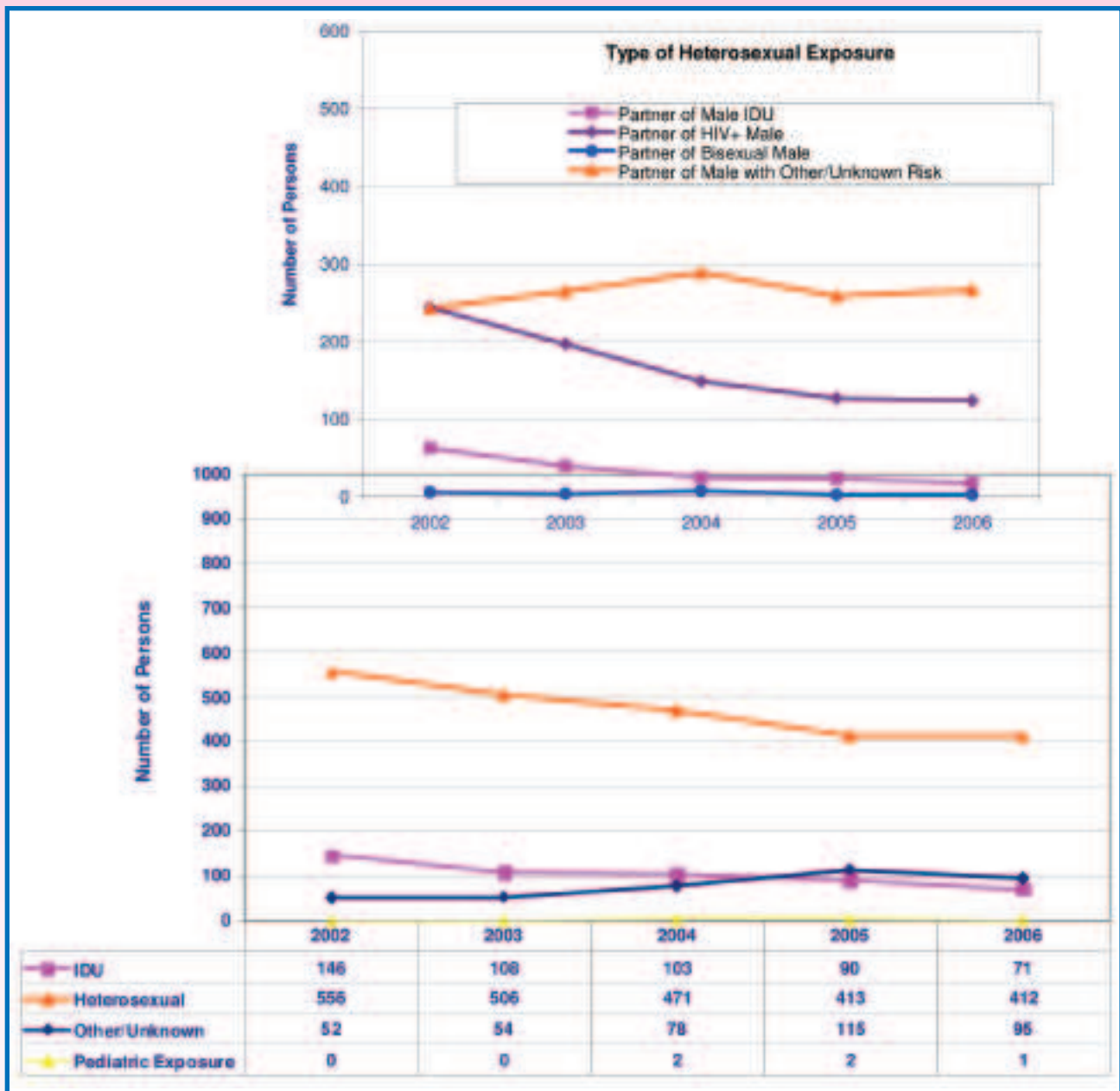
*Source:  New Jersey eHARS as of December 31, 2008.*

# Age

## Living With HIV/AIDS

In 2008 the median age of PLWHA was 47 years (females median age of PLWHA was 45), and 76.6 percent of all PLWHA were 40 years and older.  In general prevalence increases with age, reaches a peak at the age group of 40-54 and declines thereafter.  The age group of 50-54 has the highest rate of PLWHA.  The numbers of persons older than 50 living with HIV/AIDS has increased 12 times since 1992, while the number of all PLWHA increased two times (Figure 4). The increase in persons older than 50 living with HIV/AIDS may be attributed to the fact that people are living longer with HIV/AIDS so those who were infected at a younger age are maturing into this age category; and a greater proportion of cases reported with HIV/AIDS since 1998 are older than 40 years of age at time of diagnosis compared to those reported prior to 1998 (data not shown).  The proportion of all persons living with HIV/AIDS who were aged 50 and older in 2008 was greater than those aged 50 and older who were living with HIV/AIDS in the past.  The prevalence rate for males of all ages living with HIV/AIDS is almost twice that of females.  However, the prevalence rate for males and females infected under the age of 20 are almost equal.  Most of the infections of those living in their teens occurred perinatally (Table 18).

### Table 18.
### Number of Persons Living with HIV/AIDS in New Jersey by Age Group, 2008

| Age Group as of December 31, 2008 | Male | | | Female | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. | % | Rate | No. | % | Rate | No. | % | Rate |
| 0 - 12 | 85 | 0.4 | 11 | 92 | 0.7 | 13 | 177 | 0.5 | 12 |
| 13 - 19 | 237 | 1.0 | 55 | 240 | 2.0 | 59 | 477 | 1.4 | 57 |
| 20 - 24 | 428 | 1.9 | 154 | 238 | 1.9 | 90 | 666 | 1.9 | 123 |
| 25 - 29 | 814 | 3.6 | 307 | 485 | 4.0 | 194 | 1,299 | 3.7 | 253 |
| 30 - 39 | 3,257 | 14.4 | 541 | 2,295 | 18.7 | 383 | 5,552 | 15.9 | 462 |
| 40 - 49 | 8,722 | 38.5 | 1,247 | 4,961 | 40.4 | 692 | 13,683 | 39.2 | 966 |
| 50 - 54 | 4,194 | 18.5 | 1,362 | 1,975 | 16.1 | 615 | 6,169 | 17.7 | 981 |
| 55 - 59 | 2,781 | 12.3 | 1,091 | 1,111 | 9.1 | 404 | 3,892 | 11.1 | 735 |
| 60 - 64 | 1,245 | 5.5 | 613 | 473 | 3.9 | 208 | 1,718 | 4.9 | 399 |
| 65+ | 878 | 3.9 | 189 | 404 | 3.3 | 60 | 1,282 | 3.7 | 113 |
| Total | 22,641 | 100 | 533 | 12,274 | 100 | 277 | 34,915 | 100 | 402 |

Note:  Rates are per 100,000 population-based U.S. Census July 2007 Bridged Estimates.
Source:  New Jersey eHARS 2008.

## Trends in New Diagnoses

TThe largest number of diagnosed cases 2002 through 2006 occurred in people 30 through 49 years of age, a time that is typically considered the most productive years of life.  The highest rates for women also coincide with the childbearing years.  The number of diagnoses was almost equal for males and females under the age of 25, but as age increased, the ratio of male to female

cases increased.  Overall for pediatric cases (those diagnosed under 13 years of age), the equality of rates can be attributed to the fact that most of the individuals were infected perinatally.  Trends of new diagnoses were similar for men and women from 2002 through 2006.  The number of newly diagnosed HIV/AIDS cases aged 30-39, 40-49 declined from year 2002 to year 2006 ( newly diagnosed individuals aged 30-39 showed a sharper decline than those aged 40-49 for men and women).  Newly diagnosed HIV/AIDS men aged 13-29 increased from year 2002 to year 2006 (20-24 men increased sharply).  The number of individuals diagnosed with HIV/AIDS aged 55+ remained relatively stable for men and women during those five years.  Newly diagnosed men aged 50-54 increased slightly in these 5 years, while women aged 50-54 decreased slightly (Figures 12 and 13).  The median age of diagnosed HIV/AIDS cases in 2006 was 40, while the median age in 2002 was 39.

### Figure 12.
### Estimated Number of Men Diagnosed with HIV/AIDS in New Jersey by Age Group and Year of Diagnosis:  2002-2006



| | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|
| Age 13-19 | 20 | 35 | 29 | 29 | 25 |
| Age 20-24 | 58 | 81 | 112 | 110 | 107 |
| Age 25-29 | 110 | 121 | 125 | 120 | 130 |
| Age 30-39 | 516 | 392 | 409 | 332 | 329 |
| Age 40-49 | 490 | 432 | 425 | 438 | 397 |
| Age 50-54 | 117 | 114 | 119 | 129 | 121 |
| Age 55-59 | 62 | 64 | 84 | 91 | 67 |
| Age 60-64 | 32 | 41 | 41 | 31 | 31 |
| Age 65+ | 33 | 27 | 36 | 27 | 23 |
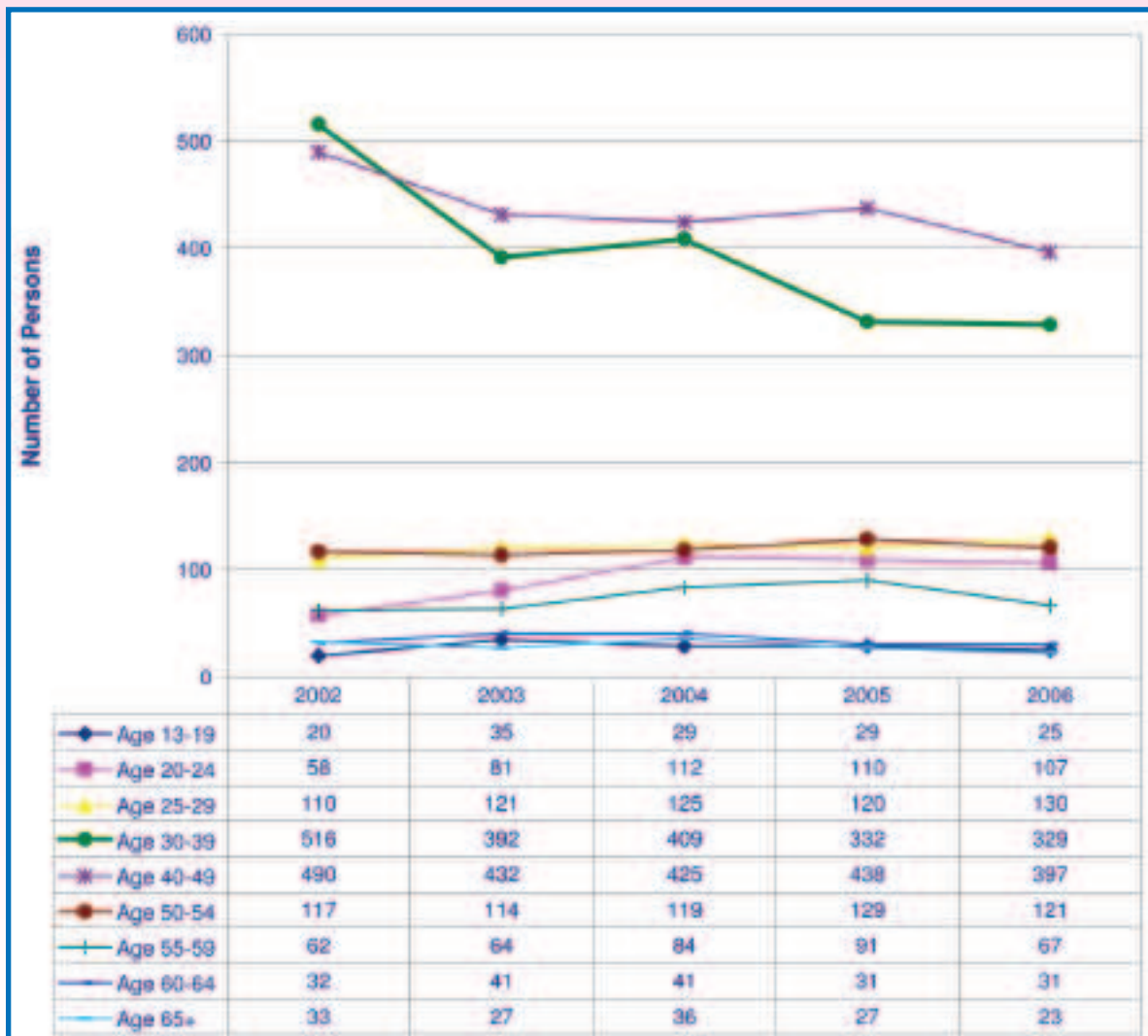
*Source:  New Jersey eHARS as of December 31, 2008*
*Note:  Only for males aged 13 years or older at diagnosis.*

**Figure 13.**
**Estimated Number of Women Diagnosed with HIV/AIDS in**
**New Jersey by Age Group and Year of Diagnosis**



| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| Age 13-19 | 18 | 17 | 27 | 12 | 22 |
| Age 20-24 | 56 | 60 | 44 | 46 | 42 |
| Age 25-29 | 80 | 77 | 60 | 64 | 57 |
| Age 30-39 | 310 | 242 | 211 | 192 | 181 |
| Age 40-49 | 219 | 237 | 207 | 211 | 183 |
| Age 50-54 | 45 | 70 | 55 | 56 | 41 |
| Age 55-59 | 21 | 21 | 24 | 30 | 35 |
| Age 60-64 | 19 | 17 | 18 | 12 | 11 |
| Age 65+ | 9 | 12 | 7 | 12 | 20 |
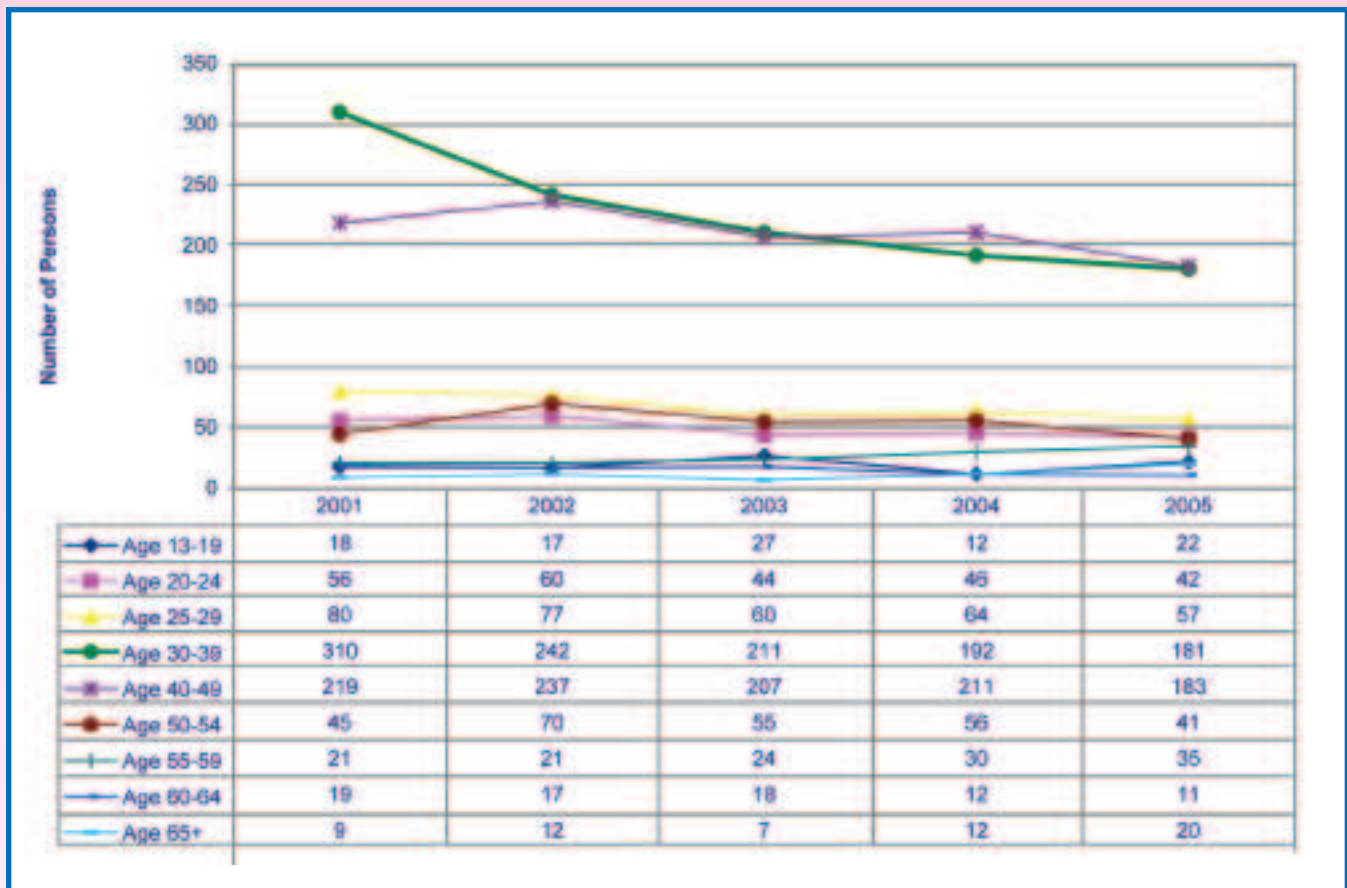
*Source: New Jersey eHARS as of December 31, 2008.*
*Note: Only for females aged 13 years or older at diagnosis.*

## Special Age Categories

Two age categories are of special interest and represent a distinct priority population for planning: persons 13 to 24 years of age and persons 50 years of age and older. Both of these groups represent only a small percentage of cases diagnosed in recent years; however, the percentage of newly diagnosed cases had been slowly increasing through 2005 (Table 19). Additionally, as the HIV infected population ages, a greater proportion of those living with HIV/AIDS are 50 years of age and older.

**Table 19.**
**Estimated Cases of HIV/AIDS for Persons Ages 13-24 and 50 and Over by Year of Diagnosis:  1998-2006**

| Year | Age 13-24 | | Age 50 and over | | All Ages | |
|------|-----|----------|-----|----------|-------|-----|
|      | No. | % (row) | No. | % (Row) | No. | % |
| 1998 | 149 | 5.9 | 319 | 12.7 | 2,517 | 100 |
| 1999 | 157 | 6.4 | 300 | 12.2 | 2,454 | 100 |
| 2000 | 178 | 6.2 | 415 | 14.4 | 2,876 | 100 |
| 2001 | 176 | 7.4 | 366 | 15.3 | 2,389 | 100 |
| 2002 | 158 | 7.1 | 364 | 16.4 | 2,215 | 100 |
| 2003 | 189 | 9.5 | 352 | 17.7 | 1,994 | 100 |
| 2004 | 198 | 9.7 | 398 | 19.4 | 2,050 | 100 |
| 2005 | 205 | 10.6 | 394 | 20.3 | 1,944 | 100 |

*Note:  Percent is the percentage of all cases diagnosed that year.*
*Source:  New Jersey eHARS as of December 31, 2008.*

## Adolescents (Persons 13 to 24 Years of Age)

Adolescence is a period of experimentation.  The use of alcohol and drugs by adolescents may occur, as well as sexual experimentation.  The number of newly HIV infected men aged 13-24 has increased in New Jersey in the past five years (Figure 12) and the percentage of newly diagnosed cases aged 13-24 has been slowly increasing for nine years (Table 19).  For those reasons, it is important to review data for this group.  Additionally, most of the infections diagnosed in this group are relatively recent infections as opposed to infections diagnosed among people older than 24 years of age, where the diagnoses may have occurred ten years or more following infection.

Among persons 13 to 24 years of age, Black non-Hispanics represent 60 percent of cases with Hispanics accounting for 26 percent of cases and White non-Hispanics accounting for 14 percent of cases (Table 20).  However, Black non-Hispanics comprised of 53 percent of all HIV/AIDS new cases followed by equal proportions (23%) of Hispanics and White non-Hispanics in 2006.  This difference is due, in part, to the fact that Hispanics account for 18.3 percent of the state's population 13 to 24 years of age, but only 15.9 percent of the state's overall population based upon the United States Census July 2007 Bridged Estimates.

**Table 20.**
**HIV/AIDS Among Persons 13 through 24 Years of Age at Diagnosis in**
**New Jersey by Race/Ethnicity and Gender, Diagnosed in 2004-2006**

| Race/ethnicity | Males No. | Males % | Females No. | Females % | Total No. | Total % |
|---|---|---|---|---|---|---|
| White non-Hispanic | 57 | 14 | 26 | 14 | 83 | 14 |
| Black non-Hispanic | 252 | 61 | 111 | 58 | 363 | 60 |
| Hispanic | 100 | 24 | 55 | 28 | 155 | 26 |
| Other/Unknown | 3 | 1 | 0 | 0 | 3 | 1 |
| Total | 412 | 100 | 193 | 100 | 604 | 100 |

*Note: Three years data are presented, as numbers are too small to present one year only.*
*Rates are not included due to the low number of cases in this population.*
*Source: New Jersey eHARS as of December 31, 2008.*

Exposure category is difficult to analyze due to the small number of cases. Similarly, the small number of cases among White non-Hispanic adolescents makes racial comparisons difficult to interpret, so the numbers for three years are combined (Table 20 and Table 21). The number of newly diagnosed HIV/AIDS cases in all race groups has declined from 2002 to 2006 (Figure 9), but the percentage of newly diagnosed aged 13-24 cases has been slowly increasing (Table 19). Young men who have sex with men (YMSM) are of particular concern, especially, young black MSM. Table 21 shows that Black YMSM aged 13-24 had a much higher number than other race MSM aged 13-24. The MSM in the middle age groups remain heavily affected. Among white MSM, those in their 40s, followed by those in their 50s, had the highest number of living with HIV/AIDS (Table 17). However, the largest percent (more than half) of risk exposure is MSM for all three races among HIV infected men 13 through 24 years of age (Table 21).

**Table 21.**
**Persons 13 through 24 Years of Age Diagnosed with HIV/AIDS in**
**New Jersey in 2004-2006 by Exposure Category, Race/Ethnicity and Gender**

| Risk Exposure | White non-Hispanic Male No. | White non-Hispanic Male % | White non-Hispanic Female No. | White non-Hispanic Female % | Black non-Hispanic Male No. | Black non-Hispanic Male % | Black non-Hispanic Female No. | Black non-Hispanic Female % | Hispanic Male No. | Hispanic Male % | Hispanic Female No. | Hispanic Female % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MSM | 37 | 65 | NA | NA | 153 | 61 | NA | NA | 54 | 54 | NA | NA |
| IDU | 4 | 7 | 11 | 42 | 4 | 2 | 5 | 5 | 5 | 2 | 4 | 7 |
| MSM/IDU | 0 | 0 | NA | NA | 4 | 2 | NA | NA | 2 | 2 | NA | NA |
| Heterosexual sex with[a] | 8 | 14 | 14 | 54 | 52 | 21 | 93 | 84 | 26 | 26 | 44 | 80 |
| Injection Drug User | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Bisexual Male | NA | NA | 1 | 4 | NA | NA | 1 | 1 | NA | NA | 0 | 0 |
| HIV+ partner | 0 | 0 | 5 | 19 | 13 | 5 | 33 | 30 | 5 | 5 | 18 | 33 |
| Partner with unknown risk | 8 | 14 | 8 | 31 | 37 | 15 | 59 | 53 | 20 | 20 | 26 | 47 |
| Pediatric Exposure | 0 | 0 | 0 | 0 | 4 | 1 | 3 | 3 | 2 | 2 | 2 | 4 |
| Other/Unknown[b] | 8 | 14 | 1 | 4 | 35 | 14 | 10 | 9 | 11 | 11 | 5 | 9 |
| Total[c] | 57 | 100 | 26 | 100 | 252 | 100 | 111 | 100 | 100 | 100 | 55 | 100 |

*Data are not presented for Asian/Pacific Islanders or Alaska Natives/American Indians due to the small number of cases.*
*a. This row is a total of all the heterosexual exposures listed.*
*b. The categories of other and unknown exposure are combined due to the small number of cases in the 'other' category.*
*c. Column values will not add to the total as heterosexual risk is shown as a subtotal of all heterosexual risks and as separate sub-categories.*
*Source: New Jersey eHARS as of December 31, 2008.*

## Persons 50 Years of Age and Older

The age group of persons 50 years of age and older is often overlooked in planning for HIV services.  The group is important to consider for two reasons:  the immune system weakens with age so the body has less ability to fight infection, and people over 50 years of age tend to have more chronic conditions for which they take medications.  These medications may interfere with HIV treatment.

Overall, Black non-Hispanics account for more than half of the 2006 new cases of persons aged 50+ and of the 2008 PLWHA, followed by White non-Hispanics (Table 22).  This is a different pattern than can be found for other age groups where Black non-Hispanics comprise the largest percentage of cases, but Hispanics and White non-Hispanics account for almost the same percentage of cases (Table 6 and Figure 9).  This is due, in part, to the fact that Hispanics comprise a smaller percentage of the population 50 years of age and older than they do in the general population (9.4% of 50+ versus 15.9% of all age on Figure 2).  Similar to the HIV infected population in general, Black non-Hispanic women are more disproportionately infected among newly diagnosed cases, as well as among PLWHA than Black non-Hispanic men.  Among Hispanic persons 50+ there is a larger percentage of 2006 newly diagnosed cases than among PLWHA in 2008; the reverse is true for the Black non-Hispanic groups.

The percentage of newly diagnosed men and women in this age group infected through IDU is lower than the percentage of persons infected through IDU among those living with HIV/AIDS in this age group.  The percentage of newly diagnosed men and women in this age group infected through heterosexual sex is higher than the percentage of persons infected through heterosexual sex among those living with HIV/AIDS in this age group (Table 23).  The proportion of HIV/AIDS diagnosed among persons 50+ that were exposed through sexual contact is larger than in the past.

### Table 22.
### Cases of HIV/AIDS Among Persons 50 Years of Age and Older in
### New Jersey by Race/Ethnicity and Gender

| Race/ethnicity | Males | | | | Females | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Diagnosed in 2006 | | Living in 2008 | | Diagnosed in 2006 | | Living in 2008 | | Diagnosed in 2006 | | Living in 2008 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| White non-Hispanic | 68 | 28 | 2,484 | 27 | 14 | 15 | 701 | 18 | 82 | 24 | 3,185 | 24 |
| Black non-Hispanic | 121 | 50 | 4,854 | 53 | 60 | 62 | 2,540 | 64 | 181 | 54 | 7,394 | 57 |
| Hispanic | 50 | 21 | 1,623 | 18 | 21 | 22 | 664 | 17 | 71 | 21 | 2,487 | 17 |
| Other/Unknown | 3 | 1 | 137 | 2 | 1 | 1 | 58 | 1 | 4 | 1 | 195 | 2 |
| Total | 242 | 100 | 9,098 | 100 | 96 | 100 | 3,963 | 100 | 338 | 100 | 13,061 | 100 |

*Note:  Rates are not included due to the low number of cases in this population.*
*Source:  New Jersey eHARS as of December 31, 2008.*
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**Table 23.**
**Cases of HIV/AIDS Among Persons 50 Years of Age and Older in**
**New Jersey by Exposure Category and Gender**

| Exposure Category | Males | | | | Females | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Diagnosed in 2006 | | Living in 2008 | | Diagnosed in 2006 | | Living in 2008 | | Diagnosed in 2006 | | Living in 2008 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| MSM[a] | 31 | 13 | 2,039 | 22 | - | - | - | - | 31 | 9 | 2,039 | 16 |
| IDU[b] | 42 | 18 | 3,366 | 37 | 7 | 7 | 1,203 | 30 | 49 | 15 | 4,569 | 35 |
| MSM/IDU | 3 | 1 | 306 | 4 | - | - | - | - | 3 | 1 | 306 | 2 |
| Heterosexual sex | 112 | 46 | 2,395 | 26 | 67 | 70 | 2,370 | 60 | 179 | 53 | 4,765 | 36 |
| Other/Unknown[c] | 54 | 22 | 992 | 11 | 22 | 23 | 390 | 10 | 76 | 22 | 1,382 | 11 |
| Total | 242 | 100 | 8,406 | 100 | 96 | 100 | 3,963 | 100 | 338 | 100 | 13,061 | 100 |

a. MSM=Male-to-male sex.
b. IDU=Injection drug use.
The categories of other exposure and unknown exposure are combined due to the small number of cases in the 'other' category.
Source: New Jersey eHARS as of December 31, 2008.

# Children Affected by HIV

Children are affected by the HIV disease in two ways: they may be infected with HIV, or they are affected because they lose one or both of their parents to HIV disease. The latter may happen because the parent is too sick to care for the child, or the parent may die.

## Pediatric Infections

Children who are diagnosed before they are 13 years of age are considered to be pediatric infections. As the reporting of pediatric cases of HIV/AIDS is more current than cases for other age groups due to the continual monitoring of birth certificates and reports from facilities, pediatric infections through December 31, 2008 are presented in this report. Most of the 1,341 cumulative pediatric HIV/AIDS infections (Table 24) resulted from a child's mother being infected with HIV (perinatal transmission). Due to improvements in the screening of donated blood in 1985, transfusions have been virtually eliminated as a means of exposure. As with adult/adolescent infections, the highest proportion of cases occurred in Black non-Hispanic children (Table 24).

**Table 24.**
**Cumulative Pediatric HIV/AIDS Cases in New Jersey**

| Exposure Category | White non-Hispanic | Black non-Hispanic | Hispanic | Other/Not Reported | Total |
|---|---|---|---|---|---|
| Mother With/At Risk of AIDS | 164 | 844 | 240 | 4 | 1,252 |
| Hemophilia/Coagulation Disorder | 10 | 7 | 5 | 0 | 22 |
| Transfusion/Blood Components | 15 | 3 | 4 | 0 | 22 |
| Risk Not Reported/Other Risk | 7 | 28 | 86 | 2 | 45 |
| Total | 196 | 882 | 257 | 6 | 1,341 |

Source: New Jersey eHARS as of December 31, 2008.

In 1993, the DHSTS began monitoring pediatric exposures to HIV through Enhanced Perinatal Surveillance (see Appendix A).  Since that time over 3,200 exposures have been followed, and the number of annual pediatric infections has dropped over 90 percent (Table 25).

**Table 25.**
**HIV Perinatal a Exposure  in New Jersey by Current Status and Birth Year Since 1993**

| Birth Year | Infected[b] | | Indeterminate[c] | | Seroreverter[d] | | Total Reported |
|---|---|---|---|---|---|---|---|
| | No. | (%) | No. | (%) | No. | (%) | No. |
| 1993 | 77 | 21% | 90 | 25% | 197 | 54% | 364 |
| 1994 | 56 | 17% | 112 | 33% | 170 | 50% | 338 |
| 1995 | 50 | 15% | 92 | 28% | 188 | 57% | 330 |
| 1996 | 39 | 13% | 71 | 24% | 182 | 62% | 292 |
| 1997 | 33 | 12% | 80 | 29% | 167 | 60% | 280 |
| 1998 | 23 | 8% | 85 | 28% | 195 | 64% | 303 |
| 1999 | 14 | 6% | 65 | 27% | 164 | 67% | 243 |
| 2000 | 15 | 6% | 71 | 26% | 186 | 68% | 272 |
| 2001 | 10 | 5% | 52 | 24% | 153 | 71% | 215 |
| 2002 | 6 | 3% | 61 | 29% | 162 | 71% | 229 |
| 2003 | 7 | 3% | 46 | 23% | 146 | 71% | 199 |
| 2004 | 8 | 2% | 36 | 17% | 172 | 80% | 216 |
| 2005 | 8 | 2% | 36 | 19% | 149 | 77% | 193 |
| 2006 | 2 | 1% | 33 | 20% | 131 | 79% | 166 |
| 2007* | 2 | 1% | 29 | 21% | 110 | 78% | 141 |
| 2008* | 1 | 1% | 50 | 60% | 32 | 39% | 83 |

*    Data for 2007, 2008 is incomplete due to delays in reporting.
a.   Child was exposed to HIV during pregnancy/delivery.
b.   Child is known to be infected with HIV/AIDS.
c.   Child was exposed but actual status of infection is not known.
d.   Child was perinatally exposed and proven to be uninfected.
Source:  New Jersey Enhanced Perinatal Surveillance data as of December 31, 2008.

## Children Whose Mothers have Died of HIV/AIDS

As part of Enhanced Perinatal Surveillance, the eHARS was matched against birth certificate files from 1989 to 2008.  In this way mother-child pairs were linked.  Additionally, case reports for children were linked to their mothers; the presence of siblings was also noted when the information was available.  As of December 31, 2008 there were an estimated 6,498 women listed in eHARS with evidence that they had at least one live birth.  Of those women 2,053 have died, 58% (1,186) of whom died leaving at least one surviving child under the age of eighteen.

## Comorbidities

The health care treatment for many persons living with HIV/AIDS, particularly the newly diagnosed, includes treatment for one or more comorbid conditions in addition to HIV/AIDS.  Under the Ryan White CARE Act, comorbidity is very broadly defined.  Comorbidity can include physical illnesses (such as tuberculosis, hepatitis, sexually transmitted infection), mental health problems (depression or other mental illness), behavioral problems (substance abuse), and/or social problems (homelessness, incarceration).  Meeting the multiple needs of people living with HIV/AIDS who have comorbidities requires attentive coordination of services as, generally; TB and hepatitis C morbidity accelerate with HIV co-infection.

## Tuberculosis (TB)

A person co-infected with HIV and TB is classified as an AIDS case. According to the CDC, TB is a leading cause of death among people infected with HIV. The risk of developing TB disease is much greater for those infected with HIV. The HIV infection so severely weakens the immune system that people dually infected with HIV and TB have a 100 times greater risk of developing active TB disease and becoming infectious compared to people not infected with HIV. The CDC estimates that 10 to 15 percent of all TB cases and nearly 30 percent of cases among people ages 25 through 44 are occurring in HIV-infected individuals. Consequently, the CDC recommends that, "all people infected with HIV should be tested for TB, and, if infected, complete preventive therapy as soon as possible to prevent TB disease."

Extra Pulmonary TB and Pulmonary TB are included among the opportunistic infections that define AIDS. Men comprised 71 percent of the cumulative AIDS cases and 73.2 percent of TB/AIDS cases in New Jersey in 2008 (Table 28). The rate of comorbid infection with HIV/TB is 5.5 per 100 of men with AIDS and 4.8 per 100 women with AIDS. Black non-Hispanics show a higher proportion of TB cases than White non-Hispanics and Hispanics. Overall, 5.3 percent of all persons diagnosed with AIDS were co-infected with TB in 2008.

### Table 26.
### Overview of Cumulative AIDS Cases and AIDS Cases with TB in New Jersey

| Gender | AIDS as of 2008 | | TB/PULM TB and AIDS to 2008 | | TB Cases to 2008 per 100 AIDS Cases |
|---|---|---|---|---|---|
| | No. | % | No. | % | Rate |
| Male | 36,981 | 70.6 | 2,031 | 73.2 | 5.5 |
| Female | 15,412 | 29.4 | 744 | 26.8 | 4.8 |
| **Race/Ethnicity** | | | | | |
| White non-Hispanic | 13,105 | 25.0 | 251 | 9.0 | 1.9 |
| Black non-Hispanic | 29,197 | 55.7 | 2,012 | 72.5 | 6.9 |
| Hispanic | 9,811 | 18.7 | 472 | 17.0 | 4.8 |
| Asian non-Hispanic | 223 | 0.4 | 36 | 1.3 | 16.1 |
| Other/Unknown | 57 | 0.1 | 4 | 0.1 | 7.0 |
| **Age Group at Diagnosis of AIDS** | | | | | |
| 0 – 12 | 462 | 0.9 | 13 | 0.5 | 2.8 |
| 13 – 24 | 1,781 | 3.4 | 105 | 3.8 | 5.9 |
| 25 – 44 | 37,554 | 71.7 | 2,101 | 75.7 | 5.6 |
| 45 – 64 | 11,728 | 22.4 | 516 | 18.6 | 4.4 |
| 65+ | 868 | 1.7 | 40 | 1.4 | 4.6 |
| **Total** | 52,393 | 100.0 | 2,775 | 100.0 | 5.3 |

*Source: New Jersey eHARS as of December 31, 2008.*

# Hepatitis C

According to the CDC, one quarter of the HIV-infected persons in the United States are also infected with the hepatitis C virus (HCV).  This figure may be even higher in New Jersey since much of the state's epidemic is related to injection drug use.  Hepatitis C is one of the most important causes of chronic liver disease in the United States and it progresses more rapidly to liver damage in HIV-infected persons.  Hepatitis infection may also impact the course and management of HIV infection.  Because HCV is transmitted through the skin by puncture, co-infection with HIV and HCV is common (50%-90%) among HIV-infected injection drug users.  For persons infected with HIV through sexual exposure, co-infection with HCV is no more common than among similarly aged adults in the general population (3%-5%).  Chronic HCV infection develops in 75-85 percent of infected persons and leads to chronic liver disease in 70 percent of these chronically infected persons.  Hepatitis infection is an opportunistic infection in HIV-infected persons, but it is not considered an AIDS-defining illness.  As highly active antiretroviral therapy (HAART) and prophylaxis of opportunistic infections increase the life span of persons living with HIV, HCV-related liver disease has become a major cause of hospital admissions and deaths among HIV-infected persons.

## Hepatitis-C (HCV) Among HIV/AIDS Patients in New Jersey*



Hepatitis C (HCV) reports during 2008 were matched probabilistically to the New Jersey eHARS as of June 30, 2009 using AUTOMATCH[1].  The matching algorithm used date of birth, names (including aliases), street address, city, county, zip code, sex and race/ethnicity to match and verify matched records.  Weak matching pairs were clerically reviewed prior to deciding on their matching status.  The match was performed by the HIV/AIDS surveillance program to maintain confidentiality of the HIV information.  Of the 6,105 unduplicated HCV reports in 2008, 546 (8.9%) were matched to HIV/AIDS records.  This is 1.4 percent lower than the matched records of the 2007 HCV reports.  Table 27 shows the demographic distribution of the co-infected cases compared to all other HIV/AIDS cases that were not co-infected with HCV and alive as of January 1, 2008.  A higher proportion among the co-infected group was AIDS cases as of June 30, 2009 compared to HIV/AIDS cases that were not co-infected with HCV.  Sex distribution is similar for both groups of patients.  Sixty-four percent

of the co-infected patients are Black non-Hispanic compared to 54 percent of the not co-infected group.  The percentages of White non-Hispanic and Hispanics are lower in the co-infected group compared to the not co-infected group.  The average age of HIV/AIDS diagnosis is older for the co-infected group (38.9 years) than for the HIV/AIDS group that is not co-infected with HCV (36.5 years).

Geographic distribution of the co-infected persons is similar to that of HIV/AIDS cases.  Over 55 percent in both groups resided in Essex, Hudson, Union and Passaic counties.  Thirty-five percent of the co-infected individuals resided in Essex County (results not shown).  There is a high association between injection drug use and HCV/HIV co-infection.  Two-thirds of the co-infected individuals were exposed to HIV/AIDS through IDU or MSM/IDU, almost two and a half times the proportion among the group that is not co-infected with HCV.  An additional five percent of the co-infected group reported MSM and 22 percent reported heterosexual contact compared to 21 percent and 40 percent for the not co-infected group, respectively.  Only six percent of the co-infected group did not report any exposure category.  Mortality is higher among the co-infected group, five percent died in or after 2008 compared to only three percent for the not co-infected group.

Table 28 shows the adjusted odds of having HCV infection among HIV/AIDS patients associated with risk exposure categories, controlling for sex, age at HIV/AIDS diagnosis, year of HIV/AIDS diagnosis and race/ethnicity.  The odds were calculated from logistic regression using the SAS system[2].  Only significant variables are kept in the table.  The odds of co-infection with HCV among HIV/AIDS patients is more than five times higher among those who inject drugs than among those who did not report any risk exposure.  There are no significant differences in co-infection between those whose exposure risk was sexual contact and those who did not report any risk of exposure.  Increased age at HIV/AIDS diagnosis is associated with increased odds of co-infection.  One-year increase in age at HIV/AIDS diagnosis is associated with 2 percent increase in co-infection with HCV.  Blacks non-Hispanic are more likely than Whites non-Hispanic to be co-infected.  No significant effects of sex or year of HIV/AIDS diagnosis were observed.

Despite data limitations these results suggest new HIV prevention challenges.  The frequent co-infection of HCV and HIV underscores the importance of an integrated prevention message that addresses high-risk behaviors, especially injection drug use, to reduce both HIV and Hepatitis-C infection.  The higher short-term mortality among HIV/AIDS patients who were co-infected with HCV in 2008, calls attention to the need for HIV/AIDS care and treatment programs to control HCV.

## Table 27.
## Distribution of Hepatitis-C and HIV Co-infection Status Among HIV/AIDS Cases By Demographic

| All HIV/AIDS Cases Alive on January 1, 2007 | INFECTION TYPE: | | | |
| --- | --- | --- | --- | --- |
| | HIV & Hep-C | | HIV/AIDS Only | |
| | No. | Col % | No. | Col % |
| **HIV Category:** | | | | |
| 1.  HIV (not AIDS) | 198 | 36.8 | 16,688 | 47.4 |
| 2.  AIDS | 340 | 63.2 | 18,503 | 52.6 |
| **Vital Status:** | | | | |
| 1.  Presumed Alive | 509 | 94.6 | 34,202 | 97.2 |
| 2.  Known Dead | 29 | 5.4 | 989 | 2.8 |
| **Sex:** | | | | |
| (F) Female | 179 | 33.3 | 12,368 | 35.1 |
| (M) Male | 359 | 66.7 | 22,823 | 64.9 |
| **Race/Ethnicity:** | | | | |
| White, non-Hispanic | 84 | 15.6 | 7,757 | 22.0 |
| Black, non-Hispanic | 344 | 63.9 | 19,157 | 54.4 |
| Hispanic | 104 | 19.3 | 7,713 | 21.9 |
| Other/Unknown | 6 | 1.1 | 564 | 1.6 |
| **Exposure Category:** | | | | |
| MSM | 29 | 5.4 | 7,376 | 21.0 |
| IDU & MSM/IDU | 358 | 66.5 | 9,446 | 26.8 |
| Heterosexual | 120 | 22.3 | 14,094 | 40.1 |
| Pediatric | 1 | 0.2 | 803 | 2.3 |
| Other/Unknown | 30 | 5.6 | 3,472 | 9.9 |
| **Age at Diagnosis:** | | | | |
| 1.  <13 | 1 | 0.2 | 787 | 2.2 |
| 2.  13-19 | 3 | 0.6 | 789 | 2.2 |
| 3.  20-24 | 23 | 4.3 | 2,731 | 7.8 |
| 4.  25-29 | 54 | 10.0 | 5,112 | 14.5 |
| 5.  30-34 | 109 | 20.3 | 6,637 | 18.9 |
| 6.  35-39 | 102 | 19.0 | 6,957 | 19.8 |
| 7.  40-45 | 110 | 20.4 | 5,439 | 15.5 |
| 8.  45-49 | 68 | 12.6 | 3,357 | 9.5 |
| 9.  50+ | 68 | 12.6 | 3,382 | 9.6 |
| **Year of  Diagnosis:** | | | | |
| 1.  < 1990 | 23 | 4.3 | 1,502 | 4.3 |
| 2.  1990-1995 | 203 | 37.7 | 10,725 | 30.5 |
| 3.  1996-2000 | 142 | 26.4 | 9,784 | 27.8 |
| 4.  2001-2005 | 101 | 18.8 | 8,814 | 25.0 |
| 5.  2006+ | 69 | 12.8 | 4,366 | 12.4 |
| **Total** | 538 | 100 | 35,191 | 100 |

*Source:  New Jersey Department of Health and Senior Services*
*Division of HIV, STD and TB Services, Epidemiologic Services Unit.*
*Data as of June 30, 2009.*

## Table 28.
## The Adjusted Odds of having Hepatitis-C Infection Associated with
## Exposure Risk and Other Variables of HIV/AIDS Patients

| Predictors | Estimated Odds and 95% Confidence Limits |
|---|---|
| **Demographics:** | |
| White Not-Hispanic (reference Category) | 1.00 |
| Black Not-Hispanic | 1.42 (1.11 – 1.81)* |
| Hispanic | 1.17 (0.87 – 1.56) |
| **HIV Disease Exposure Category:** | |
| Men having Sex with Men (MSM) | 0.63 (.37 – 1.07) |
| Injection Drug Use Related (IDUs and MSM/IDUs) | 5.46 (3.69 – 8.09)* |
| Heterosexual categories | 1.18 (0.78 - 1.79) |
| Other/Unknown (Reference category) | 1.00 |
| **Age at HIV/AIDS Diagnosis (in years)** | 1.023 (1.012 - 1.03)* |

*\* Significant at 1%. Odds are adjusted for sex and year of HIV/AIDS. The odds for categorical variables are interpreted in relation to the reference category.*

## Sexually Transmitted Diseases

An estimated 15 million people each year in the United States are infected with a sexually transmitted disease (STD). It is important to include STD data in the reporting of HIV/AIDS because sexual contact is a primary exposure category for HIV/AIDS. The STDs are indicators of individual high-risk behavior and the presence of some STDs increases the transmissibility of HIV. The most commonly reported STD in New Jersey is chlamydia (Table 29: 21,536 cases reported in 2007). It is asymptomatic in most cases and occurs most often in female adolescents who are physiologically more susceptible to this infection than are older women. If exposed to HIV, women infected with chlamydia are up to five times more likely to become infected with HIV. Gonorrhea is the second most commonly reported STD in New Jersey, (6,076 cases reported in 2007). Drug-resistant strains of this STD are becoming increasingly common. Unless successfully treated, gonorrhea can facilitate HIV transmission.

The number and rate per 100,000 of cases of chlamydia increased dramatically from 2003 to 2007. Since 2003, the rates for chlamydia are the highest they have been in New Jersey for the last five years, although still below the national rates. The number and rate per 100,000 of cases of syphilis and gonorrhea decreased from 2003 to 2006, but increased in 2007. The rates for gonorrhea have been below national rates for the past five years. The number and rate of syphilis infections has not declined nationally from 2003-2007. The rate of syphilis in New Jersey was slightly higher than the national rate in 2003, whereas 2004 to 2007, the rate was lower than the national rate (Table 29).

## Table 29.
## Sexually Transmitted Disease (STD) Incidence and Rates in
## New Jersey and the United States for 2003-2007

| | United States | | New Jersey | |
|---|---|---|---|---|
| | Cases | Rate | Cases | Rate |
| **Syphilis** | | | | |
| 2003 | 34,289 | 11.8 | 1,089 | 12.6 |
| 2004 | 33,423 | 11.4 | 826 | 9.5 |
| 2005 | 33,288 | 11.2 | 813 | 9.3 |
| 2006 | 36,959 | 12.3 | 799 | 9.2 |
| 2007 | 40,920 | 13.7 | 926 | 10.6 |
| **Gonorrhea** | | | | |
| 2003 | 335,104 | 115.2 | 7,944 | 92.0 |
| 2004 | 330,132 | 112.4 | 6,696 | 77.0 |
| 2005 | 339,593 | 114.6 | 5,722 | 65.6 |
| 2006 | 358,366 | 119.7 | 5,492 | 62.9 |
| 2007 | 355,991 | 118.9 | 6,076 | 69.6 |
| **Chlamydia** | | | | |
| 2003 | 877,478 | 301.7 | 16,169 | 187.2 |
| 2004 | 929,462 | 316.5 | 17,448 | 200.6 |
| 2005 | 976,445 | 329.4 | 19,152 | 219.7 |
| 2006 | 1,030,911 | 344.3 | 20,194 | 231.5 |
| 2007 | 1,108,374 | 370.2 | 21,536 | 246.8 |

*Note: Rates are per 100,000 population.*
*Source: Division of Sexually Transmitted Diseases Prevention, CDC.*

## Sexually Transmitted Diseases (STDs) and HIV/AIDS Co-infection in New Jersey: Results of Matching STD Reports in 2007-2008 to HIV/AIDS Records[1]

Sexually Transmitted Disease (STD) individual reports during 2007 and 2008 were matched probabilistically to the HIV/AIDS registry in New Jersey as of June 30, 2009 using AUTOMATCH[2]. The matching algorithm used dates of birth (including aliases and imputed year of birth), names (including aliases), Social Security Number (SSN), telephone number, street address, city, county, zip code, sex and race/ethnicity to match and verify matched records. Weak matching pairs were clerically reviewed prior to deciding on their matching status. The match was performed by the HIV/AIDS surveillance program to maintain confidentiality of HIV/AIDS information. Of the 37,879 unduplicated STD 2007-2008 case reports eligible for matching, 543 (1.40%) were matched to HIV/AIDS records. This is slightly lower than the two percent matching percentage for the cumulative STD records through 2006 found during a previous match between STD and HIV/AIDS records.

Table 30 shows the demographic distribution of the co-infected cases compared to HIV/AIDS cases that are not co-infected with STDs among those who were diagnosed with HIV/AIDS and alive as of January 1, 2007. Males accounted for 78.7 percent of the co-infected group compared to 64.7 percent among HIV/AIDS cases that were not co-infected with STD. There is a higher proportion of HIV (not AIDS) cases among the co-infected group. Racial distribution is similar for both groups of patients. The age at HIV/AIDS diagnosis is considerably younger among those co-infected than among those HIV/AIDS patients who were not co-infected with STD. The co-infected group (average age, 29.8 years) was diagnosed with HIV/AIDS 6.2 years younger than those HIV/AIDS patients (average age, 36 years) who were not co-infected with STD. Average age at STD diagnosis for the co-infected group was 34.5 years, 10.8 years older than those who were diagnosed with STD only.

There is a high association between syphilis and HIV/AIDS in 2007-2008. Fifty-four percent of co-infected individuals reported an episode of syphilis, as their first STD. Gonorrhea was the second most reported at 26 percent and chlamydia at 21 percent. In contrast, among those infected with STD only, chlamydia was the most frequently reported with 80 percent of the reported cases, gonorrhea with 16 percent and syphilis with three percent (results not shown).

Figure 1 shows the types of syphilis associated with the co-infected group. Of the HIV/AIDS patients who were co-infected with syphilis, 65 percent had latent syphilis, 30 percent had secondary syphilis, and five percent had primary syphilis.

Nearly four out of five (76.9%) of the co-infected individuals reported sexual activity as the major risk exposure for HIV infection. The percentage of MSM risk in the co-infected group is 50 percent compared to 20 percent among all other HIV/AIDS cases. Seven percent of the co-infected group reported injection drug use as a medium for HIV infection and 13 percent did not report any mode of HIV disease exposure. A higher proportion of the co-infected group were recently diagnosed with HIV/AIDS (70% since 2001) compared to the not co-infected group (only 37% since 2001).

Geographic distribution of the co-infected persons is similar to that of HIV/AIDS cases. Over 55 percent in both groups resided in Essex, Hudson, Union and Passaic counties. However, 33 percent of the co-infected resided in Essex County at time of HIV diagnosis compared to 28 percent among the HIV/AIDS patients who were not co-infected with STD. In the remaining counties, there is virtually no difference in the distribution between the two comparison groups (results not shown).

1   *For questions please contact Abdel R. Ibrahim: (609) 984-5940 e-mail :  Abdel.Ibrahim@doh.state.nj.us*
2   *AUTOMATCH is a generalized record linkage system that provides individual matching. It uses new advances in record linkage technology to provide statistically justifiable methodology for file matching.*

Table 30.
Distribution of STD and HIV Co-infection Status Among HIV/AIDS Cases by Demographic

| | TYPE OF INFECTION | | | |
| | HIV only | | STD and HIV | |
| | No. | Col % | No. | Col % |
|---|---|---|---|---|
| **HIV Category:** | | | | |
| 3.   HIV (not AIDS) | 16,799 | 46.4 | 307 | 60.6 |
| 4.   AIDS | 19,418 | 53.6 | 200 | 39.4 |
| **Vital Status:** | | | | |
| | 1 | 0.0 | NA | NA |
| Presumed Alive | 34,208 | 94.5 | 503 | 99.2 |
| Known Dead | 2,008 | 5.5 | 4 | 0.8 |
| **Sex:** | | | | |
| | 1 | 0.0 | NA | NA |
| (F) Female | 12,784 | 35.3 | 108 | 21.3 |
| (M) Male | 23,432 | 64.7 | 399 | 78.7 |
| **Race/Ethnicity:** | | | | |
| White, non-Hispanic | 7,971 | 22.0 | 108 | 21.3 |
| Black, non-Hispanic | 19,797 | 54.7 | 278 | 54.8 |
| Hispanic | 7,881 | 21.8 | 114 | 22.5 |
| Other/Unknown | 568 | 1.6 | 7 | 1.4 |
| **Age at HIV/AIDS Diagnosis:** | | | | |
| 0-12 | 775 | 2.1 | 16 | 3.2 |
| 13-19 | 754 | 2.1 | 52 | 10.3 |
| 20-24 | 2,701 | 7.5 | 97 | 19.1 |
| 25-29 | 5,174 | 14.3 | 95 | 18.7 |
| 30-34 | 6,843 | 18.9 | 80 | 15.8 |
| 35-39 | 7,178 | 19.8 | 80 | 15.8 |
| 40-44 | 5,672 | 15.7 | 45 | 8.9 |
| 45-49 | 3,521 | 9.7 | 28 | 5.5 |
| 50+ | 3,599 | 9.9 | 14 | 2.8 |
| **HIV/AIDS Exposure :** | | | | |
| 1. MSM | 7,287 | 20.1 | 256 | 50.5 |
| 2. IDU | 9,328 | 25.8 | 37 | 7.3 |
| 5. Unknown/Other Adult modes | 4,409 | 12.2 | 64 | 12.6 |
| 3. Heterosexual Categories | 14,421 | 39.8 | 134 | 26.4 |
| 4. Pediatric Mode | 772 | 2.1 | 16 | 3.2 |
| **STD Type:** | | | | |
| Missing | 36,217 | 100 | NA | NA |
| Chlamydia | NA | NA | 106 | 20.9 |
| Gonorrhea | NA | NA | 130 | 25.6 |
| Syphilis | NA | NA | 271 | 53.5 |
| **Year of  Diagnosis:** | | | | |
| < 1990 | 1,584 | 4.4 | 6 | 1.2 |
| 1990-1995 | 11,224 | 31.0 | 67 | 13.2 |
| 1996-2000 | 10,109 | 27.9 | 76 | 15.0 |
| 2001-2005 | 8,953 | 24.7 | 142 | 28.0 |
| 2006+ | 4,347 | 12.0 | 216 | 42.6 |
| **Total** | 36,217 | 100 | 507 | 100 |

*Source:  New Jersey Department of Health and Senior Services*
*Division of HIV/AIDS Services, Epidemiologic Services Unit.*
*Data as of June 30, 2009.*

**Figure 14.**
**Distribution of Syphilis by Type Amond the**
**Co-infected Group, 2007-2008**

Primary
5%

Secondary
30%

Latent
65%
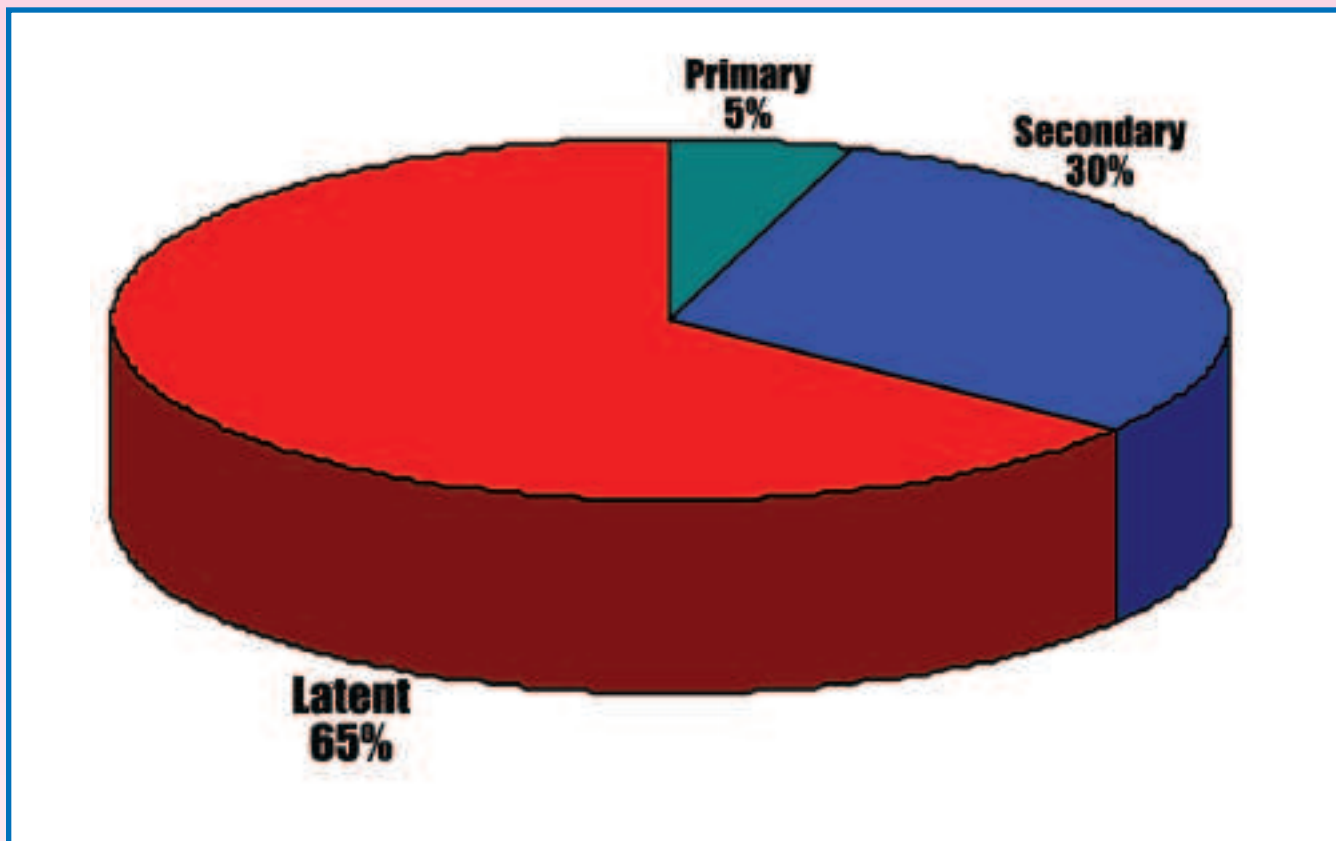
# Mortality

## Progression from HIV to AIDS and Survival after AIDS Diagnosis

The era of Highly Active Antiretroviral Therapy (HAART), which began in 1996, has also witnessed a significant improvement in the health of HIV patients.  It has slowed down progression of HIV to AIDS and witnessed a reduction in the death rates among AIDS patients.  This marked increase in AIDS-free time and survival improved the quality of life of AIDS patients.  To explore this further, we examined adult/adolescent AIDS patients' progression from HIV to AIDS and survival rates after AIDS diagnosis during 1996 to 2006, the last year for which we have complete data.  AIDS-free and survival times[1] were computed directly from dates of death and dates of HIV and AIDS diagnosis or censoring date as of December 31, 2008.  AIDS-free rates from HIV to AIDS and survival after AIDS diagnosis, and differences in survival were analyzed to compare socio-demographic and HIV exposure categories during the HAART era.  First, we illustrate the significant gains in AIDS-free time and in survival after AIDS diagnosis comparing the pre and post HAART era.

Figure 16 shows the AIDS-Free and survival curves for those diagnosed with HIV or AIDS between 1996 and 2006 (during the HAART era) compared to those diagnosed between 1992 and 1995 (Pre-HAART era).  Those diagnosed during the HAART era have considerably slower progression from HIV to AIDS and higher survival rates after AIDS diagnosis than those diagnosed prior to the HAART era.  The impact of the HAART era seems to be more pronounced on slowing the progression from HIV to AIDS than on survival after AIDS diagnosis.  This improvement in AIDS-free and survival times is attributed largely to advancements in the treatment of HIV/AIDS patients from 1996 to 2006.

1   *Progression includes only patients with over a month of an observed progression from HIV to AIDS. Survival excludes those born outside the USA and its dependencies where mortality reporting is incomplete and/or inaccessible to US national/state vital statistics files.*

**Figure 15.**
**Progression to AIDS and Survival Curves after AIDS Diagnosis:**
**Pre-HAART vs. HAART Era**
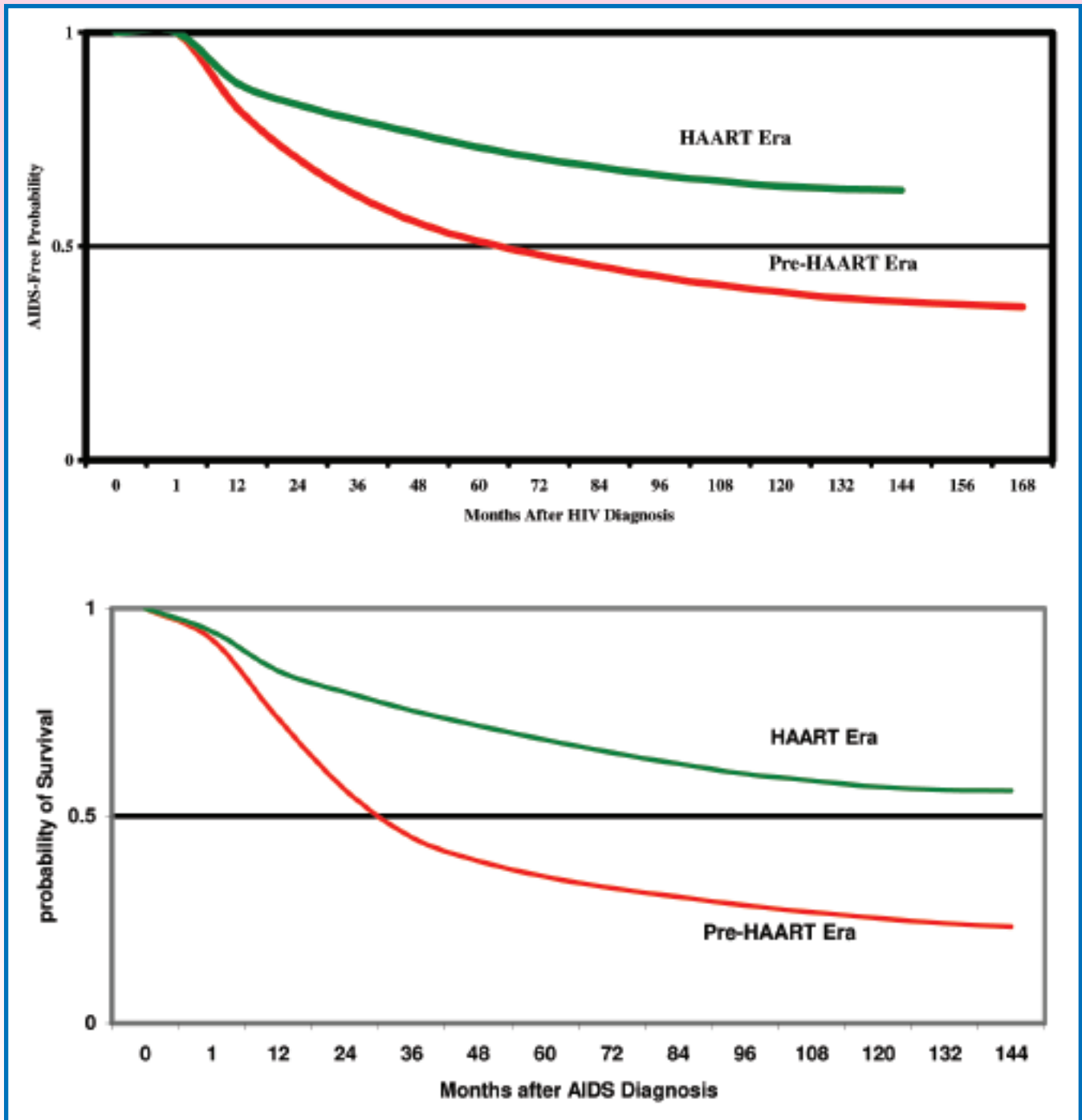
The improvement in HIV/AIDS therapy on progression to AIDS and on survival rates during the HAART era have not been uniform across socio-demographic and exposure categories in New Jersey. The observed differences in progression from HIV to AIDS and on survival after AIDS diagnosis between males and females (Figure 17) were slight during 1996-2006.

Figure 16.
Progression from HIV to AIDS and Survival Curves after
AIDS Diagnosis by Gender, 1996-2006
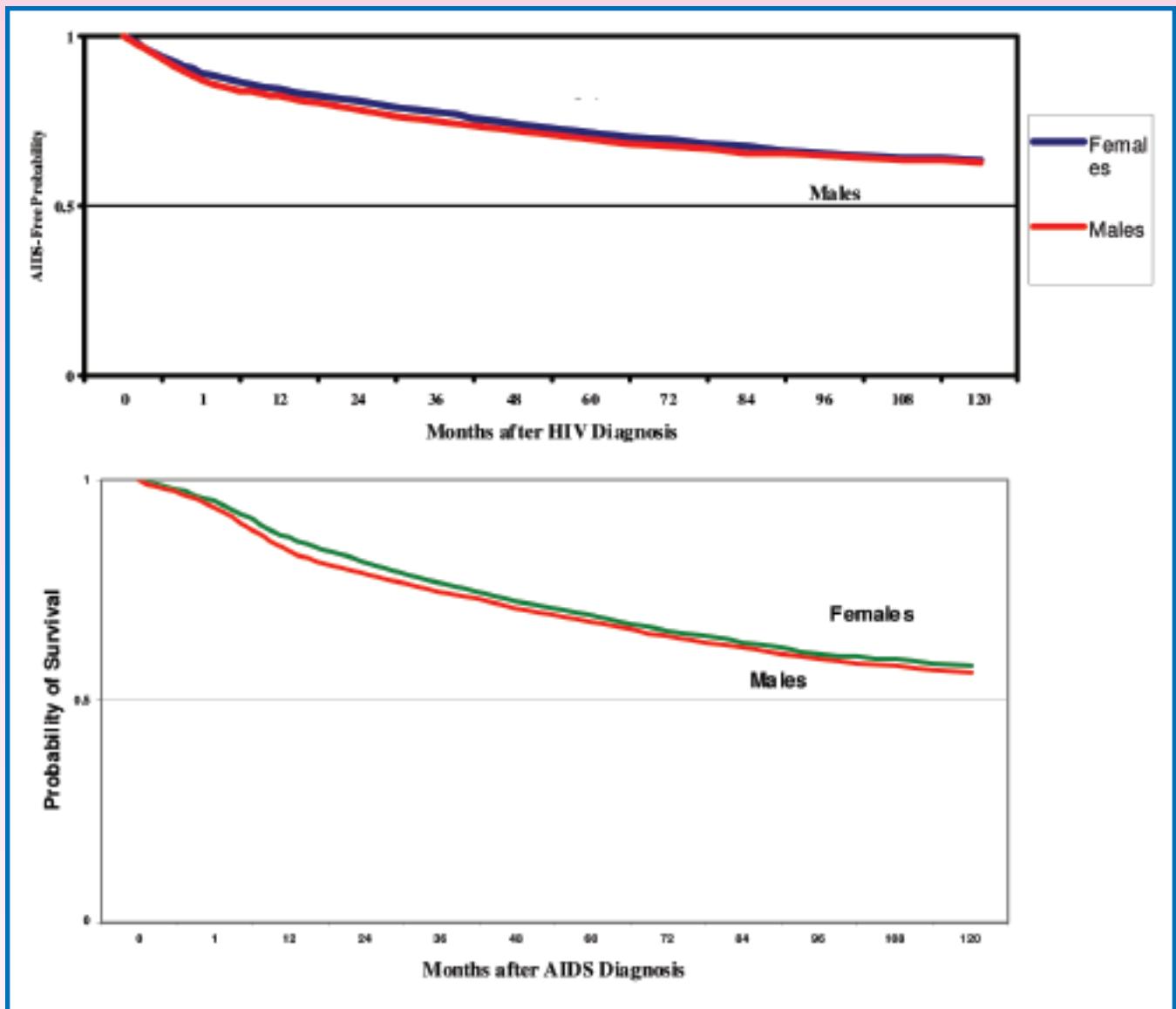
By contrast, ethnic differences in progression to AIDS and on survival from AIDS to death (Figure 18) show that Black non-Hispanic and Hispanic patients progress to AIDS and succumb to death significantly faster after AIDS diagnosis than White non-Hispanics.  Black non-Hispanics in particular experienced a considerably faster progression from HIV to AIDS and higher mortality after AIDS diagnosis.  Ethnic differences in survival rates may reflect, at least in part, differences in access to medical care, as documented in the literature.  Hispanic mortality may also be affected by a differential in mortality reports.  New Jersey cannot obtain data for many Hispanics that die outside the United States.

**Figure 17.**
**Progression from HIV to AIDS and Survival Curves after**
**AIDS Diagnosis by Race/Ethnicity, 1996-2006**
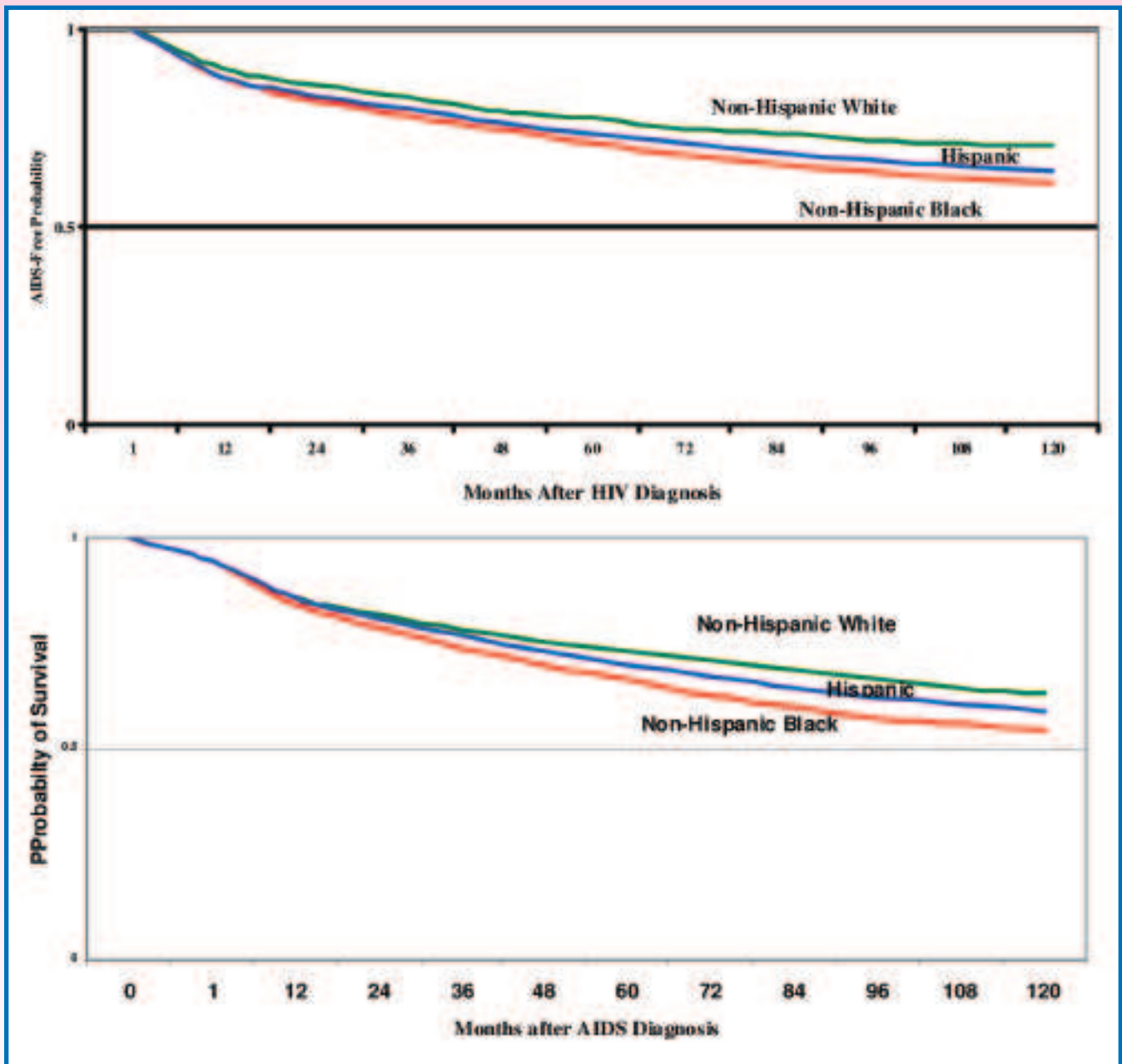


Differences in progression to AIDS and in survival after AIDS diagnosis by major exposure groups (Figure 19) show that those whose HIV exposure was injecting drug use have experienced significantly faster progression to AIDS and higher mortality after AIDS diagnosis than those whose HIV disease exposure was heterosexual sex or men having sex with men.

**Figure 18.**
**Survival Curves from HIV to AIDS and after AIDS Diagnosis by Major Exposure Category, 1996-2006**
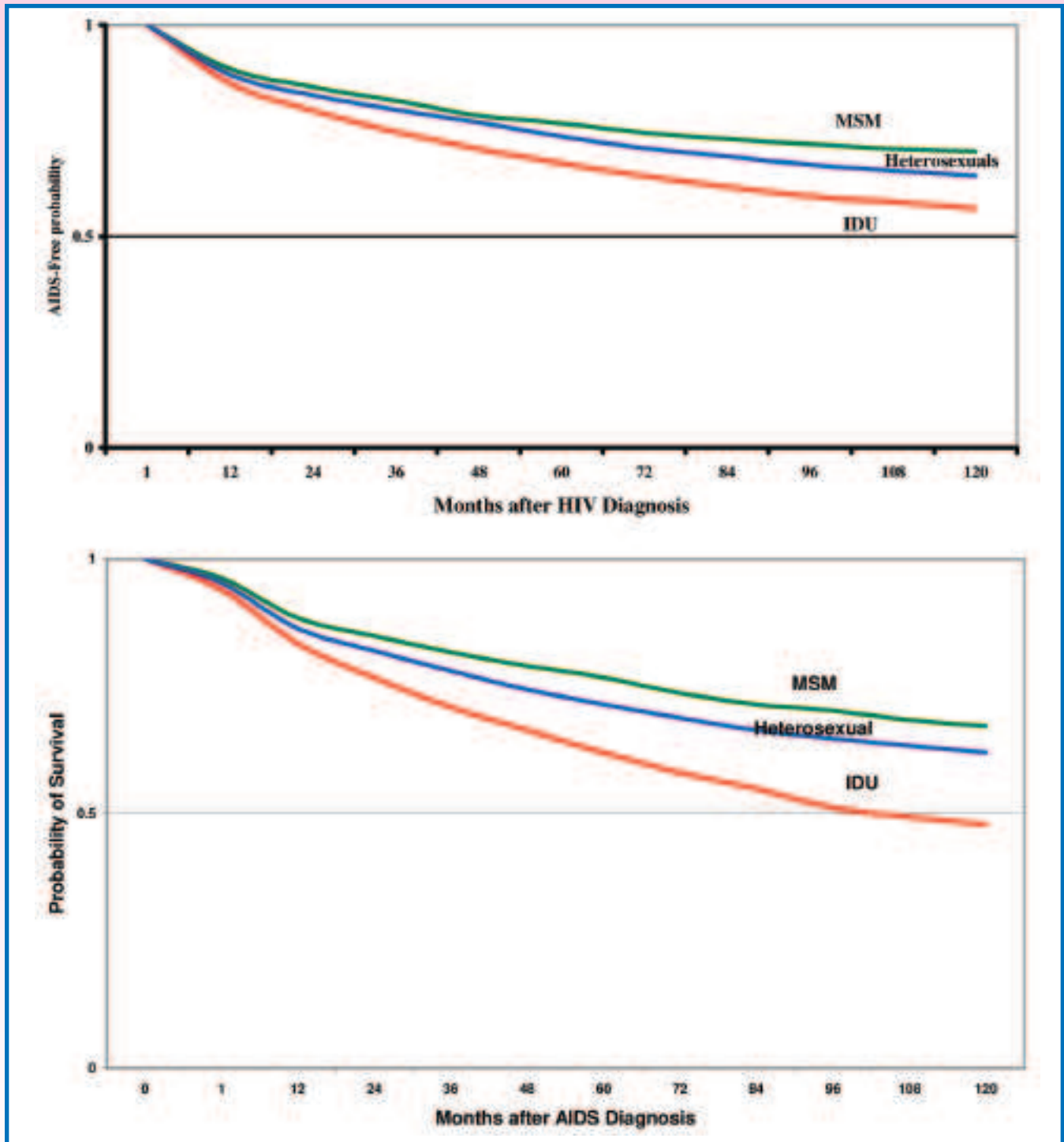


Marked differences in progression to AIDS and in survival after AIDS diagnosis occurred by age at AIDS diagnosis. Progression from HIV to AIDS increases significantly by age and survival after AIDS diagnosis decreases significantly with age. Figure 20 shows that those diagnosed at younger ages consistently show slower progression from HIV to AIDS and improved survival compared to those who were diagnosed with AIDS when they were older.

**Figure 19.**
**Progression to AIDS and Survival Curves after AIDS diagnosis by Age Group**
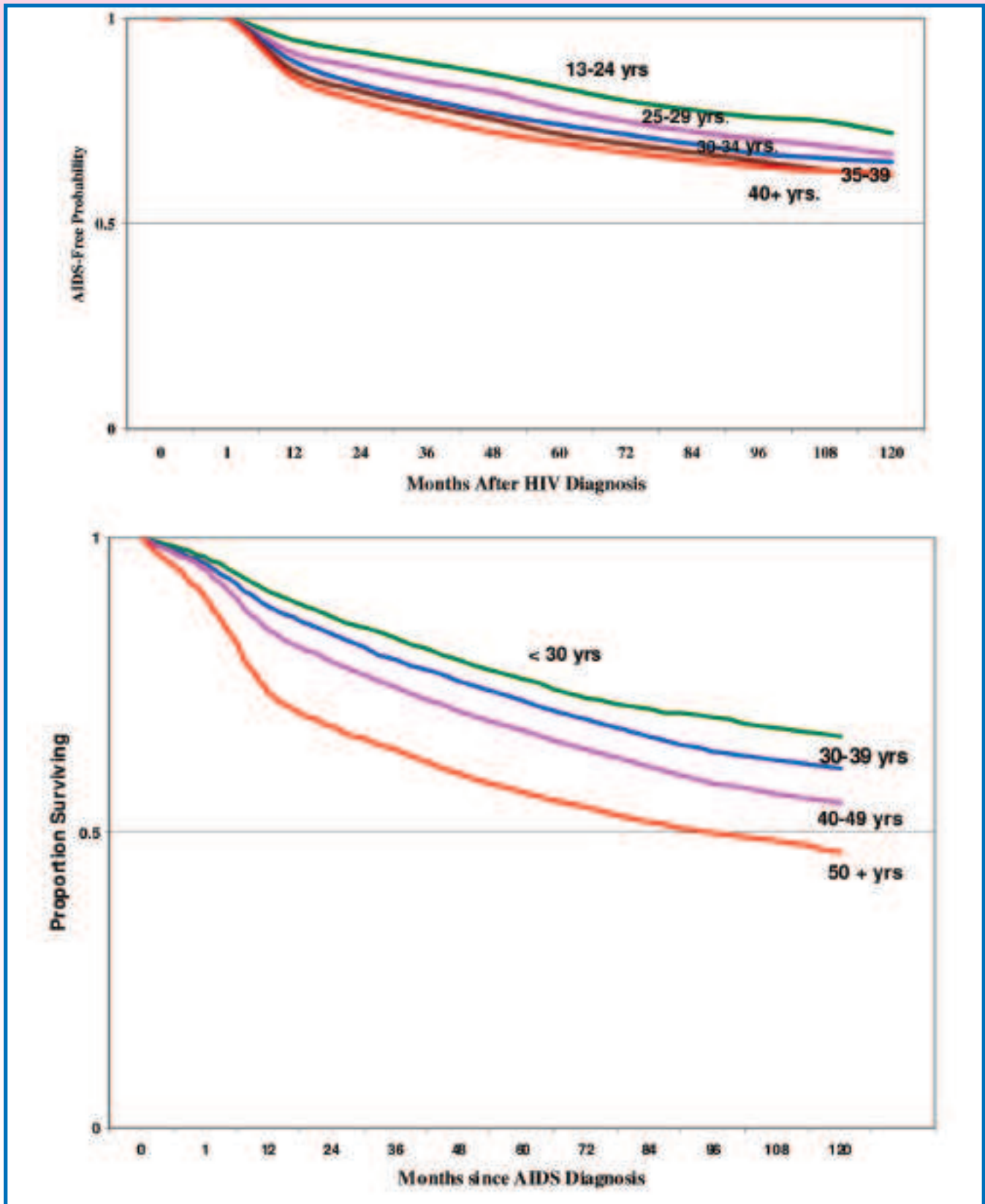
## Causes of Death

The HIV disease is the fourth leading cause of death for Black males in the state, the nineteenth leading cause for White males, and the thirteenth leading cause for all males in 2005 (Table 31). The HIV disease is the seventh leading cause for Black females, the twenty-third leading cause for White females, and the sixteenth leading cause of death for females overall in 2005 (Table 32). Among all persons 25 to 44 years of age HIV disease is the fourth leading cause of death, but for Blacks 25 to 44 years of age, HIV disease is the first leading cause of death (data not shown). When AIDS was first diagnosed in the early 1980s, the life expectancy of a person with the disease was measured in months, since the advent of the highly active antiretroviral therapy (HAART), persons are living with HIV/AIDS for years, and in many cases are dying of diseases other than HIV.

### Table 31.
### Ranking of Leading Underlying Causes of Death by
### Race for Males in New Jersey in 2005

| CAUSE GROUP (ICD-10 CODES) | Black | | White | | Total | |
|---|---|---|---|---|---|---|
| | Rank | No. | Rank | No. | Rank | No. |
| Heart Disease | 1 | 1,006 | 1 | 7,981 | 1 | 9,590 |
| Cancer | 2 | 944 | 2 | 6,839 | 2 | 8,386 |
| Accident (Unintentional Injuries) | 3 | 287 | 4 | 1,103 | 3 | 1,600 |
| Stroke | 7 | 198 | 5 | 1,088 | 4 | 1,409 |
| Chronic Respiratory Disease | 9 | 151 | 3 | 1,163 | 5 | 1,363 |
| Diabetes | 6 | 217 | 6 | 980 | 6 | 1,307 |
| Septicemia | 8 | 152 | 7 | 616 | 7 | 836 |
| Kidney Disease | 10 | 146 | 8 | 613 | 8 | 798 |
| Influenza/Pneumonia | 11 | 87 | 9 | 578 | 9 | 716 |
| Alzheimer's Disease | 16 | 35 | 10 | 456 | 10 | 514 |
| Liver Disease and Cirrhosis | 15 | 44 | 11 | 368 | 11 | 466 |
| Suicide | 19 | 25 | 12 | 339 | 12 | 415 |
| **HIV DISEASE** | **4** | **253** | **19** | **103** | **13** | **405** |
| Assault (homicide) | 5 | 220 | 23 | 70 | 14 | 348 |
| Parkinson's Disease | 24 | 12 | 13 | 309 | 15 | 344 |
| Pneumonitis due to Solids, Liquids | 17 | 27 | 15 | 237 | 16 | 287 |
| Aortic Aneurysm | 21 | 19 | 16 | 193 | 17 | 234 |
| Hypertension and Renal Disease | 12 | 63 | 18 | 134 | 19 | 217 |

*Note:  Black and White categories include Hispanics.  Total includes other races.*
*'All other diseases' category excluded from ranking.*
*Source:  New Jersey Department of Health and Senior Services, Center for Health Statistics.*

## Table 32.
## Ranking of Leading Underlying Causes of Death by
## Race for Females in New Jersey in 2005

| CAUSE GROUP (ICD-10 CODES) | Black | | White | | Total | |
|---|---|---|---|---|---|---|
| | Rank | No. | Rank | No. | Rank | No. |
| Heart Disease | 1 | 1,141 | 1 | 9,178 | 1 | 10,888 |
| Cancer | 2 | 1,012 | 2 | 7,086 | 2 | 8,506 |
| Stroke | 3 | 307 | 3 | 1,717 | 3 | 2,166 |
| Chronic Respiratory Disease | 8 | 124 | 4 | 1,556 | 4 | 1,762 |
| Alzheimer's Disease | 10 | 77 | 5 | 1,164 | 5 | 1,290 |
| Diabetes | 4 | 250 | 6 | 854 | 6 | 1,221 |
| Septicemia | 5 | 193 | 7 | 831 | 7 | 1,083 |
| Accident (Unintentional Injuries) | 9 | 119 | 9 | 699 | 8 | 907 |
| Influenza/Pneumonia | 11 | 75 | 8 | 767 | 9 | 904 |
| Kidney Disease | 6 | 142 | 10 | 595 | 10 | 780 |
| Hypertension and Renal Disease | 12 | 72 | 11 | 281 | 11 | 381 |
| Parkinson's Disease | 22 | 9 | 12 | 240 | 12 | 266 |
| Liver Disease and Cirrhosis | 14 | 35 | 15 | 203 | 13 | 255 |
| Pneumonitis due to Solids, Liquids | 18 | 18 | 13 | 228 | 14 | 254 |
| Benign, in situ, and Unspecified Neoplasm | 16 | 27 | 14 | 213 | 15 | 251 |
| HIV DISEASE | 7 | 130 | 23 | 43 | 16 | 193 |
| Atherosclerosis | 22 | 9 | 16 | 175 | 17 | 192 |
| Aortic Aneurysm | 19 | 17 | 17 | 142 | 18 | 166 |
| Perinatal Conditions | 13 | 49 | 21 | 63 | 19 | 153 |
| Suicide | 21 | 11 | 18 | 85 | 20 | 114 |
| Anemia's | 17 | 25 | 19 | 81 | 21 | 109 |
| Congenital Malformations | 20 | 16 | 20 | 69 | 22 | 105 |

*Note:  Black and White categories include Hispanics.  Total includes other races.*
*'All other diseases' category excluded from ranking.*
*Source:  New Jersey Department of Health and Senior Services, Center for Health Statistics*

# INDICATORS OF RISK

Information related to the behavioral and social indicators of risk for HIV infection are necessary for the planning of HIV prevention, care, and treatment. This section of the Epidemiologic Profile includes information about the following indicators: sexual behaviors (such as the number and gender of partners), drug use behavior, and testing behaviors (such as where and/or why tested). The data were collected through mandated reports of disease or admission to drug treatment, or through special surveys designed to measure health behaviors. Each of these methods has its limitations. Mandated reports do not provide information on at-risk, but not yet infected populations. Surveys provide only information on the population questioned, and the risk behaviors are self-reported.

The Behavioral Risk Factor Surveillance System (NJBRFS) is the largest telephone-based surveillance system in the world, with over 430,000 interviews conducted in 2007. Self reported data was collected as part of the New Jersey survey. Questions regarding HIV-related attitudes and behaviors were asked of the respondents under the age of 65 who were accessible by telephone. Since it is population-based, estimates about testing attitudes and practices can be generalized to the adult population, not just those at highest risk for HIV/AIDS.

## HIV Testing Behavior

The NJBRFS asked 20,890 respondents from 2006-2008 if they had ever been tested for HIV. Persons ages 25-44 of most races were more likely to have been tested than persons in other age groups. In every age group, a greater proportion of Black non-Hispanics said they have had an HIV test than did any other racial or ethnic group (Table 33 and Figure 20). The Odds Ratio of Black non-Hispanics tested in 2006-2008 was 2.86 times more likely than the Odds Ratio of White non-Hispanic.

**Table 33.**
**Estimated Percentage of New Jersey Adults aged (18-64) Who Have Ever Had an HIV Test\* by Age Group and Race/Ethnicity, 2006-2008**

| Age | White non-Hispanic | Black non-Hispanic | Hispanic | Asian non-Hispanic | Total |
|------|------|------|------|------|------|
| 18-24 | 30.0 | 52.2 | 36.3 | 26.8 | 33.8 |
| 25-34 | 51.4 | 77.0 | 60.7 | 27.9 | 55.0 |
| 35-44 | 50.3 | 70.4 | 54.8 | 45.5 | 53.1 |
| 45-54 | 29.5 | 57.7 | 46.3 | 26.5 | 34.6 |
| 55-64 | 17.7 | 40.8 | 32.2 | 13.1 | 22.7 |
| Total | 36.4 | 60.9 | 48.8 | 31.2 | 41.2 |

*\*Excluding blood donations.*
*Source: Prevalence Estimates for2006-2008 from NJBRFS.*
*New Jersey Center for Health Statistics.*

**Figure 20.**
**Estimated Percentage of New Jersey Adults (18-64) Who Have**
**Ever Had an HIV Test\* by Age and Race/Ethnicity, 2006-2008**
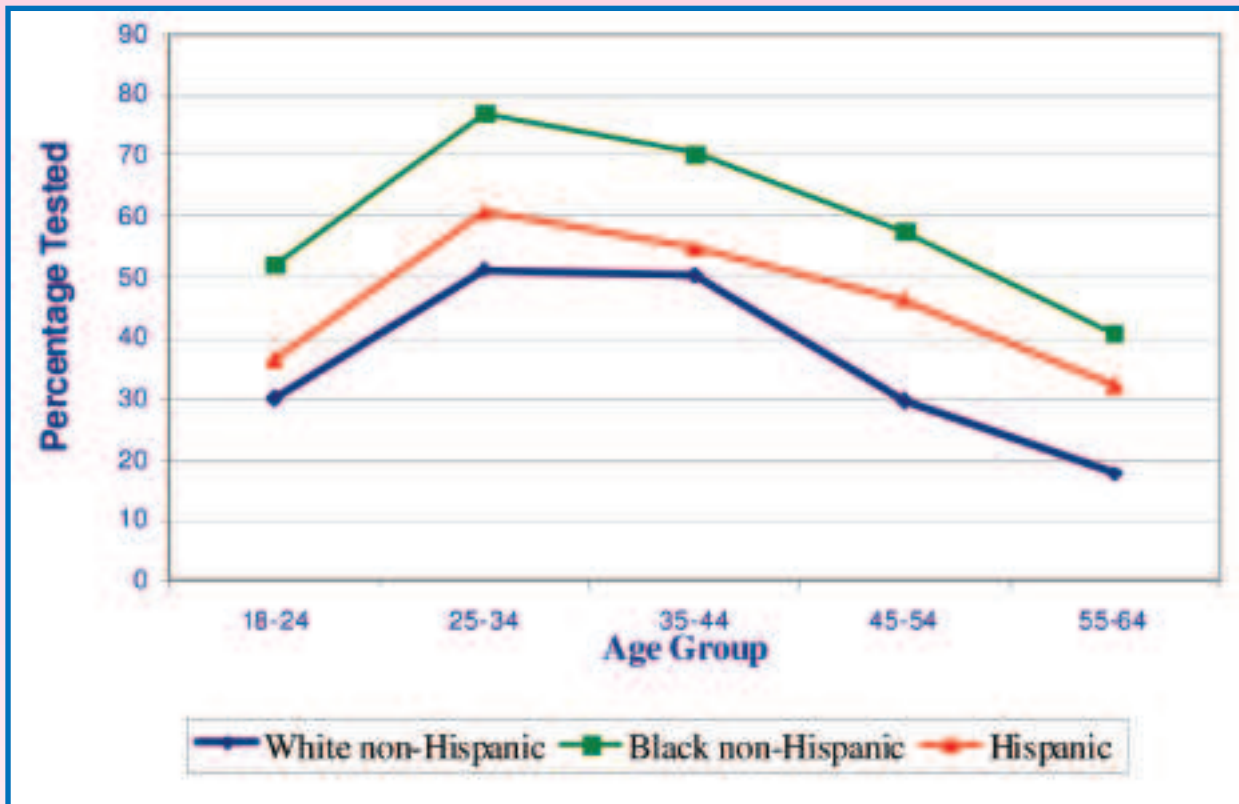


*\* Excluding blood donations.*
*Source: Prevalence Estimates for 2006-2008 from NJBRFS.*
*New Jersey Center for Health Statistics.*

In the 2006-2008 surveys, the data from the NJBRFS indicated that the proportion of women who had an HIV test was higher than the proportion of men who had been tested, among respondents 44 years of age and younger. Mandatory counseling and voluntary testing of pregnant women at the time of labor and delivery may account for these higher estimated percentages. A higher proportion of men aged 45-64 reported having had an HIV test than women did in the same age category. Overall, the link function Cumulative Logit indicates that the Odds Ratio of women tested in 2006-2008 is 1.29 times more than Odds Ratio of men.

## Table 34.
## Estimated Prevalence Percentage of New Jersey Adults Aged
## (18-64) Who Have Ever Had an HIV Test* by Age Group and Gender, 2006-2008

| Age | Men | Women | Total |
|---|---|---|---|
| 18-24 | 25.9 | 42.9 | 33.8 |
| 25-34 | 45.9 | 62.4 | 54.0 |
| 35-44 | 49.2 | 56.9 | 53.1 |
| 45-54 | 35.6 | 33.6 | 34.6 |
| 55-64 | 26.7 | 19.1 | 22.7 |
| Total | 38.5 | 44.0 | 41.2 |

*  Excluding blood donations.
*Source:  Prevalence Estimates for2006-2008 from NJBRFS.*
*New Jersey Center for Health Statistics.*

## Figure 21.
## Estimated Percentage of New Jersey Adults (18-64) Who Have
## Ever Had an HIV Test* by Age Group and Gender, 2006-2008
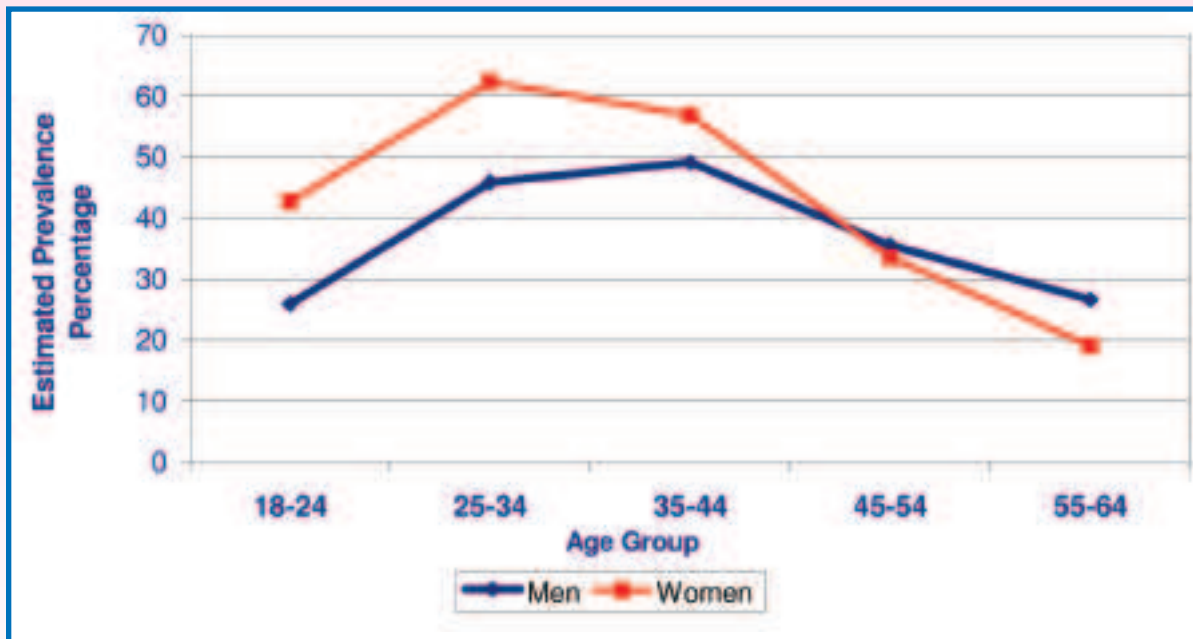


*  Excluding blood donations.
*Source:  Prevalence Estimates for 2006-2008 from NJBRFS.*
*New Jersey Center for Health Statistics.*

Nearly eight thousand respondents between the ages of 18 and 64 in 2006-2008 indicated where they had their last HIV test. In most cases, the last HIV test was at a doctor's office or at a health maintenance organization (HMO). The estimated prevalence percentage of White non-Hispanics tested in a private doctor's office or an HMO (52.8%) was higher than in other race/ethnicity groups. The estimated prevalence percentages of Hispanics tested in a Hospital/Emergency Room (24.7%) or a clinic (23.1%) were higher than in other race/ethnicity groups in New Jersey. A small percent of the respondents indicated their last HIV test was obtained at a counseling and testing site or a correctional facility. However, the estimated prevalence percentage of Black non-Hispanics tested in a correctional faciltiy or drug treatment facility (2.1%) and counseling testing site (5.4%) were larger than for other race/ethnicity groups (Table 35 and Figure 22).

### Table 35.
### Estimated Percentage of New Jersey Adults (18-64) Where
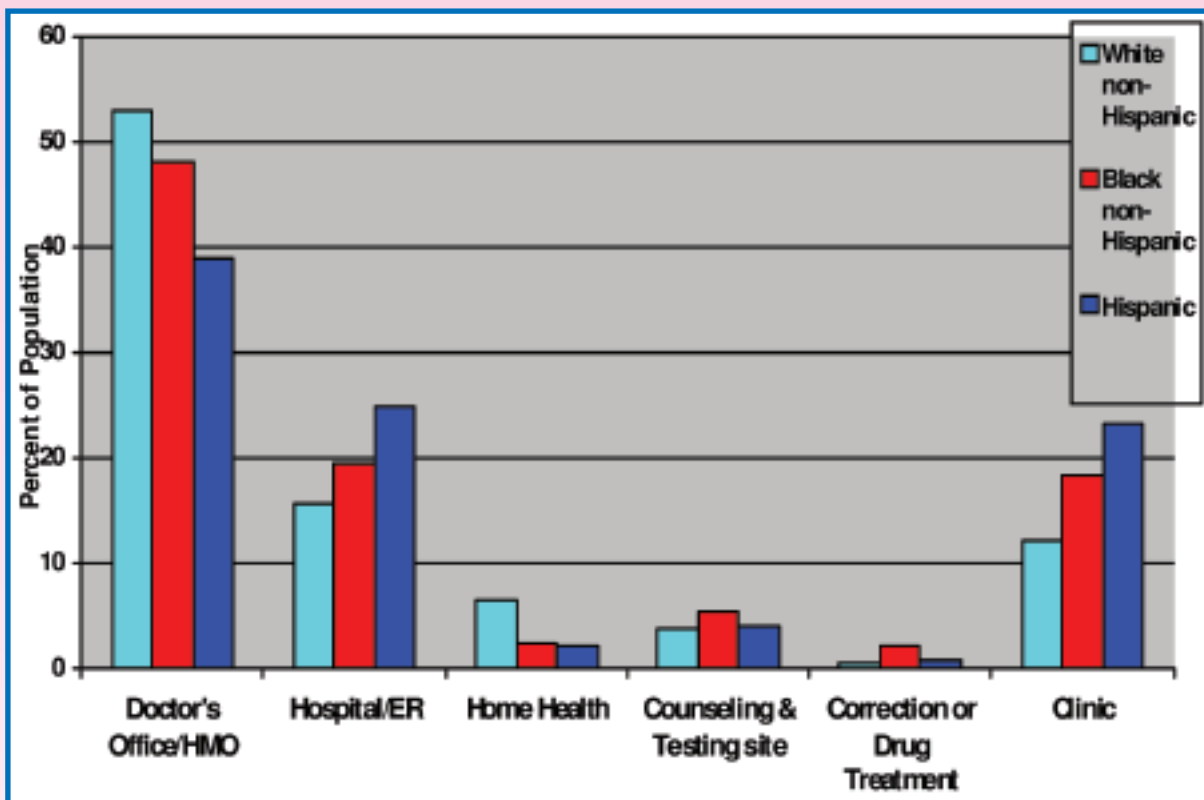### Last Obtained an HIV Test* by Race/Ethnicity, 2006-2008

| Site of HIV Test | White non-Hispanic | Black non-Hispanic | Hispanic | Total** |
|---|---|---|---|---|
| Doctor's Office or HMO | 52.8 | 48.1 | 38.8 | 48.6 |
| Hospital/ER | 15.6 | 19.5 | 24.7 | 18.4 |
| Home Health | 6.5 | 2.3 | 2.2 | 4.7 |
| Counseling and Testing Site | 3.8 | 5.4 | 3.9 | 4.1 |
| Correction or Drug Treatment Facility | 0.5 | 2.1 | 0.7 | 0.8 |
| Clinic | 12.0 | 18.3 | 23.1 | 15.8 |
| Somewhere else | 8.8 | 4.4 | 6.7 | 7.7 |
| Total | 100 | 100 | 100 | 100 |

* Excluding blood donations.
** includes refused/unknown and Asian/Pacific Islander race.
Source: Prevalence Estimates from NJBRFS 2006-2008.

*  Excluding blood donations.
** includes refused/unknown and Asian/Pacific Islander race.
Source:  Prevalence Estimates from NJBRFS 2006-2008.

The doctor's office/HMO is the most common site for HIV tests among the 18-64 year old population across all age categories.  The respondents aged 18 through 24 years were the most likely age group to have been tested at a community health clinic, and the prevalence estimates are relatively greater for young people to use clinics than for older people.  Persons 45 through 64 years old are more likely to say they used a hospital or home health organization for their recent HIV test than younger people (Table 36 and Figure 24).

**Table 36.**
**Estimated Percentage of New Jersey Adults (18-64) Where**
**Last Obtained an HIV Test\* by Race/Ethnicity, 2006-2008**

| Site of HIV Test | 18-24 | 25-34 | 35-44 | 45-54 | 55-64 |
|---|---|---|---|---|---|
| Doctor's Office or HMO | 37.2 | 48.9 | 54.2 | 46.5 | 44.7 |
| Hospital/ER | 17.8 | 17.6 | 16.0 | 21.9 | 22.4 |
| Home Health | 0.9 | 2.2 | 5.7 | 7.9 | 5.1 |
| Counseling & Testing Site | 4.6 | 4.5 | 4.0 | 3.4 | 4.0 |
| Correction or Drug Treatment | 0.9 | 1.4 | 0.4 | 0.8 | 0.5 |
| Clinic | 25.7 | 18.3 | 12.9 | 12.5 | 14.6 |
| Somewhere else | 13.0 | 7.1 | 6.7 | 6.9 | 8.7 |
| Total | 100 | 100 | 100 | 100 | 100 |

*  Excluding blood donations
Source:  Prevalence Estimates from NJBRFS 2006-2008

**Figure 23.**
**Percent Distribution of Major Sites Where New Jersey Adults (18-64)**
**Last Obtained an HIV Test by Age, 2006-2008**
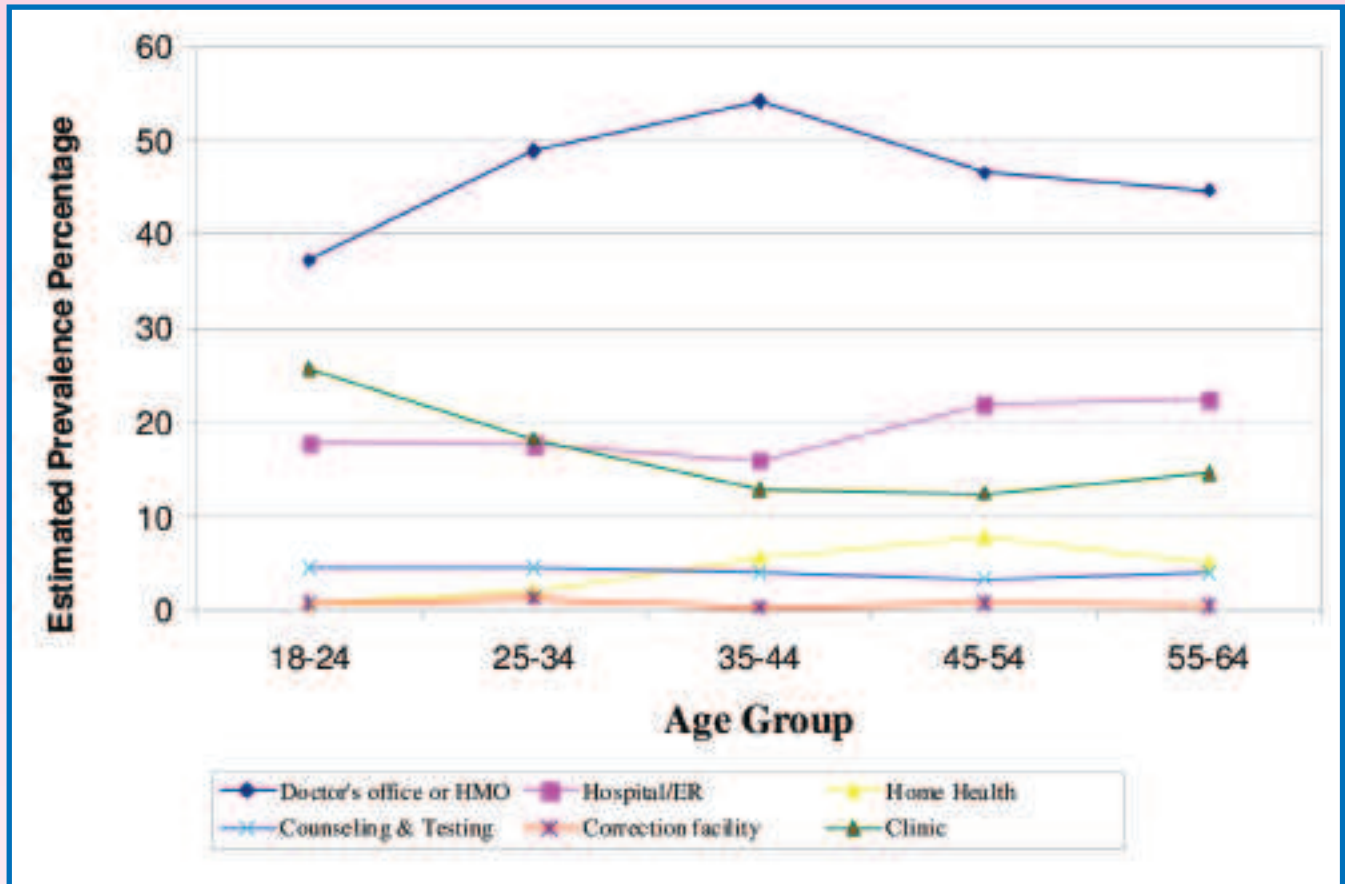
*Note: Adults who had an HIV test, excluding blood donations.*
*Source: 2006-2008 NJBRFS.*

# HIGH-RISK SITUATIONS

The NJBRFS question regarding any high-risk situation for exposure to hepatitis B was asked of 4,808 respondents in 2007.  Overall, Black non-Hispanic had a larger percentage of persons and higher-risk situations than White non-Hispanics and Asian non-Hispanics.

The NJBRFS questions regarding any high-risk behavior status in HIV were asked of 7,825 respondents in 2008 (Table 38).  Statistical inferences from the NJBRFS indicate that education level accounts for differences in exposure to high-risk situations among Asian non-Hispanics. The results show a decreasing percentage of any risk situations in persons with a college education for all race/ethnicity groups.

### Table 37.
### Estimated Percentage of New Jersey Adults (18-64) Who Have High-Risk Situations of Hepatitis B by Education Level and Race/Ethnicity, 2007

| Education Level | White non-Hispanic | Black non-Hispanic | Hispanic | Asian non-Hispanic | Total |
|---|---|---|---|---|---|
| High School or Less | 6.7 | 8.6 | 8.9 | N/A | 7.6 |
| Some Higher Education | 7.6 | 7.8 | 2.5 | 2.5 | 6.8 |
| College Graduate | 5.3 | 7.5 | 8.6 | 2.3 | 5.9 |
| All | 6.2 | 8.0 | 7.4 | 2.0 | 6.6 |

*Note: 'Unknown" responses and refusals have been excluded from this analysis.*
*Source:  New Jersey Center for Health Statistics.*

### Table 38.
### Estimated Percentage of New Jersey Adults (18-64) Who Have HIV List of High-Risk Situations by Education Level and Race/Ethnicity, 2008

| Education Level | White non-Hispanic | Black non-Hispanic | Hispanic | Asian non-Hispanic | Total |
|---|---|---|---|---|---|
| High School or Less | 3.2 | 4.2 | 6.6 | N/A | 4.3 |
| Some Higher Education | 3.7 | 2.2 | 4.4 | N/A | 3.4 |
| College Graduate | 1.8 | 0.3 | 2.5 | 1.2 | 1.7 |
| All | 2.7 | 2.5 | 5.3 | 0.9 | 3.0 |

*Note:  "Unknown" responses and refusals have been excluded from this analysis.*
*Source:  New Jersey Center for Health Statistics.*

# ILLICIT DRUG USE

A major factor in the prevention, care and treatment of HIV is illicit drug use. Sharing of injection drug equipment can transmit HIV and hepatitis. In addition, illicit drug use, as well as the use of alcohol, is linked with unsafe sexual activity. Drug users may exchange sex for drugs and some people think that drugs make sex more enjoyable. Most importantly, drug use (including alcohol) decreases the chances that people will protect themselves during sexual activity.

Illicit drug use can lead to other problems for people who are taking HIV/AIDS medication.[1,2] People who use illicit drugs are less likely to take all of their medications, which can cause treatment failure and may lead to the transmission of HIV that is resistant to some of the drug therapies available. Additionally, people who use illicit drugs and take prescribed medications for HIV may develop adverse drug reactions which are potentially life threatening.

## Admissions to Drug Treatment

There were 62,812 people admitted to drug treatment in 2008. Of these, approximately 59 percent were White non-Hispanic and one-fourth (26%) were Black non-Hispanic (Table 38). Heroin/Opiates were the primary drug of choice for about 41 percent of the total admissions in 2008. Persons admitted for heroin use were primarily White non-Hispanic (60%) and Black non-Hispanic (26%). The second most frequent primary drug on admission in 2008 was alcohol with 20,302 admissions. More than two-thirds (69%) of the admissions for alcohol treatment were White non-Hispanic and about one-sixth (17%) were Black non-Hispanic. The third most frequent primary drug in 2008 was marijuana with 9,415 admissions. This represents an increase in the number marijuana related admissions in all race/ethnic groups compared to previous years.

**Table 39.**
**Primary Drug Use by Race/Ethnicity for**
**New Jersey Resident Admissions to Drug Treatment in 2008**

| Race/ Ethnicity | Alcohol No. | % | Cocaine No. | % | Heroin/Opiates No. | % | Marijuana No. | % | Others No. | % | Total No. | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Black non-Hispanic | 3,388 | 17 | 2,212 | 37 | 6,720 | 26 | 3,487 | 37 | 327 | 23 | 16,134 | 26 |
| Hispanic | 2,690 | 13 | 772 | 13 | 3,501 | 14 | 1,837 | 20 | 226 | 16 | 9,026 | 14 |
| White non-Hispanic | 13,988 | 69 | 2,929 | 49 | 15,327 | 60 | 3,993 | 42 | 890 | 61 | 37,127 | 59 |
| Other | 236 | 1 | 43 | 1 | 140 | 1 | 98 | 1 | 8 | 1 | 525 | 1 |
| Total | 20,302 | 100 | 5,956 | 100 | 25,688 | 100 | 9,415 | 100 | 1,451 | 100 | 62,812 | 100 |

*Source: New Jersey Department of Human Services, Division of Addiction Services.*

# ANALYSIS OF UNMET NEED

For purposes of determining unmet need, individuals who had at least one HIV care-related antiretroviral drug prescription, a viral load test and/or a CD4 test during 2007 were considered to have been in care in 2007. Individuals not "in care" were considered to have an unmet need for HIV-related primary medical care. Unmet need was estimated for individuals reported to eHARS as having been diagnosed prior to 2007 and still living as of December 31, 2007 (n=30,916). Those incarcerated at time of diagnosis and those with unknown county of residence are not included in the analysis (not included in the 30,916).

The 2007 unduplicated antiretroviral drug prescription claims data from New Jersey Medicaid, the AIDS Drug Distribution Program, General Assistance, Pharmaceutical Assistance to the Aged and Disabled (PAAD) and the Senior Gold program were linked to eHARS to identify those who received prescription drugs in 2007. Viral load and CD4 data in eHARS, laboratory reports not yet updated in eHARS, and those laboratory test data available from Early Intervention Programs were also matched to eHARS to determine who had laboratory work ordered during 2007. Out of 30,916 individuals who were diagnosed prior to 2007 and still alive at the end of 2007, 16,351 patients (53%) had at least one indicator (antiretroviral drugs, a viral load test and/or a CD4 test in 2007) of HIV primary medical care in 2007. The remaining 14,610 patients (47%) are classified as individuals with unmet need for HIV-related primary care.

Differences in unmet need were found by gender, race/ethnicity, current age, mode of transmission, HIV status, year of HIV diagnosis and residence (EMA) at time of diagnosis. In 2007, 64 percent of AIDS patients received primary care compared to 34 percent of HIV patients. A higher percentage of females than males received primary medical care in 2007. Fifty-six percent of White non-Hispanics, 53 percent of Black non-Hispanics, and 49 percent of Hispanics were in care. The percentage of people in care has generally increased by year of HIV diagnosis. Fifty-nine percent of HIV/AIDS patients diagnosed in 2006 reported having primary medical care compared to only 48 percent who were diagnosed in or before 1994.

The estimates of people in care represent minimum numbers in care. This is because many indications of care are not included in this analysis. These include medical visit data, and data on laboratory tests and prescription drugs paid for by private sources. Finally, gaps in mortality data and population movement may affect the estimated level of HIV-related primary medical care.

# SUCCESSES AND FUTURE CHALLENGES

New Jersey's response to the HIV/AIDS epidemic has yielded many successes. The greatest success in New Jersey's fight against HIV/AIDS is the reduction of perinatal transmission of HIV with a decrease from 12 percent in 1997 to one percent in 2008. Due to improvements in the screening of donated blood, transfusions have been virtually eliminated as an exposure category for HIV infection. When AIDS was first diagnosed in the early 1980s, life expectancy for individuals with the disease was measured in months. Now over 50 percent of those infected with HIV are still living ten years after the date of HIV diagnosis.

In the absence of an HIV vaccine or cure, prevention remains one of the most effective methods of containing the epidemic. Successful public health efforts have reduced the number of annual new infections, but despite the existence of strong proven prevention programs, individuals are still becoming infected with a preventable disease. This is particularly true in minority communities. Although the number of infections is down for Black non-Hispanic men and women, the rate of infection in this population is still significantly higher than in the White population.

Although surveillance data show that persons are living longer with HIV/AIDS, the older adult is often overlooked in targeting prevention. In 2006, 33 percent of newly diagnosed HIV/AIDS cases occurred in individuals 45 years of age and older and in 2008, 59 percent of persons living with HIV/AIDS are 45 years old or older (Table 5). Many adults 45 years of age and older do not take precautions against HIV because they do not consider themselves to be at risk for infection. If they are infected, older adults often mistake the symptoms of HIV/AIDS with the signs of the normal aging process. Similarly, physicians may be less likely to consider the possibility of HIV infection in older adults, resulting in inadequate prevention and delayed diagnosis. This is a population that needs more attention.

The advent of highly active antiretroviral therapy has been a huge success in an area where there was previously little hope. However, analysis of reported cases of HIV/AIDS has shown that many infected individuals are not in care. Additionally, drug resistance threatens to erase the recent gains made in treating HIV. As strains resistant to HAART increase in the HIV infected population, new pharmaceutical agents must be readily available for use in these patients. Moreover, medical treatments must also be developed to meet the future needs that current drug therapies may not resolve. The DHSTS continues to monitor changes in the epidemic using its surveillance system to look for resistant strains. However, the challenge will be to maintain and modify this system as laboratory testing for these strains evolves.
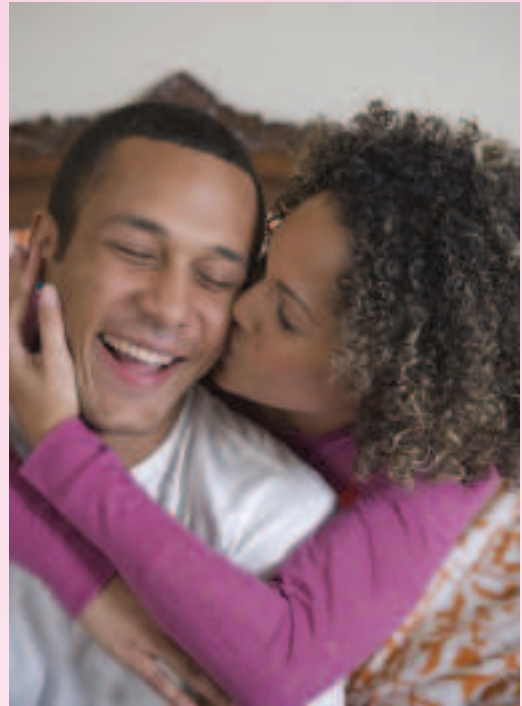
Transmission of HIV, hepatitis and other blood-borne pathogens, by the sharing of contaminated needles, has given rise to syringe exchange programs in other states. Although some epidemiologic studies have shown that these programs decrease the transmission of HIV disease without increasing the rates of addiction, they remain controversial. Others think it is inconsistent with public health policy to provide drug paraphernalia to addicts. In 2007, a Gubernatorial Executive Order was established to permit a limited number of syringe exchange programs (SEP) in New Jersey. The SEPs are currently operating in Camden, Newark, Paterson and Jersey City. These municipalities are highly impacted by injection drug use and HIV transmission. The DHSTS will continue to monitor the impact of the SEP and respond to the political challenges regarding this important issue.

While the availability and expansion of rapid HIV testing has revolutionized our ability to introduce testing to a greater population by informing participants of their status on the same day within 30 minutes, we must also offer more innovative programming to get African Americans and Hispanics to test sooner, long before they are symptomatic from the effects of possible HIV infection.

The DHSTS believes that these challenges represent our greatest opportunity for improvement in advancing the fight against HIV. Turning the tide on reducing the spread of HIV remains a formidable challenge, and we must not underestimate the commitment needed. The value of this Epidemiologic Profile is that it provides the surveillance and research information necessary for the planning processes for HIV/AIDS prevention, education, care, treatment and HIV testing. To this end, the DHSTS invites your comments and suggestions for the use and improvement of future versions of the Epidemiologic Profile.

# BIBLIOGRAPHY

## Appendix A - Major Data Sources

### Enhanced Perinatal Surveillance (EPS)

**Overview:** The project was established to monitor the implementation and effect of the Public Health Service recommendations for preventing perinatal HIV transmission on pediatric HIV/AIDS trends, provide a data collection system that enables states to respond to selected requirements of the Ryan White CARE Act, and assist with timely evaluation of perinatal prevention efforts.

The project collects data using the HIV/AIDS case report form and collects additional information from supplemental records by the use of a medical record abstraction form. The enhanced surveillance methods used to identify HIV-infected mothers and their perinatally exposed children include matching of birth file to the HIV/AIDS surveillance registry and linking of mother-infant pairs. Information on HIV-infected mothers and their perinatally exposed children is abstracted from multiple sources: the maternal HIV record, prenatal care records, labor and delivery records, birth records, pediatric HIV records, birth and death certificates, and laboratory reports. The data that are collected include maternal and prenatal care, mother's HIV test history, prenatal and neonatal antiretroviral therapy, other interventions to prevent transmission, receipt of prophylaxis and treatment of the infant, appropriate follow-up care of the mother and child, and other interventions relevant to the evaluation of recommended public health actions to prevent perinatal HIV transmission. Infants identified through enhanced surveillance are followed-up every six months until their HIV infection status is determined; if they meet the case definition, they are followed-up to determine their vital status.

**Population:** All HIV-exposed infants born during 1999 or later years and their HIV-positive mothers.

**Strengths:** The project is population based in most areas. Data from population-based areas are complete. In a study that included data from four population-based project areas (Louisiana, Michigan, New Jersey, and South Carolina), 90 percent ascertainment of infants born to HIV-infected women was found when data were compared with data from the Survey of Childbearing Women. The project collects information on HIV-exposed

infants every six months until HIV infection is diagnosed. Study sites are able to characterize trends in perinatal HIV/AIDS, monitor the implementation and effect of perinatal prevention guidelines, assess resource needs, assess missed prevention opportunities, and monitor the effect of prevention programs.

**Limitations:** Data for the project rely upon the ability to identify an HIV-exposed infant and locate the supplemental medical charts needed to complete the abstraction form. The completeness of data elements relies upon the level of documentation in each of these medical records.

## HIV/AIDS Reporting System (eHARS)

**Overview:** Since 1992 HIV/AIDS has been a reportable disease in New Jersey. The surveillance system was established to monitor incidence and the demographic profile of HIV/AIDS; describe the modes of HIV transmission among persons with a diagnosis of HIV or AIDS; guide the development and implementation of public health intervention and prevention programs; and assist in the assessment of the efficacy of public health interventions.

**Funding Source:** U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for HIV, STD, and TB Prevention, New Jersey Department of Health and Senior Services (NJDHSS) and the Division of HIV, STD and TB Services (DHSTS).

**Mode of Administration:** The CDC designed case report forms are completed by providers, and/or the NJDHSS staff, based on a review of medical records. Records are updated based on laboratory reports received from testing laboratories.

**Population:** All persons whose conditions meet the 1993 CDC AIDS surveillance case definition or who are identified as HIV positive.

**Strengths:** These data reflect the effect of HIV/AIDS on a community and the trends of the epidemic in a community. The HIV/AIDS surveillance has been determined to be >85 percent complete. The data include all demographic groups (age, race/ethnicity, gender).

**Limitations:** Information is not available on persons who are HIV positive but not reported, or who have not been tested. Information on the mode of transmission of the disease is not complete, and follow-up on known

positives may not be complete because they may move out-of-state after diagnosis.  Because of the prolonged and variable period from infection to the development of AIDS, trends in AIDS surveillance do not represent recent HIV infections.  Asymptomatic HIV-infected persons are also not represented by AIDS case data.  In addition, incomplete HIV or CD4+ T-cell testing may interfere with the representation of reporting.  Further, the widespread use of highly active antiretroviral therapy (HAART) complicates the interpretation of AIDS case surveillance data and estimation of the HIV/AIDS epidemic in an area.  Newly reported AIDS cases may reflect treatment failures or the failure of the health care system to halt the progression of HIV infection to AIDS.  The AIDS cases represent late-stage HIV infections.

**Response Rate:** Population-based system of reporting, mandated by both statute and regulation.  Evaluations of completeness are consistently greater than 85 percent.

**Demographic Data:** Gender, age and race/ethnicity.

**Other Data:** Mortality status, mode of transmission, year of diagnosis and date of report.

**Schedule:** Ongoing.

**Geographic Estimates:** State, county and municipality.

# New Jersey Alcohol and Drug Abuse Data System (ADADS)

**Overview:** Drug abuse treatment agencies throughout the state submit reports on treatment admissions and discharges to the state's Alcohol and Drug Abuse Data System (ADADS).  The system collects data on drug use and socio demographic characteristics of persons admitted to drug treatment.

**Population:** All persons admitted to drug treatment in New Jersey.

**Strengths:** Data are provided statewide and by county.  Data include detailed information on drugs used, length of time used, and methods of use including injection.  Data are available on the NJDHSS website with links to other useful sites.

**Limitations:** The system does not contain data on persons who use illicit drugs but do not enter treatment.  It does not contain data on needle sharing for those admitted to drug treatment.

# New Jersey Death Data

**Overview:** New Jersey law requires the prompt filing of a death certificate by the proper authority in the event of a death occurring in the state. These certificates are submitted to the office of the State Registrar, where they are recorded and filed permanently. Statistics on deaths of New Jersey residents that occurred in other states are obtained through an exchange program sponsored by the national Vital Statistics Cooperative Program and added to the death file. Records of deaths occurring to non-residents of New Jersey were eliminated from the analysis. Deaths included in this report encompass all of the deaths to New Jersey residents that occurred within a calendar year. The records follow the standard certificate promulgated by the National Center for Health Statistics and include demographic information on the decedent, underlying cause of death and contributions of selected factors to the death. The underlying cause of death for deaths occurring prior to 1999 were coded in accordance with the International Classification of Diseases, Ninth Revision.

**Years of Data Collected:** New Jersey, along with Massachusetts, the District of Columbia, and several large cities that had efficient systems for death registration, was part of the first national death "registration area" created in 1880. New Jersey has continued to collect death records since that time, through a number of changes in the death record format and several versions of the classification system for cause of death. The standard death certificate that provided the data for this report was implemented in 1989. The certificate was revised in 2003 using a new format. The manual for coding the cause of death that had been in effect from 1979 through 1998, Ninth Revision was replaced by the International Classification of Diseases, Tenth Revision in 1999.

**Population:** The entire state population.

**Strengths:** Reporting of deaths is universal and complete. Standardized procedures and definitions are used throughout the country to collect and process death certificate data. The data are widely available and can be analyzed by demographic characteristics and geographic residence of individuals who are reported to have died with an underlying cause of HIV infection.

**Limitations:** Deaths from HIV infection as an underlying cause may be under-reported and as a consequence, information may be incomplete when using only the underlying cause of death. Death records may be less timely than reports to the HIV/AIDS reporting system.

**Demographic Data:**    Gender, age, educational attainment, race/ethnicity, employment status, and marital status.

**Schedule:**    Reported annually.

**Geographic Estimates:**    State, county, municipality.

## Sexually Transmitted Disease Case Reporting

**Overview:**    The CDC conducts surveillance to monitor the levels of syphilis, gonorrhea, chancroid, and, more recently, chlamydia, in the U.S. in order to establish prevention programs, develop and revise treatment guidelines, and identify populations at risk for STDs. States, local areas, and U.S. territories submit to the CDC (weekly, monthly, or annually) case reports of STDs that have met the respective case definition for the infection.

**Funding Source:**    U. S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for HIV, STD and TB Prevention and the New Jersey Department of Health and Senior Services (NJDHSS).

**File Content:**    Case report forms include date of report, name, telephone number, address, age, birth date, pregnancy status, gender, race/ethnicity, disease type, name, address and telephone number of the provider/physician, laboratory test and treatment.

**Population:**    All persons with a diagnosis of an infection that meets the CDC surveillance case definition for the infection and who are reported to a local health department.

**Years of Data Collected:**    New Jersey started to require reporting of venereal disease in 1917. New Jersey has continued to collect these reports since that time, through a number of format changes.

**Response Rates:**    Laboratories and providers are surveyed to determine compliance with regulations.

**Demographic Data:**    Gender, age and race/ethnicity.

**Schedule:**    Reported annually.

**Strengths:** Sexually Transmitted Disease surveillance data can serve as a surrogate marker for unsafe sexual practices and/or demonstrate the prevalence of changes in a specific behavior (e.g., rectal gonorrhea). The STD data are widely available at the state and local level and because of shorter incubation periods between exposure and infection, STDs can serve as a marker of recent unsafe sexual behavior. In addition, certain STDs (e.g., ulcerative STDs) can facilitate transmission and/or acquisition of HIV infection. Finally, changes in trends of STDs may indicate changes in community sexual norms (e.g., unprotected sex).

**Limitations:** Sexually Transmitted Diseases are reportable, but requirements for reporting differ by state. Reporting of STDs from private sector providers may be less complete. Although STD risk behaviors result from unsafe sexual practices, they do not necessarily correlate with HIV risk. Trends in chlamydia infections may reflect changes in reporting and screening practices rather than actual trends in disease.

## Survey of Childbearing Women

**Overview:** Beginning in 1988 and continuing annually since, the NJDHSS, DHSTS has conducted a study of the HIV status of newborns. This is an anonymous unlinked study done through testing of a blood specimen from infants born in the state. The HIV antibodies are present in the blood of a newborn in about the same concentration as in the blood of the mother. Therefore, the test of a newborn's blood is a good indicator of the presence of HIV in the mother and infant pair. The state's 120,000 newborns each year are routinely screened for inborn errors of metabolism. This involves obtaining a blood specimen from each newborn. During the months of July, August and September, excess blood remaining from the inborn errors of metabolism screening are analyzed for HIV through blinded, anonymous surveys. Since 1994, positive specimens have been tested for the presence of ZDV.

**Population:** All women giving birth to a live infant whose routine specimens for inborn errors of metabolism testing are received at the state Public Health and Environmental Laboratory during July, August, and September of each year.

**Strengths:** It is the state's only population based study of HIV prevalence.

**Limitations:** Women giving birth may not be representative of women in general. Limited information is available about the participants.

## Tuberculosis Surveillance

**Overview:** All reporting areas (the 50 states, the District of Columbia, New York City, Puerto Rico, and other United States jurisdictions in the Pacific and Caribbean) report tuberculosis (TB) cases to the CDC by using a standard case report form, the Report of a Verified Case of Tuberculosis (RVCT). Reported TB cases are verified according to the TB case definition for public health surveillance.  In 1993, the surveillance of TB was expanded to collect additional data to better monitor and target groups at risk for TB disease, to estimate and follow the extent of drug-resistant TB, and to evaluate outcomes of TB cases.  The RCVT form was revised to obtain information on occupation, initial drug regimen, HIV test results, history of substance abuse and homelessness, and residence in correctional or long-term care facilities at the time of diagnosis.

**Population:** All persons whose case of TB meets the public health surveillance definition.

**Strengths:** The level of active TB disease reporting is more than 95 percent complete.  As a result of the 1993 expansion of surveillance activities, jurisdictions have been able to evaluate the success of TB control efforts and monitor the status of the TB epidemic.  Tuberculosis surveillance data provide areas with a minimum estimate of the level of HIV comorbidity.

**Limitations:** Data on HIV infection status of reported TB cases should be interpreted with caution, because these data are not representative of all TB patients with HIV infection.  HIV testing is voluntary, and some TB patients may decline HIV testing.  In addition, TB patients who have been tested anonymously may not share their HIV test results with their health care provider.  Further, testing may be influenced by other factors, such as the extent to which testing is focused on, or routinely offered to, specific groups.

## Hepatitis C Registry

**Overview:** Communicable Disease Services within the New Jersey Department of Health and Senior Services conducts surveillance to monitor the levels of hepatitis C in the state.

**Funding Source:**    Federally funded through the CDC.

**File Content:**    Case report forms include date of report, name, telephone number, address, age, birth date, pregnancy status, gender, race/ethnicity, disease type, name, address and telephone number of the provider/physician, laboratory test and treatment.  Demographics, however, are not always available.

**Population:**    The enabling regulations for collecting and reporting hepatitis C are outlined in N.J.A.C. 8:57.  As per the regulations all physicians, hospitals and clinical laboratories are required to report this disease.  Hepatitis C is directly reportable to the New Jersey Department of Health and Senior Services.

**Demographic Data:**    Gender, age and race/ethnicity.

**Schedule:**    Reported annually.

**Strengths:**    Allow to assess, level, trends and prevalence of the disease.  Can be used to measure comorbidity with other diseases through matching the hepatitis C registry to other disease registries like HIV/AIDS and other communicable diseases.

**Limitations:**    Some demographics are missing.

## Uniform Billing (UB-92)

**Overview:**    The New Jersey Department of Health and Senior Services collects discharge records from hospitals.  The UB-92 Hospital Discharge Data file contains medical abstracts, patient information and billing of all hospital discharges from acute care facilities.

**Population:**    All discharges from hospitals statewide.

**Strengths:**    Broad coverage.

**Limitations:**    Data are largely administrative in nature and may not be adequate for detailed research.  Medical and patient information may not be accurate.

## United States Bureau of the Census Population Data

- United States Census Bureau:
  - o   Bridged-race vintage estimates of resident population of July 1, 2005, U.S. Bureau of the Census, Population Division, released 8/16/2006, and
  - o   U.S. Census Bureau, American Community Survey.

**Overview:**   The Census Bureau collects and provides timely information about the people and the economy of the U.S.  The decennial censuses provide data on demographic characteristics (e.g., age, race, Hispanic ethnicity, sex) of the population, family structure, educational attainment, income level, housing status, and the percentage of persons living at or below the poverty level.  In addition, the Census Bureau provides intracensal population estimates for counties by age, race, ethnicity and gender for each year.  Also, the Census Bureau conducts a number of population surveys such as the current Population Survey and the American Community Survey.

**Population:**   United States population.

**Strengths:**   A wide range of online statistical data on the United States population is available on the web in different formats (e.g., tables, maps).  State and county-specific information is easily accessible, and links to other census websites are provided.

**Limitations:**   Only limited municipality data are available between censuses.  The availability may improve when the American Community Survey is completely implemented.

# Appendix B - Glossary

**Acquired Immunodeficiency Syndrome (AIDS):**   The current Centers for Disease Control and Prevention AIDS definition includes the following conditions:  HIV positive, **AND** CD4 (T-cell) count below 200 **OR** presence of one or more opportunistic infections.

**Antiretroviral Drug:**   A drug used to combat the Human Immunodeficiency Virus (HIV).

**Core Surveillance:**   Activities conducted by the Epidemiologic Services unit within the Division of HIV/AIDS Services.

**Diagnosis:**   The art or act of identifying a disease from its signs and symptoms.

**Eligible Metropolitan Area:**   Geographic areas highly impacted by HIV/AIDS that are eligible to receive Title I CARE Act funds.

**Epidemic:**   The occurrence of more cases of a disease than would be expected in a community or region during a given time period.

**Epidemiology:**   The study of the populations in order to determine frequency and distribution of disease and measure risks.

**Exposure Category:**   In describing HIV/AIDS cases, same as transmission categories; how an individual may have been exposed to HIV, such as injection drug use, male-to-male sexual contact, and heterosexual sex.

**Heterosexual:**   Relating to or characterized by a tendency to direct sexual desire toward the opposite sex.

**HIV:**   Human Immunodeficiency Virus:  a type of virus called a retrovirus.

**ICD-10:**   The International Classification of Disease. Tenth revision.

**Incidence:**   The number of new events (i.e., diagnosed cases) in a period of time. Incidence is often expressed as an annual measure (the number of new cases occurring during a year).  Incidence rate is the number of newly diagnosed cases per standard population size, usually expressed as cases per 100,000 populations.

**Morbidity:**  The relative incidence of disease.

**Mortality:**  The number of deaths in a given time or place:  the proportion of deaths to the population.

**Poverty Level:**  A measure of household income set by the United States Census Bureau.

**Prevalence:**  The number of occurrences of a given disease or other condition existing in a given population at a designated time.  The prevalence rate is the number of living (prevalent) cases per standard population size, usually expressed as cases per 100,000 populations.

**Proportion:**  The amount of things or events relative to the total number of things or events.  Measures are usually presented as percentages.  Proportions are useful when describing the composition of populations.

**Rate:**  The amount of things or events relative to a standard quantity.  It is derived by dividing the number of cases for a given sub population (e.g., African American males), by the total population count for that group.  A rate is useful for making comparisons between groups having different population sizes.

**Report Delay:**  The time internal between when an HIV diagnosis was made and reported to the New Jersey Department of Health and Senior Services (Division of HIV/AIDS Services).

**Ryan White CARE Act**  Federal legislation created to address the unmet health care and service needs of people living with HIV disease and their families.

**Seroprevalence:**  The number of persons in a defined population who test HIV positive based on HIV testing of blood specimens.  (Seroprevalence is often presented either as a percent of the total specimens tested or as a rate per 100,000 persons tested.)

**Surveillance:**  An ongoing, systematic process of collecting, analyzing and using data on specific health conditions and diseases.

**Title I:**  The part of the CARE Act that provides emergency assistance to localities (EMAs) disproportionately affected by the HIV/AIDS epidemic.

**Title II Consortia:** The part of the CARE Act that provides funds to states and territories for primary health care and support services that enhance access to care to persons living with HIV and their families.

**Trend:** A measurable direction that can be determined for a condition being examined.

**Uninsured:** A person or group of persons who do not have health insurance.

# Appendix C – Other Sources

## New Jersey Department of Health and Senior Services

### Division of HIV, STD and TB Services

Home Page: www.nj.gov/health/aids/aidsprv.htm
Semi-Annual HIV/AIDS Report: www.nj.gov/health/aids/aidsqtr.htm
County and Municipal Statistics: www.nj.gov/health/aids/repa/aidsdata.shtml
Fact Sheets: www.nj.gov/health/aids/factsheets.htm

## Centers for Disease Control and Prevention

### National Centers for HIV, STD and TB Prevention

www.cdc.gov/nchstp/od/nchstp.html

### Division of HIV/AIDS Prevention:

www.cdc.gov/hiv/dhap.htm

### Division of Sexually Transmitted Diseases

www.cdc.gov/nchstp/dstd/HIVSTDinfo.htm

### National Institute of Allergies and Infectious Diseases

www.niaid.nih.gov/final/aids/aids.htm

### National Institute on Drug Abuse

www.nida.nih.gov/

### National Institute of Health – Office of AIDS Research

www.nih.gov/od/oar/index.htm

## Kaiser Family Foundation

www.KFF.org/hivaids/index.html

## New Jersey Department of Education

New Jersey Student Health Survey of High School Students at
www.nj.gov/njded/students/yrbs/index.html

# Division of HIV, STD and TB Services

# HIV/AIDS Epidemiologic Profile for the State of New Jersey 2008

*Preventing Disease With Care*

C1632