

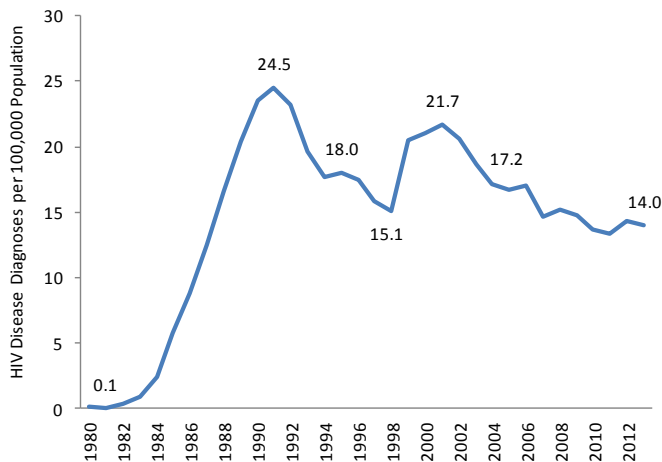
# Overview of HIV Disease in Illinois

The first cases of AIDS were reported in Illinois in 1980. Since the beginning of the epidemic through the end of 2013, 60,267 persons in Illinois have been diagnosed with HIV disease (HIV and/or AIDS). In 2011, new HIV disease diagnoses in Illinois represented an estimated 4.3% of the total cases diagnosed in the United States (CDC, 2013) and Illinois ranked 6<sup>th</sup> among the 50 states in the number of new HIV disease diagnoses (CDC, 2014a).

## HIV Disease Diagnoses

In 2013, 1,804 persons were newly diagnosed with HIV disease in Illinois or 14 persons per 100,000 population. The highest rate of new HIV disease diagnoses in Illinois occurred in 1991 when 2,832 persons were diagnosed or 24.5 persons per 100,000 population. Since 2001, there has been a downward trend in the rate of new HIV disease diagnoses in Illinois.

**Figure 1. HIV Disease Diagnoses by Year of Diagnosis, Illinois, 1980-2013**



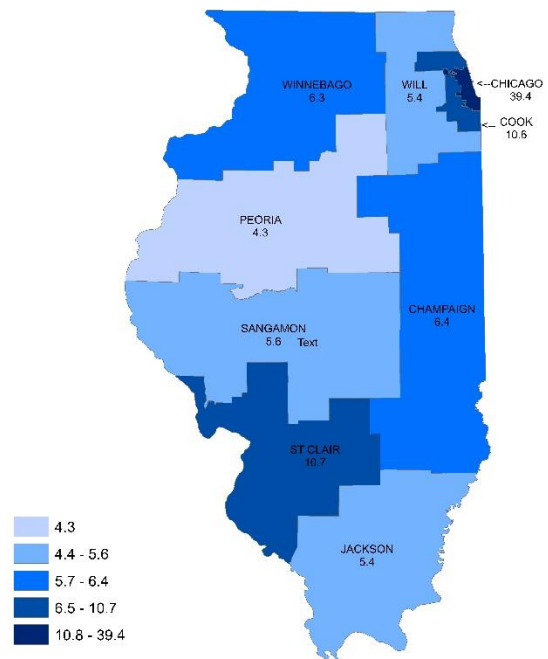
Source: Illinois Department of Public Health, June, 2014

## Geography

The City of Chicago had the highest rate of new HIV disease diagnoses from 2009–2013 with 39.4 persons diagnosed per 100,000 population. The IDPH planning regions with the next highest rates were St. Clair, which contains the city of East St. Louis and Cook County, excluding the city of Chicago. The Peoria Region had the lowest HIV disease diagnosis

rate from 2009–2013 with 4.3 diagnoses per 100,000 population.

**Figure 2. HIV Disease Diagnoses by Region, Illinois, 2009–2013**

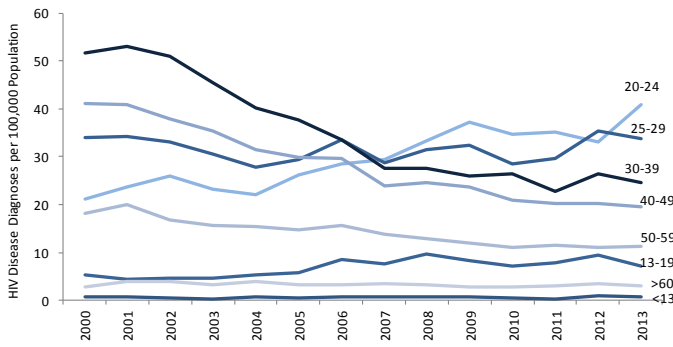


Source: Illinois Department of Public Health, June, 2014

## Age at Diagnosis

From the beginning of the epidemic until 2005, the rate of new HIV disease diagnoses was highest among adults aged 30–39 years. Starting in 2006, the age group with the highest rate of new HIV disease diagnoses were young adults aged 20–29 years, with those aged 20–24 years having the highest rates of new infections most years. Although HIV disease diagnosis rates have declined in most age groups since 2000, among those 13–29 years, rates have increased in the past five years (see section, “Youth”). Younger children (<13 years) and older adults (≥60 years) have consistently had the lowest rates of new HIV disease diagnoses.

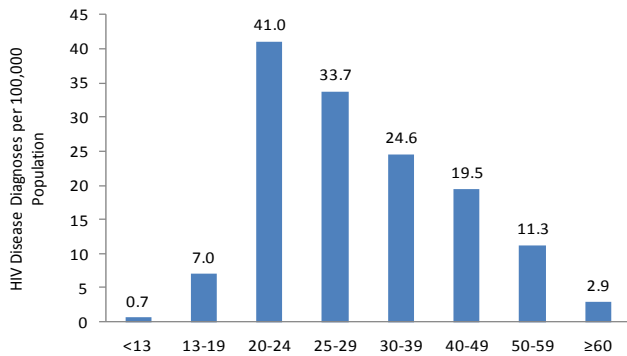
**Figure 3. Rate of HIV Disease Diagnoses by Age at Diagnosis and Year of Diagnosis, Illinois, 2000–2013**



Source: Illinois Department of Public Health, June, 2014

In 2013, youth 20–24 years had the highest rate of HIV disease diagnoses (41 per 100,000 population). After age 24 years, the rate of new diagnoses decreased with increasing age.

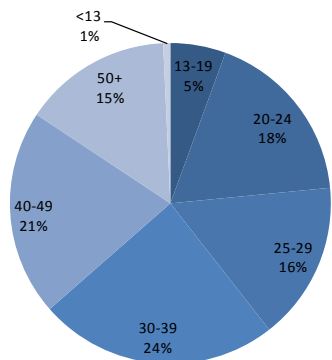
**Figure 4. Rate of HIV Disease Diagnoses by Age at Diagnosis, Illinois, 2013**



Source: Illinois Department of Public Health, June, 2014

From 2009–2013, 40% of new HIV disease diagnoses in Illinois were among individuals aged <30 years at diagnosis.

**Figure 5. HIV Disease Diagnoses by Age at Diagnosis, Illinois, 2009–2013**

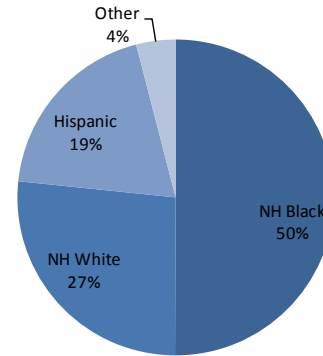


Source: Illinois Department of Public Health, June, 2014

**Race/Ethnicity**

HIV disproportionately affects non-Hispanic (NH) blacks. In Illinois from 2009–2013, NH blacks accounted for 50% of all new HIV disease diagnoses despite accounting for <15% of the population (see section, “Blacks”).

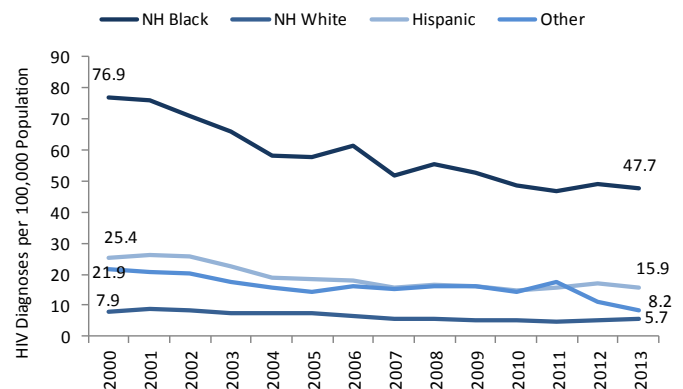
**Figure 6. HIV Disease Diagnoses by Race/Ethnicity, Illinois, 2009–2013**



Source: Illinois Department of Public Health, June, 2014

The rate of new HIV disease diagnoses decreased across all racial/ethnic groups in Illinois from 2000–2013. However, disparities persist with the rate among non-Hispanic (NH) blacks (47.7 per 100,000 population) three times higher than among Hispanics (15.9 per 100,000 population), the group with the next highest incidence rate. NH whites had the lowest incidence of HIV disease in 2013 with 5.7 new diagnoses per 100,000 population.

**Figure 7. Rate of HIV Disease Diagnoses by Race/Ethnicity and Year of Diagnosis, 2000–2013**

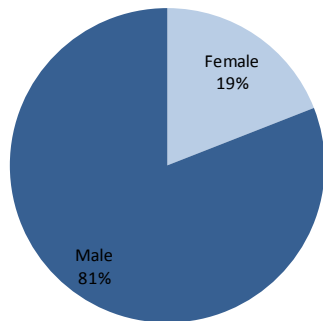


Source: Illinois Department of Public Health, June, 2014

## Sex

Since the beginning of the epidemic, the rate of HIV infection has consistently been higher among males than females. From 2009–2013, males accounted for 81% of new HIV disease diagnoses in Illinois. In 2013, the rate of new HIV disease diagnoses among males was over five times higher than among females in Illinois.

**Figure 8. HIV Disease Diagnoses by Sex, Illinois, 2009–2013**

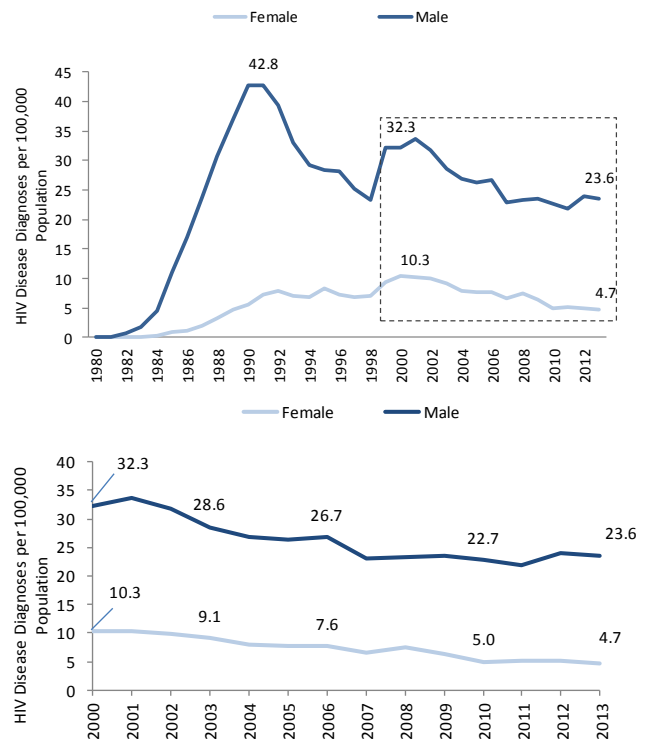


Source: Illinois Department of Public Health, June, 2014

The highest rate of HIV disease diagnoses among males occurred in 1991 when there were 42.8 new cases per 100,000 population. For females, the rate of new HIV disease diagnoses peaked in the year 2000 with 655 diagnoses (10.3 per 100,000 population).

From 2000–2013, the rate of new HIV disease diagnoses for both males and females declined. Among females, the rate in 2013 was less than half the rate in 2000 and, among males, the 2013 rate declined by 25% compared to 2000. However, in 2012 and 2013, diagnosis rates among males increased. This increase among males was driven by the increase in HIV disease diagnoses among MSM youth (see section, “Youth”).

**Figure 9. Rate of HIV Disease Diagnoses by Sex and Year of Diagnosis, Illinois, 1980–2013**



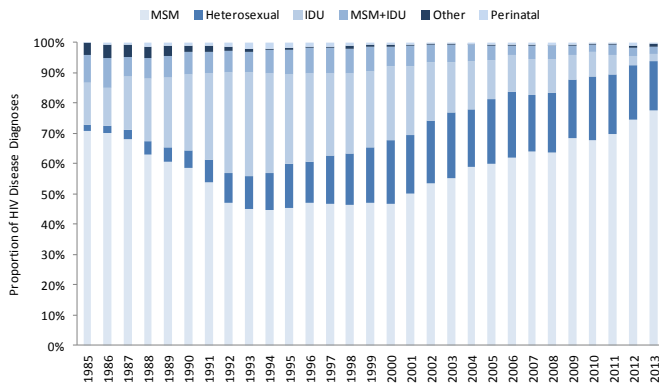
Source: Illinois Department of Public Health, June, 2014

## Transmission Risk Category

Since the beginning of the epidemic, the majority of HIV cases in Illinois have been among men who have sex with men (MSM) (see section, “Men who Have Sex with Men”). In the early nineties, the proportion of cases attributed to heterosexual contact increased and remained relatively steady until 2012 when cases among MSM began to account for a larger proportion of new HIV disease diagnoses (see section, “Heterosexual Contact”).

The proportion of cases attributed to injection drug use was highest in the mid-nineties when injection drug users (IDUs) accounted for a significant proportion of new HIV disease diagnoses. Since 2002, the proportion of new diagnoses accounted for by IDUs has declined (see section, “Injection Drug Users”).

**Figure 10. Proportion of HIV Disease Diagnoses by Transmission Risk Category and Year of Diagnosis, Illinois, 1980–2013**



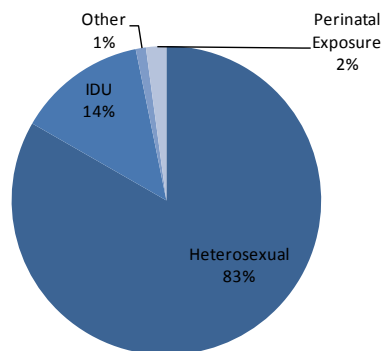
**Note:** From 1985–2013, 7,580 of 59,824 individuals diagnosed with HIV disease had no transmission risk category reported.

**Source:** Illinois Department of Public Health, June, 2014

### Sex and Transmission Risk Category

During the five-year period from 2009–2013, 1,715 females in Illinois were newly diagnosed with HIV disease. Among females where a transmission risk category was identified (60%), the main mode of disease transmission was heterosexual contact (83%). Injection drug use was the next most commonly reported risk category at 14%. Perinatal exposure and other risk categories accounted for 3% of HIV disease diagnoses among females (see section, “Women”).

**Figure 11. HIV Disease Diagnoses among Females by Transmission Risk Category, Illinois, 2009–2013**

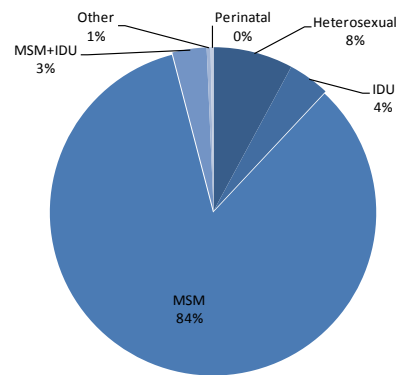


**Note:** 679 women with a transmission risk category not reported are excluded from the chart.

**Source:** Illinois Department of Public Health, June, 2014

From 2009–2013, 7,287 males were diagnosed with HIV disease in Illinois. Men who have sex with men (MSM) accounted for 84% of new diagnoses among Illinois males from 2009–2013. Males who reported injection drug use alone accounted for 4% of new diagnoses with an additional 3% of new diagnoses among males who reported being both MSM and having used injection drugs. Eight percent of males reported heterosexual contact as their only HIV transmission risk factor.

**Figure 12. HIV Disease Diagnoses among Males by Transmission Risk Category, Illinois, 2009–2013**



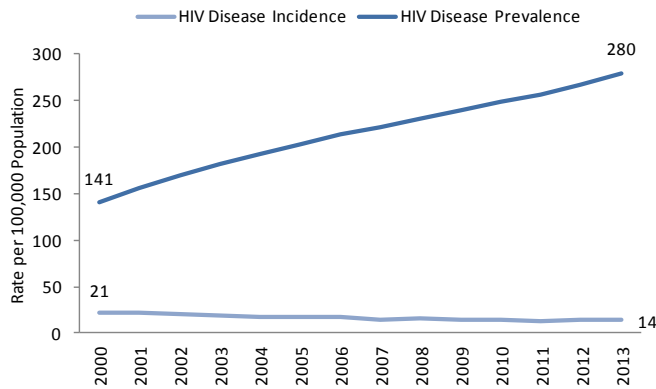
**Note:** 1,276 men with no transmission risk category reported are excluded from the chart.

**Source:** Illinois Department of Public Health, June, 2014

### Persons Living with HIV Disease

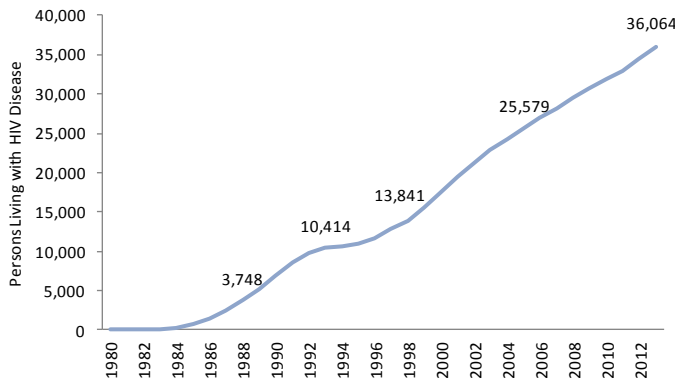
Through the end of 2013, 60,267 persons in Illinois had been diagnosed with HIV disease. At the end of 2013, 36,064 persons were living with an HIV disease diagnosis (PLWHA). The number of PLWHA has doubled since 2000 from 140 to 280 persons per 100,000 population. This increase occurred despite the decrease in the number of persons newly diagnosed with HIV disease. The increase in PLWHA reflects increased survival as a result of improved treatment regimens (Harrison, Song, and Zhang, 2010).

**Figure 13. HIV Disease Incidence and Prevalence, Illinois, 2000–2013**



Source: Illinois Department of Public Health, June, 2014

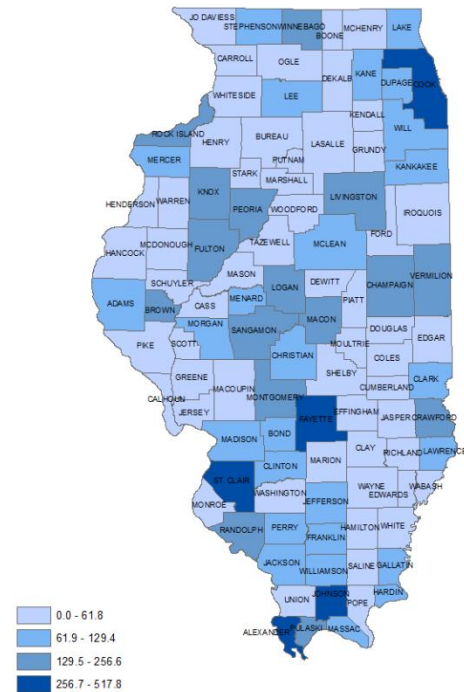
**Figure 14. Persons Living with Diagnosed HIV Disease, Illinois, 1980-2013**



Source: Illinois Department of Public Health, June, 2014

Seventy-eight percent of PLWHA in Illinois in 2013 resided in Cook County, including the City of Chicago. In 2013, 0.5% of persons living in Cook County had been diagnosed with HIV disease. St. Clair county, where the City of East St. Louis is located, had the second highest number of PLWHA in 2013 (n=806) (see Appendix A).

**Figure 15. Rate of Persons Living with HIV Disease by County, Illinois, 2013**



Note: County based on last known county of residence.  
Source: Illinois Department of Public Health, June, 2014

### Sex

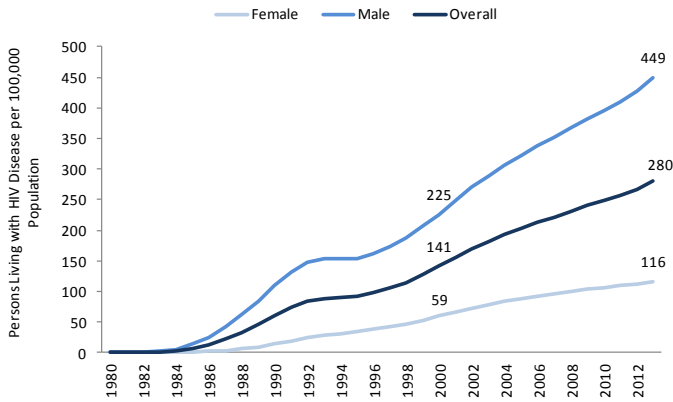
In 2013, the rate of men living with HIV disease in Illinois was almost four times higher than the rate among women—449 vs. 116 per 100,000 population. At the end of 2013, there were 7,631 women living with diagnosed HIV disease in Illinois compared to 28,433 men. MSM account for the largest proportion of men living with HIV (n=20,196).

### DID YOU KNOW?

1 in 222 men in Illinois was living with diagnosed HIV disease in 2013

1 in 859 women in Illinois was living with diagnosed HIV disease in 2013

**Figure 16. Rate of Persons Living with HIV Disease by Sex, Illinois, 1980–2013**



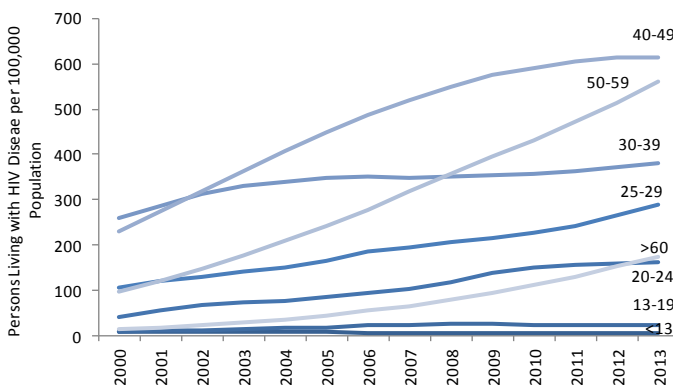
Source: Illinois Department of Public Health, June, 2014

**Age**

The age distribution of PLWHA in Illinois reflects the increased life expectancy of PLWHA due to the development of successful drug regimens, as well as successful initiatives to reduce perinatal transmission (see section, “Perinatal Transmission”) (AIDS Foundation of Chicago, AIDS Legal Council of Chicago, Children’s Memorial Hospital, and Pediatrics AIDS Chicago, 2006; Harrison et al., 2010).

Although HIV disease prevalence has increased among all adults ≥20 years since 2000, the greatest increases in Illinois have occurred among those aged ≥60 years. From 2000–2014, the number of PLWHA ≥60 years increased more than 12-fold from 14.5 to 179 PLWHA per 100,000. In 2013, there were 4,336 persons ≥60 years living with HIV disease in Illinois.

**Figure 17. Rate of Persons Living with HIV Disease by Age, Illinois, 2000–2013**



Source: Illinois Department of Public Health, June, 2014

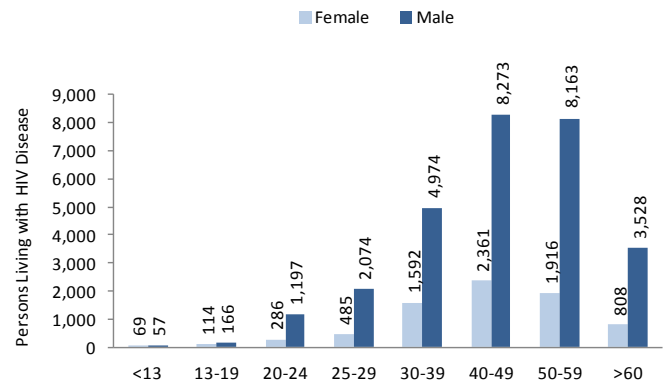
In 2013, persons aged 40–49 years had the highest prevalence of HIV disease with 615 persons per 100,000 population or 10,634 diagnoses in 2013. Adults aged 50–59 had the next highest prevalence in 2013 with 562 persons per 100,000 population living with HIV disease. The increase in the number of older adults living with HIV disease has a variety of health and social implications (see section, “Adults 50 years and Older”).

The only age group that had a decline in the prevalence rate of HIV disease from 2000–2013 were children <13 years. The prevalence rate declined from 9.5 to 5.9 per 100,000 children in this time period (see section, “Perinatal Transmission”).

**Age and Sex**

The highest number of males and females living with HIV disease were aged 40–59 years in 2013. Among children <19 years, diagnoses were evenly distributed between males and females. In 2013, after age 20 years, there were on average, four-fold more men living with HIV disease than females.

**Figure 18. Persons Living with HIV Disease by Current Age and Sex, Illinois, 2013**

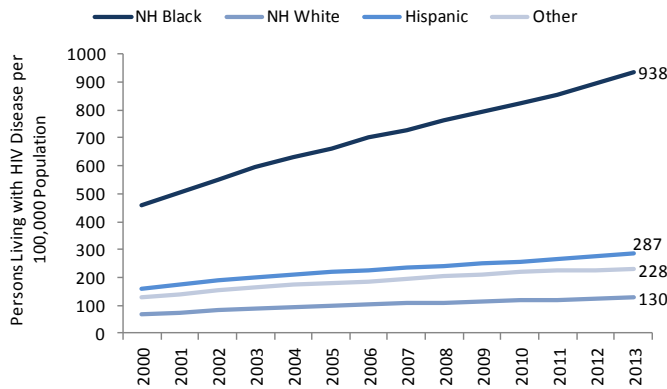


Source: Illinois Department of Public Health, June, 2014

**Race/Ethnicity**

NH blacks had the highest prevalence of HIV disease in Illinois. In 2013, of every 100,000 NH blacks, 938 were living with HIV disease or almost 1% of the NH black population. This was over three times as high as among Hispanics, the group with the next highest prevalence rate (287 per 100,000 population). NH whites had the lowest prevalence rate in 2013 (130 per 100,000 population).

**Figure 19. Rate of Persons Living with HIV Disease by Race/Ethnicity, Illinois, 2000–2013**



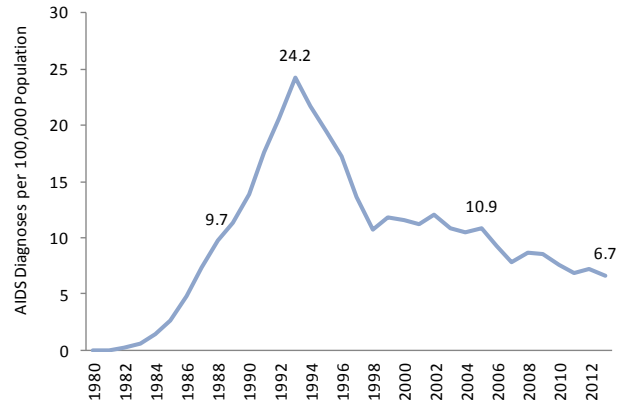
Source: Illinois Department of Public Health, June, 2014

### AIDS Diagnoses

HIV infection is classified as AIDS when the immune system of a person infected with HIV becomes severely compromised (measured by CD4 cell count) and/or the person becomes ill with an opportunistic infection (CDC, 2014c). In the absence of treatment, AIDS usually develops 8–10 years after initial HIV infection; however, with early HIV diagnosis and treatment, this may be delayed by many years (CDC, 2014c). Although in the earlier years of the HIV epidemic, progressing to AIDS was a near certain death sentence, in the era of highly active antiretroviral therapy, with adherence to treatment, CD4 cell counts can recover and viral load can be suppressed (AIDSinfo, 2014).

The highest incidence rate of AIDS diagnoses in Illinois was reported in 1993 with 24.2 diagnoses per 100,000 population or 2,837 diagnoses. In 2013, there were 860 new diagnoses of AIDS reported or 6.7 diagnoses per 100,000. From 2000–2013, the average annual number of AIDS diagnoses reported in Illinois was 1,171 diagnoses. Approximately 52% of persons diagnosed with HIV disease in Illinois had ever progressed to AIDS by the end of 2013.

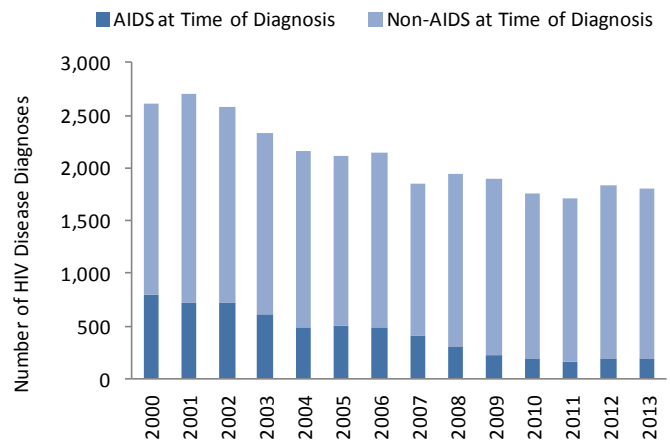
**Figure 20. Rate of AIDS Diagnoses by Year of Diagnosis, Illinois, 1980–2013**



Source: Illinois Department of Public Health, June, 2014

Since 2000, the proportion of new HIV disease diagnoses with AIDS diagnosed at time of diagnosis has declined from 24% to 9%. This decline reflects the success of HIV testing efforts (see section, “Undiagnosed HIV Disease”).

**Figure 21. HIV Disease Diagnoses by Year of Diagnosis and AIDS at Diagnosis, Illinois, 2000–2013**



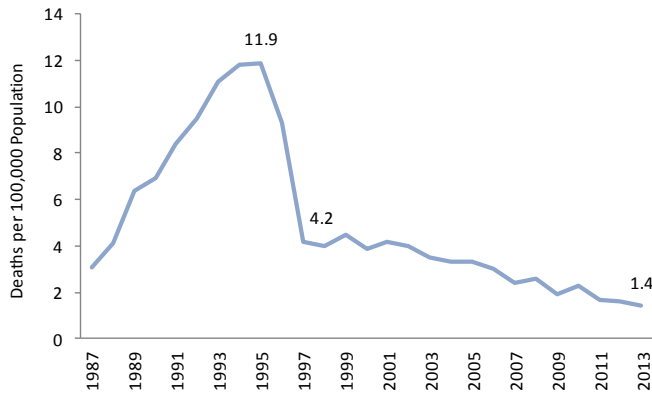
Source: Illinois Department of Public Health, June, 2014

### Mortality

Nationally, mortality rates for HIV/AIDS have declined since peaking in 1994–1995 (CDC, 2015). Despite advances in HIV treatment and expanded care initiatives, people in the U.S. continue to die from HIV disease.

In Illinois, deaths coded with HIV infection as the underlying cause of deaths have declined significantly since rates peaked in 1995 with 11.9 deaths per 100,000 population and 1,427 deaths identified. In 2013, there were 188 deaths coded with HIV as the underlying cause of death or 1.4 deaths per 100,000 population.

**Figure 22. Age-Adjusted\* Mortality Rate with HIV as the Underlying Cause of Death by Year of Death, Illinois, 1980–2013**

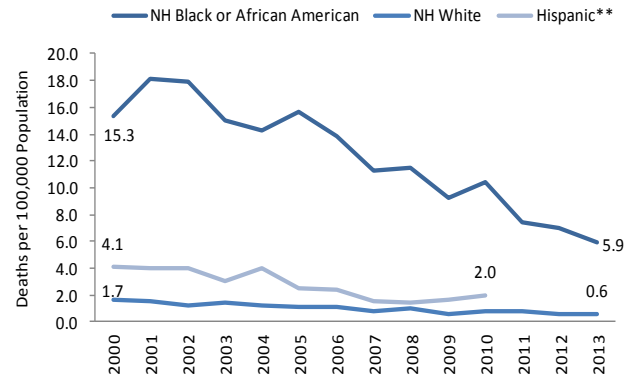


\*Age-adjusted using 2000 U.S. Census Population  
**Note:** Deaths with HIV as the underlying cause of death maybe underreported from IDPH to the National Center for Health Statistics. Rates should be interpreted with caution.  
**Sources:** Centers for Disease Control and Prevention, National Center for Health Statistics, 2000 and 2003, 2015

**Race/Ethnicity**

Mortality rates for HIV as the underlying cause of death decreased across all racial and ethnic groups from 2000–2013 in Illinois. Among NH black, NH white, and Hispanic populations, mortality rates decreased by approximately 60%. Despite decreases across racial/ethnic groups, disparities persist with the HIV mortality rate among NH blacks almost ten times higher than among NH whites.

**Figure 23. Age-Adjusted\* Mortality Rate with HIV as the Underlying Cause of Death by Race/Ethnicity and Year of Death, Illinois, 2000–2013**



\*Age-adjusted using the 2000 U.S. Census Population  
 \*\*Estimates were unreliable for 2011 and 2013  
**Note:** Deaths with HIV as the underlying cause of death maybe underreported from IDPH to the National Center for Health Statistics. Rates should be interpreted with caution.  
**Sources:** Centers for Disease Control and Prevention, National Center for Health Statistics, 2000 and 2003, 2015

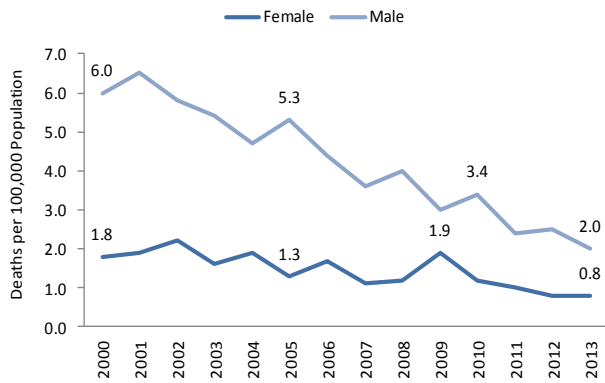
**Sex**

Almost three times as many men as women died from HIV disease in Illinois in 2013 (135 vs. 53 deaths). However, the prevalence rate of diagnosed HIV disease was four times higher among men than women in 2013 (449 vs 116 per 100,000). Therefore, in 2013, women in Illinois were more likely to die as a result of HIV infection.

Mortality rates among both men and women declined from 2000–2013. However, the percent change over this time period was higher among men than women with the rates decreasing by 67% among men and 56% among women.



**Figure 24. Age-Adjusted\* Mortality Rate with HIV as the Underlying Cause of Death by Sex, Illinois, 2000–2013**



\*Age-adjusted using the 2000 U.S. Census Population

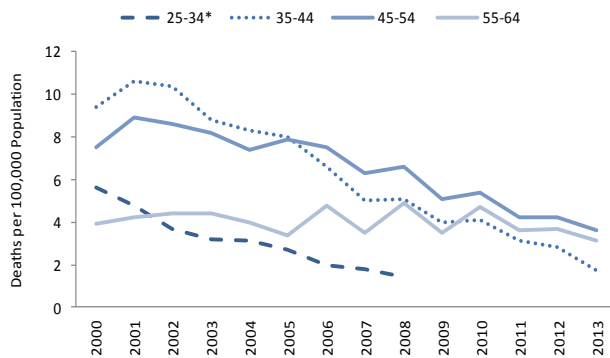
**Note:** Deaths with HIV as the underlying cause of death may be underreported from IDPH to the National Center for Health Statistics. Rates should be interpreted with caution.

**Sources:** Centers for Disease Control and Prevention, National Center for Health Statistics, 2000 and 2003, 2015

### Age

Mortality rates for HIV as the underlying cause of death declined across all age group from 25–64 years from 2000–2013. Adults aged 55–64 years had the lowest HIV mortality rate decline during this time period.

**Figure 25. Mortality Rates with HIV as the Underlying Cause of Death by Age, Illinois, 2000–2013**



\*Estimates were unreliable for 2009, 2011 and 2012

**Note:** Deaths with HIV as the underlying cause of death may be underreported from IDPH to the National Center for Health Statistics. Rates should be interpreted with caution.

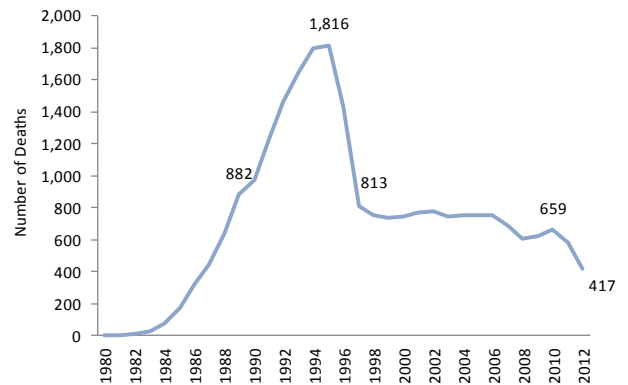
**Sources:** Centers for Disease Control and Prevention, National Center for Health Statistics, 2000 and 2003, 2015

Information on deaths among persons living with HIV disease is available from eHARS (see section, “Data Sources”). However, this information does not

identify if the person died as a result of HIV disease and instead, reflects mortality from all causes among those living with HIV disease.

In Illinois, the number of deaths among persons diagnosed with HIV peaked with 1,816 deaths in 1995. In that year, deaths among persons with HIV accounted for 1.7% of deaths statewide. In 2013, preliminary estimates of deaths among persons living with HIV disease had declined to 517 deaths and accounted for 0.5% of all deaths in Illinois.

**Figure 26. Number of Deaths among HIV Positive Individuals, Illinois, 1980-2013**



**Source:** Illinois Department of Public Health, April, 2015

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