Minneapolis City of Lakes

Minneapolis Department of Health and Family Support

HIV Surveillance

Research Brief, September 2012

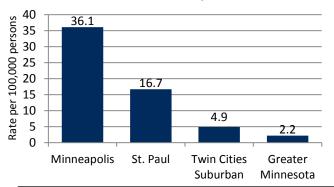
Human immunodeficiency virus (HIV) is one of the greatest public health challenges in the United States and around the world. The virus gradually weakens the immune systems of those it infects, leading to the development of acquired immunodeficiency syndrome (AIDS) and predisposing its victims to potentially life-threatening infections and cancers. After a dramatic rise between the early 1980s and 1990s, national rates of HIV and AIDS have decreased substantially and remained relatively stable.¹ With the development of improved treatments, deaths from HIV/AIDS have also declined. Despite this progress, HIV/AIDS continues to impact thousands of people in the U.S. The CDC estimated that there were over 48,000 new HIV infections in 2009, and between 1999 and 2008 there were over 17,000 HIV/AIDS deaths annually.¹² Furthermore, as mortality has declined, the number of persons living with the disease has risen, and it is estimated that over one million individuals in the United States are currently living with HIV/AIDS.¹

HIV/AIDS remains a particular challenge in Minneapolis, as rates have traditionally been much higher than in other areas of Minnesota. This report examines trends in HIV/AIDS in Minneapolis between 2000 and 2010; compares the city's rates to other areas in the state; examines differences in HIV incidence and prevalence by gender, age, and race/ethnicity; and discusses local prevention efforts and services for those living with HIV/AIDS.

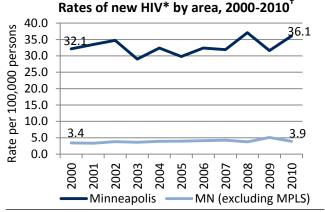
HIV Rates by Area

Between 2000 and 2010 the overall rate of new HIV cases in Minneapolis increased slightly but has remained relatively stable, as shown in the chart at right. Rates in areas of Minnesota outside Minneapolis also remained stable during that period; however, rates in Minneapolis have consistently been much higher than rates in other areas of the state.

Rates of new HIV by area, 2010



Source: Minnesota Department of Health, HIV Surveillance Report, 2010



^{*}HIV or AIDS at first diagnosis

In 2010, the rate of new HIV cases in Minneapolis was over 2 times the rate in St. Paul, over 7 times the rate in the seven county metro suburban area, and over 16 times the rate in greater Minnesota. Minneapolis also accounted for 42% of new HIV cases in Minnesota while comprising only 7.2% of the state's population. Comparisons of HIV rates by area are presented in the chart at left.

[†] Throughout this report, linear modeling was used to recalculate rates over the 10 year period between Census 2000 and 2010.

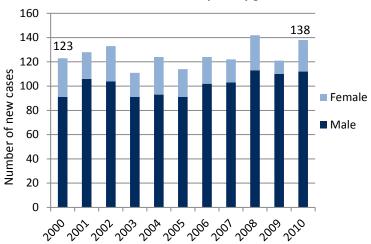
¹ HIV Surveillance – United States, 1981-2008. MMWR Morbidity and Mortality Weekly Report 2011; 60(21): 689-693.

² Prejean, J., Song, R., Hernandez, A., Ziebell, R., Green, T., et al. Estimated HIV Incidence in the United States, 2006–2009. *PLoS ONE* 2011; 6(8): e17502. doi:10.1371/journal.pone.0017502

Minneapolis HIV Cases by Gender and Mode of Exposure

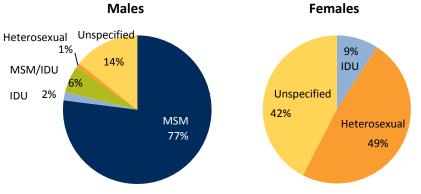
Over the past decade, males consistently comprised the majority of HIV cases in Minneapolis, as shown in the chart below. Among males, the majority of cases occur among men who have sex with men (MSM), while a much smaller proportion of cases are due to injection drug use (IDU), MSM and IDU combined, or heterosexual contact. Among females, heterosexual contact is the leading mode of HIV exposure, while a smaller proportion is attributed to injection drug use. For a significant proportion of both male and female cases, the mode of HIV exposure remains unspecified.

Number of new HIV cases in Minneapolis by gender, 2000-2010



According the Minnesota Department of Health, this is due to a number of factors such as delays in interviewing cases or unwillingness to self-report socially stigmatizing modes of exposure. Because heterosexual contact is assigned only if a case reports high risk heterosexual contact, with an **HIV-positive** as individual or injection drug user, the mode of exposure for many individuals may remain unspecified if they are unaware of their partners' HIV risk.3 The distribution of mode of exposure for new HIV cases by gender is shown in the charts below.

Minneapolis HIV Cases by Mode of Exposure, 2008-2010 combined



MSM = men who have sex with men IDU = injection drug use

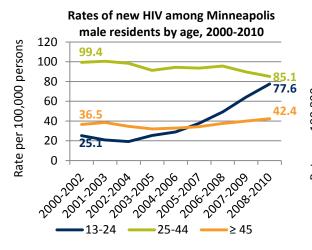
Minneapolis HIV Cases by Age

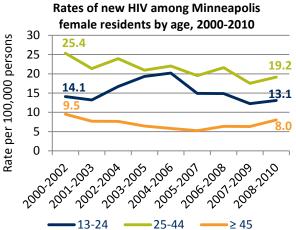
Between 2000 and 2010, the highest rates of new HIV for both males and females were in the 25-44 age groups, although female rates were much lower than male rates across all age groups. Rates among females aged 25-44 declined about 24% between 2000 and 2010. The HIV rate among females aged 45 or older also decreased, although to a lesser extent. In contrast, rates among

³ Minnesota Department of Health. HIV/AIDS Prevalence and Technical Notes 2010. Available online at: http://www.health.state.mn.us/divs/idepc/diseases/hiv/stats/pmtech2010.html. Accessed August 23, 2012.

females aged 13-24 fluctuated somewhat, with 3 year average rates peaking at 20.2 per 100,000 in 2004-2006 before again declining to about 13.1 per 100,000 in 2008-2010.

Among males, rates in the 25-44 age group decreased about 14% overall while rates in the 45 and older group increased slightly. In contrast, the HIV rate among adolescent and young adult males aged 13-24 has increased dramatically. Average rates in this group have more than tripled from a low of 19.2 new cases per 100,000 in 2002-2004 to 77.6 per 100,000 in 2008-2010. This alarming trend is consistent with trends at both the state and national levels, and national data suggest that it is due to an increase in HIV rates among young men who have sex with men.⁴ Minneapolis trends in HIV diagnosis by age and gender are presented in the charts below.

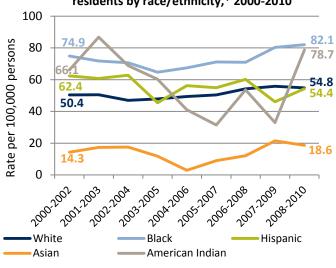




Minneapolis HIV Cases by Race/Ethnicity

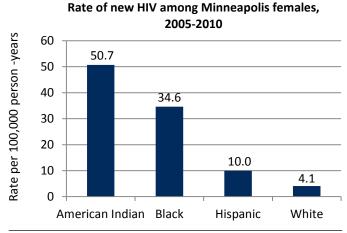
Disparities in HIV rates between racial and ethnic groups have been a core part of the discussion surrounding HIV/AIDS in recent years. Between 2000 and 2010, average HIV rates among males increased slightly for all racial and ethnic groups except Hispanics, who experienced an overall decline. Rates among American Indians and Asians should be interpreted with some caution due to relatively small case counts. Although whites comprise the highest proportion of cases among Minneapolis males, rates of HIV infection have generally been highest among blacks. Between 2000 and 2010 the average rate among black males remained approximately 30 to 50% higher than the rate among white males. Furthermore, black males are disproportionately affected by HIV, as they comprised 25% of male cases between 2008 and 2010 but only 18% of the Minneapolis male population. HIV trends among males by race/ethnicity are shown in the chart at right.

Rates of new HIV among Minneapolis male residents by race/ethnicity,* 2000-2010



*Throughout this report, race and ethnicity are mutually exclusive. Hispanics of any race are classified as Hispanic.

⁴ Prejean, J., Song, R., Hernandez, A., Ziebell, R., Green, T., et al. Estimated HIV Incidence in the United States, 2006–2009. *PLoS ONE* 2011; 6(8): e17502.



Due to a very small number of cases, rates for Asian females were not calculated.

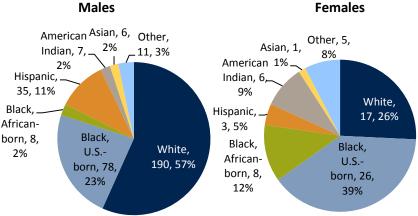
Disparities in HIV rates by race/ethnicity also persist among Minneapolis females. Black females are particularly disproportionately affected by HIV, as they comprised 51% of female cases between 2008 and 2010 while representing only 18% of the female population. Although rates for by race/ethnicity females should interpreted with some caution due to relatively small case counts, they illustrate the disparities in HIV risk between different racial/ethnic groups. Between 2005 and 2010, American Indians and blacks had the highest rates of HIV among Minneapolis females. The rate for American Indians was over 12 times higher than the rate among whites, while the rate among blacks was over 8 times higher than the rate among whites.

Additionally, the HIV rate among Hispanic females was over 2 times the rate among white females. HIV rates among females by race/ethnicity are shown in the chart above.

HIV Among African-born Blacks Living in Minneapolis

During the past few decades, the number of African-born immigrants and refugees in Minneapolis has increased substantially, and data indicate that this community is disproportionately affected by HIV/AIDS. Between 2008 and 2010, Africanborn black individuals accounted for 2% of male cases and 12% of female cases in Minneapolis, while comprising just over 4% of the population according to the most recent American **Community Survey**

Proportion of new HIV cases (n, %) by race/ethnicity, 2008-2010 combined



estimates. Although HIV rates for African-born Minneapolis residents were not calculated due to a lack of reliable population estimates, statewide data suggest that for males and females combined, African-born blacks have the highest HIV rate of any racial or ethnic group in Minnesota. In 2011, the estimated statewide rate among African-born blacks was about 1.8 times higher than among U.S.-born blacks and 18.8 times higher than among whites.⁵ The demographic and risk profiles of African-born blacks with HIV are also slightly different than for other races/ethnicities. While the majority of cases in other groups tend to be male, half of African-born cases in Minneapolis between 2008 and 2010 were female, and among both males and females African-born blacks are more likely

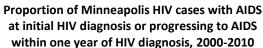
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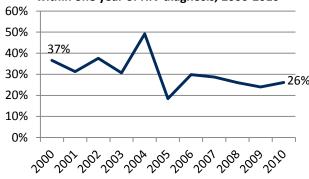
⁵ Minnesota Department of Health. HIV Surveillance Report, 2011.

to report high-risk heterosexual contact as the mode of HIV exposure.⁶ Furthermore, providing care to African-born individuals with HIV/AIDS may be difficult due to several barriers such as their unfamiliarity with the HIV care system, fear of isolation from the community, and cultural beliefs and stigmas surrounding HIV/AIDS.⁷

Late Testing

The CDC estimates that about 20% of individuals with HIV are unaware that they are infected.8 This presents major challenges to HIV prevention, as studies have estimated that over half of sexually acquired HIV infections are transmitted from individuals who do not know they are infected.9 Early detection is therefore crucial for preventing HIV transmission and providing potentially lifesaving treatment to those infected, and a major public health goal is reducing the proportion of late testers or individuals who are diagnosed with AIDS at their first HIV diagnosis or within one year of being diagnosed with HIV. Although the proportion of late testers among Minneapolis cases has fluctuated, there has been some progress toward reducing this proportion. Between 2000 and 2010 the percentage of late testers showed an overall decline from 37% to 26%, as shown in the chart at right.

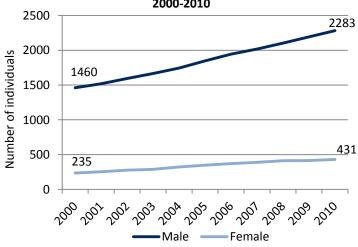




People Living with HIV/AIDS in Minneapolis

Between 2000 and 2010 the number of individuals living with HIV/AIDS in Minneapolis increased, as shown in the chart at right. This increase is expected to continue as additional cases are detected and improved therapies enable people with HIV/AIDS to live longer, healthier lives. In 2010, there were 2714 individuals living with HIV/AIDS in Minneapolis, of whom 1467 were living with HIV infection (non-AIDS) and 1247 had progressed to AIDS. 84% of those with HIV/AIDS were male.

Number of individuals living with HIV/AIDS in Minneapolis, 2000-2010



⁶ Minnesota Department of Health. HIV Surveillance Report, 2011.

⁷ Othieno, Joan. Understanding how contextual realities affect African born immigrants and refugees living with HIV in accessing care in the twin cities. *Journal of Health Care for the Poor and Underserved* 2007: 18:170-188.

⁸ HIV Surveillance – United States, 1981-2008. MMWR Morbidity and Mortality Weekly Report 2011; 60(21): 689-693.

⁹ Marks, G., Crepaz, N., and Janssen, R.S. Estimating sexual transmission of HIV from persons aware and unaware that they are infected with the virus in the USA. *AIDS* 2006; 20(10):1447-1450.

Demographic Profile of People Living with HIV/AIDS in Minneapolis, 2010		
	Males, n (%)	Females, n (%)
Age		
<13	1 (<0.1)	2 (<0.1)
13-24	84 (4)	25 (6)
25-44	925 (41)	229 (53)
≥45	1271 (56)	175 (41)
Total	2281*(100)	431 (100)
Race/ethnicity		
White	1384 (61)	76 (18)
Black	618 (27)	285 (66)
Hispanic	196 (9)	24 (6)
Asian	19 (1)	3 (1)
American Indian	35 (2)	29 (7)
Other	31 (1)	14 (3)
Total	2283 (100)	431 (100)
* Age data missing for 2 cases.		

The age profile of people living with HIV/AIDS differs slightly for males and females. In 2010, the majority of males living with HIV/AIDS were in the 45 or older age group, while the 25-44 age group had the second highest number of cases. In contrast, the majority of females with HIV/AIDS were in the 25-44 age group while the 45 and older age group had the second highest number of cases. For both genders, a much smaller proportion of individuals were in the under 13 or 13-24 age groups.

The race/ethnicity of people living with HIV/AIDS also differs between males and females. In 2010, 61% of Minneapolis males with HIV/AIDS were white, while blacks and Hispanics comprised the second and third largest proportions of males with HIV/AIDS, respectively. In contrast, 66% of Minneapolis females with HIV/AIDS were black, while whites and American Indians made up the second and third largest proportions of female cases. The

demographic profile of people living with HIV/AIDS in Minneapolis is shown in the table above.

Local HIV/AIDS Prevention Efforts and Services

Several local initiatives contribute to preventing the spread of HIV in Minneapolis. One innovative partnership between the Minneapolis Department of Health and Family Support and Neighborhood HealthSource, *Seen on da Streets*, contributes to HIV prevention among young males by providing health education and promoting sexually transmitted disease testing. The department also operates six school-based clinics in Minneapolis high schools that promote HIV prevention among the city's young people by providing students with accessible reproductive health education and services.

Based in Minneapolis, the Red Door Services of the Hennepin County Public Health Clinic is the largest HIV/STD testing site in Minnesota and has implemented several programs to serve those living with HIV/AIDS. These include the Care Access and Prevention Services (CAPS) program, which provides support for individuals newly diagnosed with or at high risk of HIV, and the Health Interventions for Men (HIM) program, which seeks to promote the sexual health of gay and bisexual men. Similarly, the Hennepin County Medical Center Positive Care Center provides comprehensive health and psychosocial support services to people living with HIV/AIDS.

Multiple local organizations also seek to reduce the spread of HIV and provide services to those living with HIV/AIDS. The Minnesota AIDS project is a statewide organization that provides support to people living with HIV/AIDS, connects them with local resources, and conducts several outreach initiatives to raise awareness of HIV/AIDS. In addition, The Aliveness Project, a Minneapolis-based community center, seeks to promote self-empowerment and provide services including meal and food shelf programs, case management, and complementary care for persons living with HIV/AIDS. Finally, the African American AIDS Task Force is a Minneapolis-based organization that aims to serve people of African descent with HIV/AIDS by providing culturally appropriate health services and education.