

Introduction

Human immunodeficiency virus (HIV) is the virus that damages immune system cells (CD4+ cells) and causes acquired immunodeficiency syndrome (AIDS). Upon infection with HIV, the virus attacks, infects, and destroys human CD4+ cells, which are crucial to helping the body fight disease and infection. Destruction of these cells over time weakens the immune system and its ability to fight off various diseases and opportunistic infections, resulting in AIDS. AIDS is the late clinical stage of infection with HIV.

The number of people living with HIV infection in the United States is higher than ever before. The Centers for Disease Control and prevention (CDC) estimates that more than 1.1 million individuals are living with HIV in the United States and more than one in five (21%) of these people living with HIV are unaware of their infection.¹

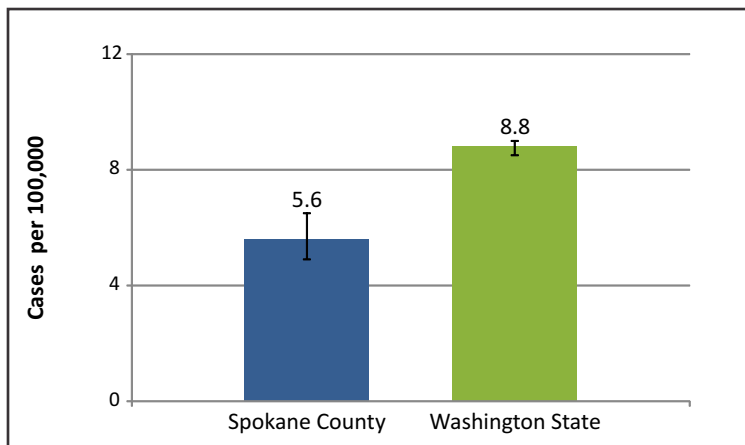
Despite the increase in the total number of people living with HIV in the United States in recent years, the annual number of new HIV infections has remained relatively stable.¹ New infections continue at a high rate; approximately 48,100 persons became infected in 2009.²

Although there are many successful strategies that prevent and treat HIV/AIDS, more than 18,000 people with AIDS continue to die each year in the United States and HIV remains a significant cause of death for some populations. Mortality rates of homosexual men, bisexual men, men who have sex with men (MSM), Blacks, and Hispanics are disproportionately affected by HIV.³

New HIV Diagnoses

In Spokane County, reported cases of new HIV infections have remained stable from 2002 to 2009. Spokane County had 199 new HIV diagnoses or an average of 25 new cases per year. Spokane County's newly diagnosed HIV rate was approximately six cases per 100,000 residents, which was significantly lower than Washington State's rate of approximately nine cases per 100,000 residents. (Figure 1)

Figure 1
New HIV Diagnosis Rates, 2002-2009

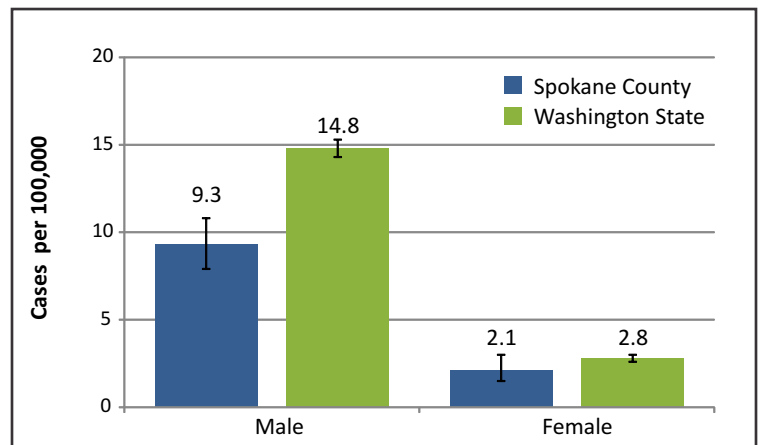


Data Source: Washington State Department of Health, Office of Infectious Disease and Reproductive Health Assessment Unit, December 31, 2010

New HIV Diagnoses by Gender

In Spokane County, 81% of newly diagnosed cases were male and 19% were female. The rate of new infections was 4.4 times higher for men than women in Spokane County and 5.3 times higher for men than women in Washington State. The rate of new infections among men was 37% lower in Spokane County compared to Washington State. The rate of new infections among women in Spokane County was similar to Washington State's rate. (Figure 2)

Figure 2
New HIV Diagnosis Rates by Gender, 2002-2009



Data Source: Washington State Department of Health, Office of Infectious Disease and Reproductive Health Assessment Unit, December 31, 2010

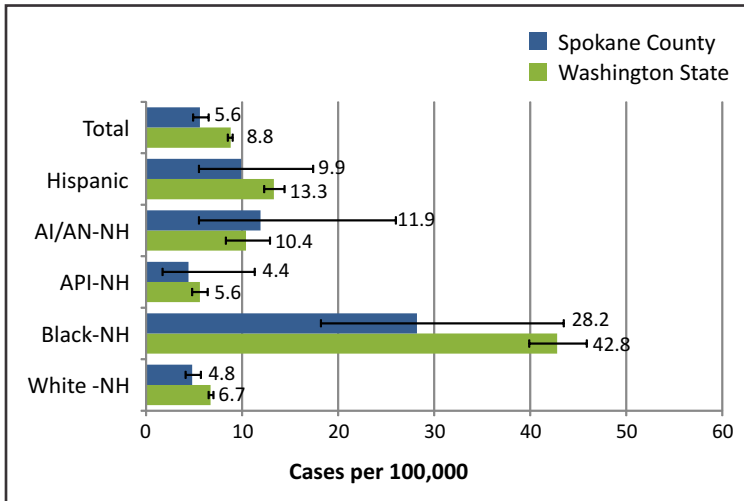
New HIV Diagnoses by Race and Ethnicity

White Non-Hispanic (NH) individuals account for 78% of newly diagnosed cases in Spokane County. Black NHs account for 2% of the population in Spokane County; however, comprise 10% of new HIV cases.

The rate of new infections among Black NHs is approximately 6.0 times higher than White NHs in Spokane County and 6.4 times higher in Washington State. Among Hispanics, the rate of new infections is 2.0 times higher than White NHs for both Spokane County and Washington State. For American Indian/Alaska Native (AIAN) NHs the rate of new infections is 2.5 times higher than White NHs in Spokane County and 1.6 times higher in Washington State. For Asian Pacific Islander (API) NHs there was no difference in the rate of new infections compared to White NHs in Spokane County; however in Washington State, the rate of new infections was 16% lower for API NHs compared to White NHs.

The rate of new infections among White NHs for Washington State was 1.4 times higher than White NHs in Spokane County and the rate of new infections for all other races/ethnicities for Spokane County was similar to Washington State. (Figure 3)

Figure 3
New HIV Diagnosis Rates by Race/Ethnicity, 2002-2009

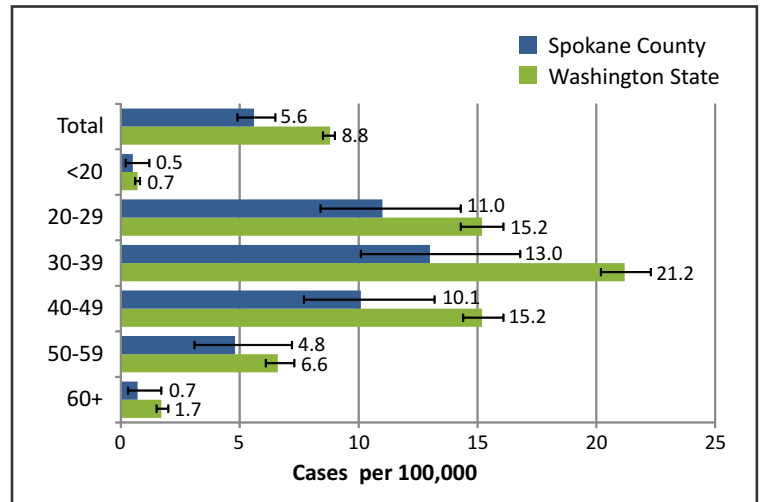


AI/AN – American Indian/Alaska Native, API – Asian Pacific Islander, NH – Non-Hispanic
Data Source: Washington State Department of Health, Office of Infectious Disease and Reproductive Health Assessment Unit, December 31, 2010

New HIV Diagnoses by Age

In Spokane County, HIV infection is significantly higher among individuals in their 20s, 30s, and 40s; however, in Washington State the HIV infection rate is significantly higher among individuals in their 30s compared to all other age groups. Compared to Washington State, HIV infection in Spokane County is significantly lower among all age groups with the exception of individuals in their 50s. (Figure 4)

Figure 4
New HIV Diagnosis Rates by Age Group, 2002-2009



Data Source: Washington State Department of Health, Office of Infectious Disease and Reproductive Health Assessment Unit, December 31, 2010

HIV Diagnoses by Exposure

Transmission of HIV usually occurs through one of four different exposure categories: unprotected sexual intercourse (vaginal or anal) with someone who is infected with HIV; sharing needles or syringes with someone who is infected with HIV; childbirth or breast feeding by a woman with HIV (mother to infant transmission); or blood transfusions prior to 1985.

In the United States, homosexual men, bisexual men, and men who have sex with men (MSM) account for just 2-5% of the population; however, the rate of new HIV infection among MSM is more than 44 times that of other men and more than 40 times that of women.^{1,3} In addition, MSM are the only risk group in which new HIV infections have been increasing steadily since the early 1990s with MSM accounting for more than half (53%) of all new HIV infections and MSM with a history of injection drug use (IDU) accounting for an additional 4% of all new infections.^{1,4} Overall, more than half (53%) of all people living with HIV in the United States are MSM or MSM-IDU.⁴

Sharing syringes and other equipment for drug injection is also a significant potential route of HIV transmission.⁵ In the United States, injection drug users represent 12% of annual new infections and 19% of those living with HIV.¹

Lastly, individuals infected through heterosexual contact account for 31% of annual new HIV infections and 28% of people living with HIV.¹

Among individuals infected with HIV from 2002 to 2009, 61% in Spokane County and 64% in Washington State reported their risk factor as MSM (MSM and MSM-IDU). Injection drug use accounted for approximately 25% of new HIV infections in Spokane County and approximately 15% in Washington State (IDU and MSM-IDU). High risk heterosexual contact (having sex with someone who is infected with HIV or having sex with someone who is at high risk for acquiring or transmitting HIV) accounted for approximately 15% of new infections in Spokane County and approximately 12% in Washington State. (Table 1)

Table 1
Newly Diagnosed Cases of HIV Disease by Exposure Category, 2002-2009

Exposure Category	Spokane Co.	WA State
Men who Have Sex with Men (MSM)	49.7%	56.6%
Injection Drug Use (IDU)	12.6%	7.1%
MSM and IDU	11.1%	7.7%
High Risk Heterosexual Contact	14.1%	1.6%
Mother to Infant Transmission	1.0%	0.4%
Transfusion/Hemophiliac	1.0%	0.2%
No Identified Risk/Other	10.5%	16.4%

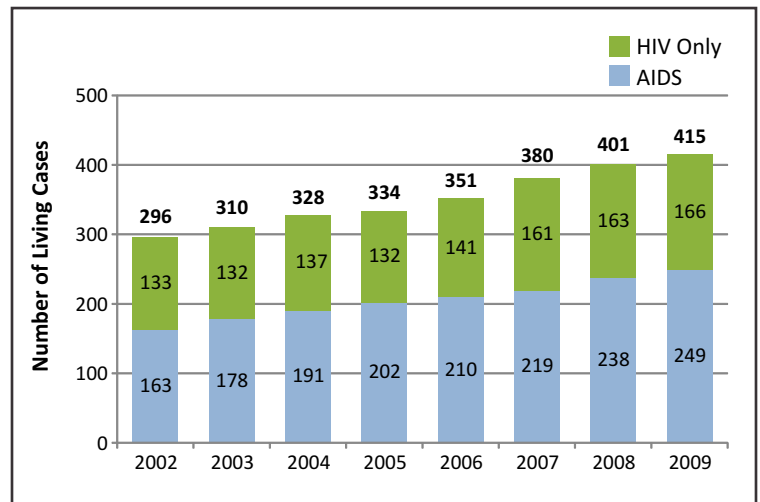
Data Source: Washington State Department of Health, Office of Infectious Disease and Reproductive Health Assessment Unit, December 31, 2010

HIV Documented Prevalence and Mortality

There have been substantial advances in the development of antiretroviral therapy (ART) in the past decade.⁶ ART are medications used in combination to reduce the replication of HIV and to treat HIV infected persons.⁶ These medications limit or slow down the destruction of the immune system, improve the health of people living with HIV, and may reduce an individual's ability to transmit HIV.⁶ Currently, people can live much longer with HIV before they develop AIDS because of ART.⁷ Since the development of these medications, there has been a steady increase in life expectancy and the number of people who are surviving and living with HIV/AIDS.⁷ The increase in prevalence of HIV can be attributed to the effective use of ART and because more people become infected with HIV than die from the disease each year.⁷ Despite major advances in diagnosing and treating HIV infection, there is still no vaccine for HIV or cure for AIDS.

As of December 31, 2009, there were 415 persons living with HIV in Spokane County, 60% of whom had a diagnosis of AIDS. (Figure 5) Since 2002, there has been a 40% increase in the number of individuals living with HIV in Spokane County.

Figure 5
HIV/AIDS Documented Prevalence, Spokane County, 2002-2009



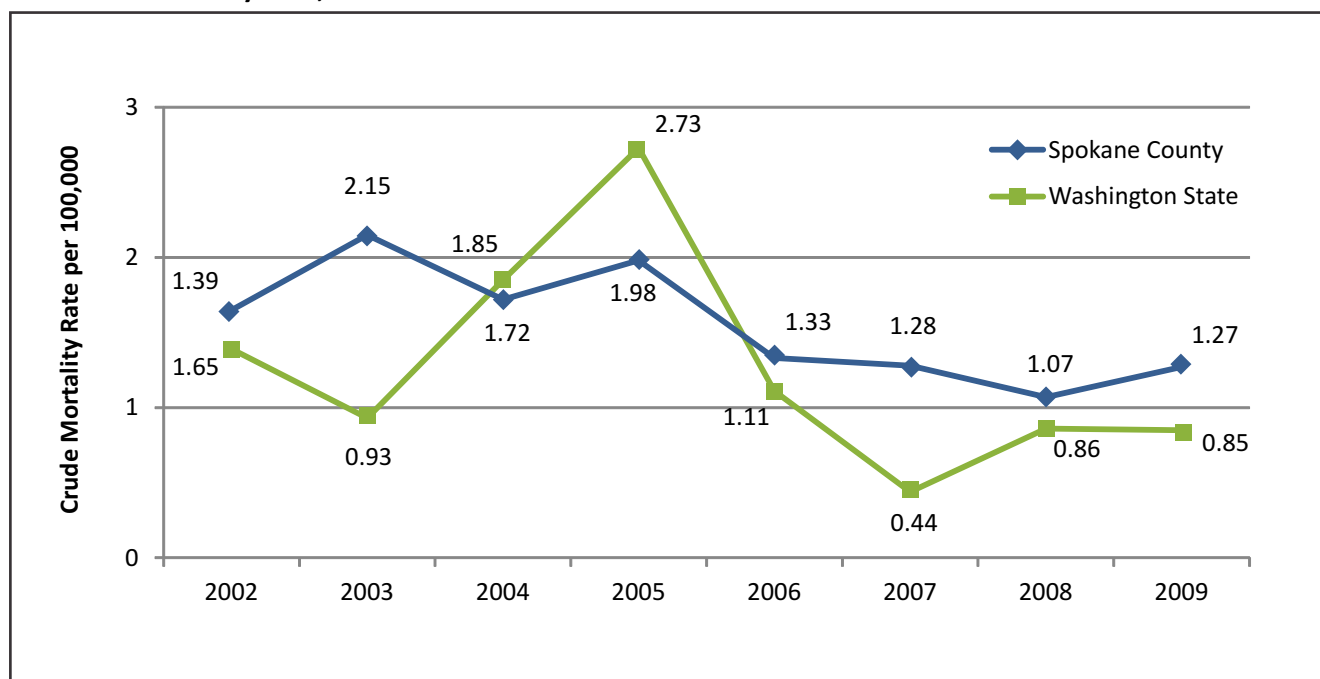
Data Source: Washington State Department of Health, Office of Infectious Disease and Reproductive Health Assessment Unit, December 31, 2010

The crude HIV mortality rate is defined as the number of deaths caused by HIV relative to the estimated total population each year per 100,000. In Spokane County, the crude HIV mortality rate has remained stable from 2002 to 2009 and is similar to the crude HIV mortality rate for Washington State. Washington State however has experienced a significant decrease in the crude HIV mortality rate from 2002 to 2009. On average, the crude HIV mortality rate has decreased by 7.6% each year for Washington State. (Figure 6)

The Washington State Department of Health, along with the Spokane Regional Health District and Spokane AIDS Network, have implemented best-practice care and prevention services for populations impacted by HIV in Spokane County. HIV prevention services include a needle exchange program for IDUs, HIV and viral hepatitis testing for MSMs and IDUs, as well as community- and group-level HIV prevention programs for MSM. Partner notification services work with newly-identified HIV positive persons to locate and provide testing to sex and/or needle-sharing partners who may have been exposed. Lastly, medical case management and medical nutrition therapy for HIV positive persons are available; providing both education to prevent new transmission to others and ensuring access to medical care and treatment adherence support.

Figure 6

Crude HIV Mortality Rate, 2002-2009



Data Source: Washington State Department of Health, Office of Infectious Disease and Reproductive Health Assessment Unit, December 31, 2010

1. "HIV in the United States Fact Sheet." Centers for Disease Control and Prevention. HIV/AIDS. July 2010 <http://www.cdc.gov/hiv/resources/factsheets/us.htm>
2. Prejean J, Song R, Hernandez A, Ziebell R, Green T, et al. (2011) Estimated HIV Incidence in the United States, 2006-2009. PLoS ONE 6(8): e17502.doi:10.1371/journal.pone.0017502
3. "HIV in the United States: An Overview." Centers for Disease Control and Prevention. HIV/AIDS August 2011 <http://www.cdc.gov/hiv/topics/surveillance/resources/factsheets/incidence-overview.htm#2>
4. "HIV among Gay, Bisexual and Other Men Who Have Sex with Men (MSM) Fact Sheet." Centers for Disease Control and Prevention. HIV/AIDS. September 2010 <http://www.cdc.gov/hiv/topics/msm/index.htm>
5. "Drug-Associated HIV Transmission Continues in the United States." Centers for Disease Control and Prevention. HIV/AIDS. March 8, 2008 <http://www.cdc.gov/hiv/resources/factsheets/idu.htm>
6. "Effect of Antiretroviral Therapy on Risk of Sexual Transmission of HIV Infection and Superinfection." Centers for Disease Control and Prevention. HIV/AIDS Treatment. September 2009 <http://www.cdc.gov/hiv/topics/treatment/resources/factsheets/art.htm>
7. "New Estimates of U.S. HIV Prevalence, 2006." Centers for Disease Control and Prevention. HIV/AIDS Surveillance. October 2008 <http://www.cdc.gov/hiv/topics/surveillance/resources/factsheets/prevalence.htm>

This factsheet will be updated with 2010 HIV/AIDS data for Spokane County and will be available in the spring of 2012. For more information, please contact Lisa St. John, HIV/AIDS Program Manager at (509) 324-1542 or lstjohn@spokanecounty.org

