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HIV/AIDS/STD
Epidemiological Profile

Nebraska HIV, Hepatitis, Ryan White and HOPWA Programs
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NEBRASKA 2007 HIV EPIDEMIOLOGIC PROFILE

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Executive Summary:

This profile describes the epidemic of Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) in Nebraska. The primary source of data is the Nebraska Department of Health and Human Services HIV Surveillance Program, which is responsible for collecting data on all cases of HIV/AIDS in the state. Both HIV and AIDS are conditions reported by name; AIDS since 1983 and HIV since July 1995.

HIV/AIDS Incidence: As of the end of 2006, a total of 2,241 persons had been reported with Human Immunodeficiency Virus (HIV) or Acquired Immunodeficiency Syndrome (AIDS) in Nebraska; of these 35% are known to have died. During 2006, 117 new cases of HIV and AIDS were diagnosed, reflecting an incidence rate of 6.7 cases per 100,000 population.

The number of HIV/AIDS cases increased from 3 cases in 1983 to a high of 136 cases in 2001, decreased to 75 cases in 2003, before increasing again to 117 cases in 2006. A substantial number of persons reported with HIV disease in Nebraska are being diagnosed at an advanced stage of the disease; 42% of those diagnosed between 1997 and 2006 either had AIDS at the time of their HIV diagnosis or progressed to AIDS within 12 months of their HIV diagnosis.

The largest number of deaths for persons with HIV/AIDS was 43 in 2001 and has since dropped to 24 deaths in 2006.

Trends among Recently Diagnosed Cases:. Between 2004 and 2006, the number of males newly diagnosed with HIV/AIDS increased, from 68 cases in 2004 to 91 cases in 2006. HIV/AIDS cases among females remained stable at approximately 29 cases. Rates were higher among men (9.2 per 100,000 persons) than women (3.4 per 100,000 persons) and highest among persons aged 25 to 44 years (15.9 per 100,000). There have been an increasing number of cases among blacks, rising from 26 cases in 1997 to 45 cases in 2006, nearly matching the number of white cases (56). Rates among males were highest for blacks (59.3 per 100,000) compared to whites (5.3 per 100,000). The rate for Hispanic males was also high at 21.0 per 100,000. Rates among females were highest for blacks (42.4 per 100,000). Among men, the most commonly reported risk behaviors were men who have sex with other men (MSM; 50%), heterosexual contact with a person known to be at risk for HIV infection (10%), injection drug use (IDU; 7%), and MSM with IDU (4%). Among women, heterosexual contact was reported for 63% of the cases, and 8% reported injecting drug use as their risk behaviors.

Prevalence: At the end of 2006, 1,397 Nebraska residents were known to be living with HIV/AIDS (PLWHA). However, since not all persons infected with HIV are aware of their status, it is estimated that there were between 2,182 and 2,489 persons currently living in Nebraska with HIV disease.

The majority of PLWHA live in Douglas County (61%) and Lancaster County (17%). Most are male (73%), white (77%), 25 to 44 years of age (59.7%) with the predominate risk behaviors being MSM (43.8%).

Service Utilization: The federally funded Ryan White HIV/AIDS Treatment Modernization Act continues to serve low-income persons with HIV/AIDS in Nebraska. The AIDS Drug Assistance Program (ADAP) provided needed pharmaceuticals to 315 unduplicated clients for the period April 2005 through March 2006. There was an average of 179 clients served per month, with an average two new clients admitted to the program per month. The program did have a waiting list during this period due to the lack of adequate funding.

As of December 31, 2006, the Nebraska CARE Program (Ryan White Part B and Part C) had 904 clients. Most of the visits were medical-related services, but the largest average number of visits per client occurred for those seeking substance abuse treatment.

Case management is provided across the state by Nebraska AIDS Project. There were a total of 517 unduplicated HIV positive clients who were provided a total of 5,244 case management service units; an average of 10.14 service units per client. Of these 517 clients, 217 received direct emergency assistance which consists of housing (rent), utility, transportation, insurance and food assistance.

Information from the CARE Act Data Report indicated that transportation was by far the most utilized assistance category, followed by utilities, food and housing.

The Housing Opportunities for Persons with AIDS (HOPWA) served 133 unduplicated clients and 76 family members in 2006. The most utilized housing type was rental housing (72%) followed by private residence (18%).

Unmet Need: An important aspect of HIV/AIDS planning and service delivery is to estimate the size of the HIV/AIDS infected population that is aware of their infection, but not receiving medical care. For this reason, the Health Resources Services Administration (HRSA) requires that grantees under Ryan White Part B and Part C estimate this population annually. In Nebraska, persons with HIV infection who did not receive a viral load or CD4 lymphocyte test in 2005 are considered to have unmet primary medical need. Forty percent of the PLWHA were estimated to fall in to this category. Persons with unmet need were primarily male (80%), white (56%) or black (24%) and 30 to 39 years old (72%). The majority of those with unmet need reported MSM as their risk behaviors (44%), followed by heterosexual contact (11%), injecting drug use (11%), and MSM/IDU (9%).

INTRODUCTION

This statewide profile describes the epidemiology of HIV/AIDS in Nebraska through December, 2006, with data received through March 2007. The report characterizes the distribution of HIV infection in terms of geography, race, gender, age, and associated causal factors. By examining changes over time, it also identifies trends of increasing risk in certain groups. This epidemiological profile has been prepared to assist in developing a comprehensive HIV/AIDS prevention and planning effort, and to quantify unmet need for prevention and care programs.

The Epidemiologic Profile (Epi Profile) plays a key role in the development of the HIV Comprehensive Plan for Nebraska. By June 2008 the second Five Year HIV Comprehensive Plan for Nebraska (2009-2013) will be completed. The Comprehensive plan consists of four key products: the Epidemiologic Profile, the Community Services Assessment, prioritized populations and a set of interventions for each population.

The statewide community planning group, the Nebraska HIV CARE and Prevention Consortia (NHCPC), will begin the initial phase of developing the comprehensive plan in June 2007 by bringing together members of the Assessment and Evaluation Committee to preview the Epi Profile and identify data gaps prior to the NHCPC quarterly meeting in July 2007. At this all day meeting we will be completing the Community Services Assessment (Needs Assessment, Resource Inventory and Gap Analysis) along with selecting our priority populations.

The completeness of the Epi Profile is key to determining priority target populations. Populations are prioritized by comparing infection rates, risk behaviors, and other factors. This process helps the HIV Prevention Program to direct prevention funds to those populations most at risk of transmitting HIV or becoming infected. As a result, targeted prevention efforts can be supported to reduce HIV transmission in populations with the highest rates of HIV infection, thereby achieving the greatest possible impact.

ORGANIZATION OF THE PROFILE

This epidemiological profile is organized into five main sections; the outline is as follows:

Section 1: Description of Nebraska's population
This question examines the overall demographic and socioeconomic characteristics of the general population in Nebraska. The information used to answer this section may be used to establish a baseline for comparison to other states and other populations.

Section 2: HIV/AIDS in Nebraska
Examines the population of persons with HIV/AIDS in Nebraska. Additionally, through analysis of the information one will be able to target prevention groups as well as care services for those people who are most affected.

Section 3: Indicators of risk for HIV/AIDS infection in Nebraska
The information relating to this question will provide a more in depth analysis of high risk populations associated with HIV transmission as well as identify measures that serve as indicators of high-risk behavior.

Section 4: Care and Services Utilized by Persons with HIV in Nebraska
This information describes the patterns of HIV primary medical care and support services used by persons with HIV. It examines the characteristics of persons accessing Ryan White Part B and Part C care services and the types of services they received.

Section 5: The number and characteristics of persons who know they are HIV positive, but who are not receiving HIV primary medical care
This section describes efforts that are underway to use a framework developed by CDC and HRSA to estimate unmet need for HIV primary medical care in Nebraska.

PROFILE PREPARATIONS

This profile was prepared by the Nebraska Office of Public Health HIV/AIDS Surveillance Program in close collaboration with the Nebraska HIV Prevention and Ryan White CARE Act Programs and the Centers for Disease Control and Prevention (CDC). It was developed to provide key stakeholders and the Nebraska HIV Care and Prevention Consortium (NHCPC) with data to guide their planning and prevention efforts.

PROFILES DATA SOURCES

Data were compiled from a variety of sources to provide the most complete picture possible. Few behavioral or supplemental surveillance projects are available in Nebraska; therefore, core surveillance data is heavily utilized. Each data source has strengths and limitations, which should be considered when interpreting the data. Below is a list of the data sources used in this profile. For a complete description of each data source and its strengths and limitations, please see Appendix A: Epi Profile Data Sources.

Core HIV/AIDS Surveillance:

HIV/AIDS Case Surveillance	
Nebraska Youth Risk Behavior Survey (YRBS)	
Nebraska Behavioral Risk Factor Surveillance Program (BRFSS)	
STD Surveillance	
Substance Abuse Data:	Treatment Episode Data Set (TEDS)
	National Household Survey of Drug Abuse (NHSDA)
Vital Statistics Data	Death Data
Population Data	U.S. Census Bureau
HIV Care Data	Ryan White Care Act

SURVEILLANCE RISK BEHAVIOR CATEGORIES

For surveillance purposes HIV and AIDS cases are counted only once in a hierarchy of risk behaviors categories, according to the CDC standards. The hierarchy is the list of behaviors that can lead to HIV infection, in the order of the behavior that can put one at a greatest risk for infection down toward those behaviors that are still risky, but not as risky as the behavior before it. Persons with more than one reported mode of exposure to HIV are classified in the exposure category listed first in the hierarchy, except for men with both a history of sexual contact with other men and a history of injection drug use. They make up a separate category. The modes of exposure are categorized in this report according to the following hierarchy:

Men who have sex with men (MSM)
Include men who report sexual contact with other men, and men who report sexual contact with both men and women.

Men who have sex with men and inject drugs (MSM/IDU)
Includes men who inject nonprescription drugs and report sexual contact with other men or who report sexual contact with both men and women.

Injection drug use (IDU)
Includes persons who inject nonprescription drugs.

Heterosexual contact
Includes persons who report specific heterosexual contact with an HIV positive person, or heterosexual contact with a person at increased risk for HIV infection, such as an injecting drug user, person with hemophilia, transfusion recipient or bisexual male.

Includes new category, Presumed Heterosexual, which includes females that are currently classified as an NIR, and reports a positive history of sex with a male prior to HIV diagnosis, has a negative history of injection drug use, and there is no other information that would suggest a likely alternative source of HIV infection (for example, occupational exposure)

No identified Risk Factor (NIR)
A person who reports no or unknown information on sexual or injecting drug use behavior, or a person who reports heterosexual contact with partner(s) whose specific HIV risks and HIV status are unknown is considered to have no risk identified (NIR) as their risk behaviors

GUIDELINES TO PREVENT MISINTRERPRETATION OF THE DATA

Recommendations

The following guidelines are intended to facilitate proper interpretation of the text, tables and figures presented in this profile. Decisions about how to allocate limited resources for prevention and care services depend, in part, on appropriate interpretation of epidemiological data. The following guidelines are intended to facilitate proper interpretation of the tables and figures presented in this profile.

- Carefully examine the entire table or graph. Read the title of the table or figure and look closely at the type of information presented on the vertical and horizontal axes. Are the data showing the number of cases or a percentage of the total cases? Pie graphs and stacked bar graphs can show total numbers or percentages. Examine how the graphs are scaled. Does the number of cases increase by 5, 10, 100, or some other factor? What is the time period covered? Have any data been excluded from total counts?
- These data have certain limitations. This report will present both AIDS-case report data and HIV infection case-report data. AIDS case report data span 18 years and are relatively complete. HIV case report data only span less than 10 years, making the HIV data relatively incomplete.

- Be careful not to over-interpret small changes or differences from year to year. Comparing one year with another year may be misleading, particularly given the low numbers of cases reported in Nebraska annually. Major trends over time will be highlighted in the narrative of this document.

- Look for consistencies with other information sources. Different findings should be examined carefully. All data sources are not equivalent; thus, lacking the ability to

generalize to the population of Nebraska. In particular, scientific studies should be examined for their purposes and for the population studied. Where scientific studies are presented, their limitations will be included in the discussion.

- Case rates have been calculated for 12-month periods per 100,000 population. The denominator for calculating rates is based on Census 2000 data from the U.S. Bureau of Census. The numerator is the number of cases reported during the 12-month period. This number is divided by the population estimate and multiplied by 100,000. Race-specific rates are the number of cases reported for a particular racial/ethnic group during the preceding 12-month period divided by the projected population for that race/ethnicity, multiplied by 100,000.

Section 1: Description of Nebraska's Population

Nebraska is largely a rural state, covering 77,358 square miles, making it the 16th largest of the 50 states in terms of land area. Nebraska measures 459 miles (740 kilometers) across at its widest point, following a diagonal from southeast to northwest.

Approximately two thirds of Nebraska's 1.7 million people reside in three of Nebraska's 93 counties (Douglas, Lancaster and Sarpy) which are considered urban counties and are located in the eastern portion of the state. These counties contain Nebraska's major population centers, Omaha, Lincoln, and several smaller cities scattered along the Platte River and Interstate I-80. Counties located on the west-central side of Nebraska are less populated. The remaining one third of the population is located in the other 90 counties which are considered rural. According to the U.S. Census Bureau, Nebraska is the 38th most populated of the 50 states. Rural counties are losing population while urban centers are growing.

Table 1 lists the top 10 counties in Nebraska based on population size, according to the 2004 U.S. Census Estimates.

Table 1: 10 Largest Counties in Nebraska

County	Population
Douglas	482,112
Lancaster	261,545
Sarpy	135,973
Hall	54,862
Buffalo	43,406
Scotts Bluff	36,631
Dodge	36,066
Madison	35,752
Lincoln	34,979
Platte	31,245
Nebraska	1,747,214
Source: US Bureau of the Census, 2004 Population estimates	

The largest city in Nebraska is Omaha followed by Lincoln. All other cities in Nebraska are under 50,000 population, as listed in Table 2.

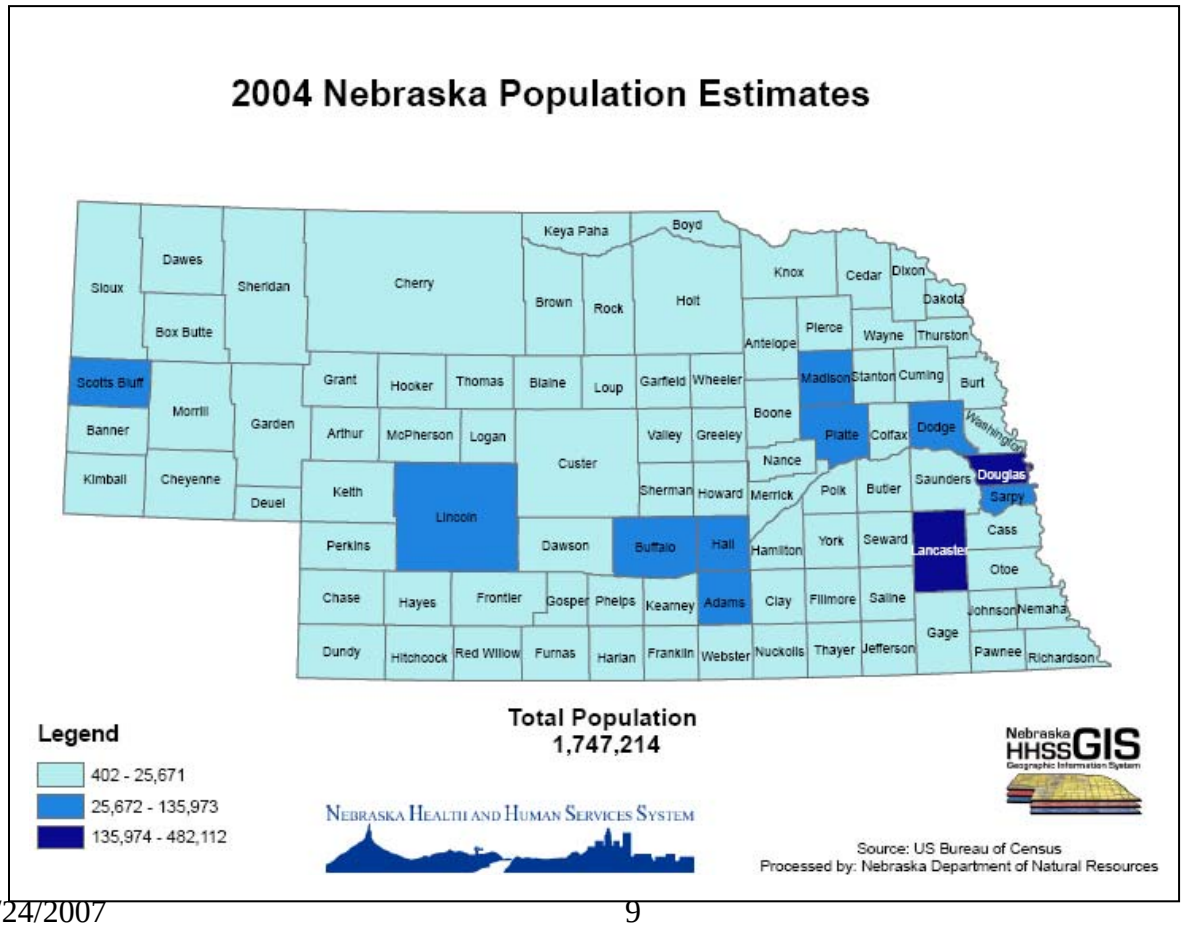
Table 2: List of Top 10 Cities in Nebraska by Population Size

City	Population
Omaha	409,416
Lincoln	236,146
Bellevue	47,347
Grand Island	44,287
Kearney	28,640
Fremont	25,272
Norfolk	24,072
Hastings	23,404
North Platte	23,944
Columbus	20,881

Source: US Bureau of the Census, 2004 Population Estimates

The map, immediately following, identifies the population in each of Nebraska's 93 counties. The shading corresponds to the population range given in the key at the bottom of the map.

Map 1:



DEMOGRAPHICS OF NEBRASKA

Age and Gender

In 2004, the population of Nebraska was estimated at 1,747,214 persons (Table 1). According to the U.S Census, Nebraska's population increased 2.1% in five years (from 1,711,263 in 2000 to 1,747,214 in 2004). The largest proportion of the population was between the ages of 30-49 (27.8 % overall), and about 49.7 % of the population was between 13-49 years of age. The age distribution among males and females was similar; however, a slightly higher proportion (4.2%) of women were elderly (65 years and older) than men (Table3).

Table 3: Percentage distribution of the general population, by age group and gender, Nebraska

	Males, %	Females, %	Total Population, %	US Population
Age, years	(N = 863,793)	(N = 883,911)	(N = 1,747,214)	(N = 293,656,842
< 13	21.3%	19.9%	20.6%	20.7%
13-19	7.7%	7.1%	7.4%	7.1%
20-24	8.1%	7.5%	7.8%	7.1%
25-29	7.0%	6.5%	6.7%	6.7%
30-49	28.4%	27.2%	27.8%	29.5%
50-64	16.3%	16.7%	16.3%	16.5%
65 or older	11.2%	15.4%	13.3%	12.4%
Source. US Bureau of the Census, 2004 Population estimates,				

Race/Ethnicity

The racial and ethnic minority population in 2000 comprised 12.6% of the total population, and by 2004 it is estimated to have increased to 16.3%. The following Table 4 shows the increase in Nebraska's population groups from 2000 to 2004. The state's growth rate of 2% was fueled by the growth of ethnic and racial minority populations in the state, especially Hispanic which grew 27.1% from 2000 to 2004.

Table 4: Increase in population, Nebraska, 2000 to 2004

	2000	2004 Estimate	% Increase
Total Population	1,713,239	1,747,214	2.00%
White	1,587,082	1,609,056	1.30%
Black	70,212	74,815	6.80%
American Indian	15,664	16,562	5.90%
Asian	23,761	27,922	18.70%
Hispanic	95,308	119,975	27.10%
Non-Hispanic	1,617931	1,627,239	
Minority	215,529	250,577	16.30%

Source: US Bureau of the Census, 2004 Population Estimates

In the 2000 U.S. Census, the collection of race and ethnicity information was expanded to allow persons the opportunity to report more than one race group, as well as to report Hispanic ethnicity. For the purposes of this profile, to compare to HIV data, the numbers used are for those of one race. More than 92% of the men and women in Nebraska reported themselves as non-Hispanic White (Table 5). Non-Hispanic blacks comprised 4.3% of the population. Hispanics comprised 6.9% of the total population, and Asians/Pacific Islanders and American Indians/Alaska Natives totaled 1.6% and less than 0.9% respectively. The race/ethnicity distribution among males and females was similar.

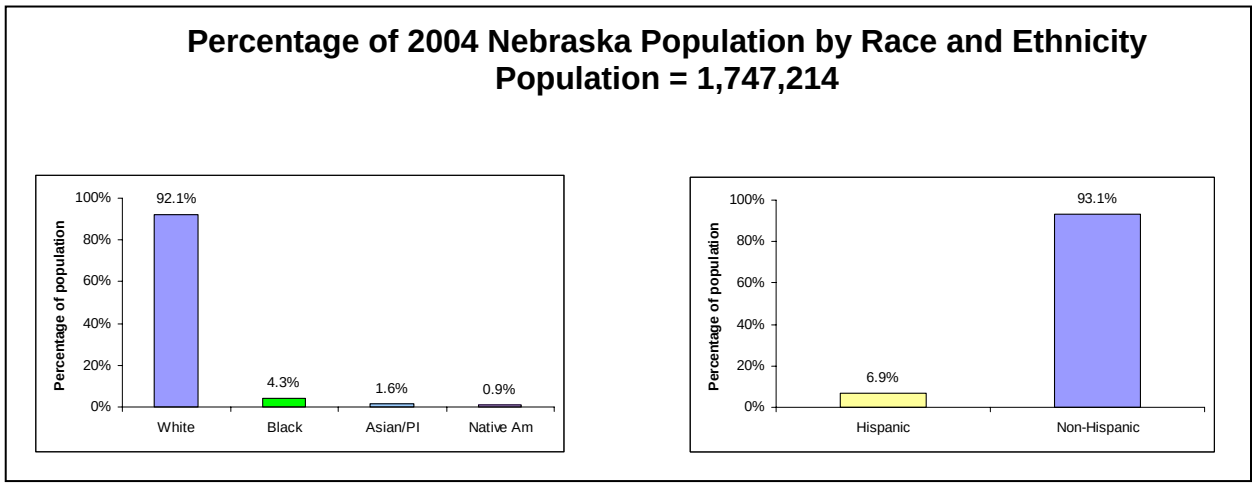
Table 5: Percentage distribution of the general population, by race/ethnicity and gender

	Males, %	Females, %	Total Population, %
Race/ethnicity	(N = 863,628)	(N = 883,586)	(N = 1,747,214)
Hispanic or Latino	7.5%	6.2%	6.9%
Not Hispanic or Latino			
White alone	92.1%	92.1%	92.1%
Black/African American alone	4.3%	4.3%	4.3%
American Indian/Alaska Native alone	0.9%	1.0%	0.9%
Asian/Native Hawaiian/Pacific Islander alone	1.6%	1.6%	1.6%

Source. US Bureau of the Census, 2004 Population Estimates

The racial and ethnic composition in Nebraska, according to the 2004 U.S. Census Estimates, is illustrated in Figure 1.

Figure 1



As Table 6 indicates, according to the 2004 Census, the distribution of race/ethnicity varied across Nebraska counties that had a population of more than 100,000.

Table 6: Percentage distribution of the general population, by race/ethnicity for counties of >100,000 population compared with the population of Nebraska

	Population, %			
	Douglas	Lancaster	Sarpy	Total Population,%
Race/ethnicity	(N = 482,112)	(N = 261,545)	(N = 135,973)	(N = 1,747,214)
Hispanic or Latino	8.5	4.1	5.1	6.9
Not Hispanic or Latino				
White alone	83.9	91.5	91.3	92.1
Black/African American alone	11.7	3.0	4.1	4.3
American Indian/Alaska Native alone	0.7	0.7	0.4	0.9
Asian/Native Hawaiian/Pacific Islander alone	2.2	3.3	2.2	1.6
Source. Census 2004, US Bureau of the Census				

In Douglas County, the most populous county, 11.7% of the population indicated their race as black, compared with 4.1% in Sarpy and 3.0% in Lancaster. Douglas County also reported the highest proportion of Hispanics (8.5%), while Lancaster had the lowest proportion of Hispanics (4.1%) compared with the other counties. Less than 1% of the population in each of these counties reported themselves as American Indian/Alaska Native. The percentages of persons in the three counties that identified themselves as Asian/Pacific Islander ranged from 2.2 - 3.3%.

Socioeconomic Status

Poverty Level

In 2004 census, the median household income in Nebraska was $42,166. More than 172,162 residents (10.0% of the population) for whom poverty status was determined, had incomes that fell below the federally defined poverty level as compared with 12.7% nationally (Table 7).

The unemployment rate (among those in the labor force age 16 and older) in 2000 was 2.5% statewide. Nearly 13.8% of adults (19-64 years) in Nebraska were uninsured. In the 2000 census, 86% of male and 87% of female Nebraska residents aged 25 years and older reported educational attainment of high school diploma or higher.

Table 7: Percentage distribution of persons living below the poverty level during 1999 for selected counties, compared with the population of Nebraska and the United States

County	Population	Below poverty level, %
Douglas	463,585	9.8
Lancaster	250,291	9.5
Sarpy	122,595	4.2
Hall	53,534	12.0
Lincoln	34,632	9.7
Scotts Bluff	36,951	14.5
Thurston	7,171	25.6
Madison	35,226	11.2
Platte	31,662	7.7
Buffalo	42,259	11.2
Dawson	24,365	10.8
Statewide	1,711,263	9.7
U.S.	281,421,906	12.4
Source. Census 2000, US Bureau of the Census		

Education by Gender in Selected Counties

In 2000, more than 85% of Nebraskans aged 25 and older had earned at least a high school diploma or its equivalent (Table 8). Additionally, a majority had at least some college, within each of the three largest counties and statewide.

Table 8: Percentage distribution of the population 25 years or older, by educational attainment and gender, for counties of > 100,000 population, Nebraska, 2000

	Douglas		Lancaster		Sarpy		Total Population, %	
Percentage	Males	Females	Males	Females	Males	Females	Males	Females
Education	(N= 140,367)	(N= 152,709)	(N= 75,093)	(N= 77,654)	(N= 35,821)	(N= 37,983)	(N= 523,919)	(N= 563,322)
< 9th grade	4.7	3.9	2.9	2.8	1.9	1.9	5.9	4.9
High school	8.5	8.4	7.3	6.0	4.2	5.4	8.4	7.8
High school diploma[1]	24.2	28.0	24.9	25.6	22.1	27.1	31.0	31.5
Some college	23.9	25.0	22.5	25.5	28.9	29.8	22.8	25.6
Associate or bachelor's degree	27.9	26.7	30.1	30.6	31.0	28.1	23.8	23.8
Graduate or professional degree	10.8	8.0	12.3	9.5	11.8	7.7	8.3	6.3

Source. Census 2000, US Bureau of the Census
1. Includes equivalency

The most common level of education attainment among persons 25 years and older varied by location and sex. Statewide 31.0% of men and 31.5% of women had earned no more than a high school diploma or its equivalent. Douglas, Lancaster, and Sarpy Counties had higher percentages of men and women who earned at least one college or professional degree, compared to the statewide percentages. All three counties reported a lower percentage of both males and females with an education level of less than 9th grade as compared to the statewide percentage for both groups.

Health Insurance

From 1999-2000, nearly 13% of Nebraskans ages 19-64 reported that they did not have health insurance coverage (Table 9). When only low income (less than 200% of poverty level) are considered this percentage increases to 28.6%. However, both of these values are less than their corresponding percentages nationwide. Approximately two-thirds (65.9%) of Nebraskans ages 19-64 reported receiving health insurance coverage from their employer (this value drops to 30.4% for low income Nebraskans). Five percent of all Nebraska adults received health coverage form Nebraska's Medicaid Program.

Table 9: Percentage distribution of adults (19-64 years), by health insurance coverage and income level in Nebraska compared with the United States, 1999-2000

	All Income Levels		Low Income[1]	
	Nebraska, %	U.S., %	Nebraska, %	U.S., %
Source of Insurance	(N^2 = 1,119)	(N^2 = 165,257)	(N^2 =261)	(N^2 = 48,783)
Employer	65.9	68.1	30.4	32.8
Medicaid[3]	5.0	6.3	15.5	17.6
Other[4]	16.3	7.9	25.4	12.1
Uninsured	12.7	17.7	28.6	37.6

Source. Kaiser Family Foundation
***Note**. Percentages may not add to 100% because of rounding*
1. Less than 200% of poverty level
2. In thousands
3. Medicaid includes CHIP
4. Includes private non-group and other public insurance (mostly Medicare and military-related)

Section 2: HIV/AIDS in Nebraska

HIV disease has impacted persons in all sex, age, and racial/ethnic groups in Nebraska. This impact, however, has not been the same for all population groups. In the beginning of the national epidemic, HIV cases rose most sharply in white men who reported having sex with men. Although white men who have sex with men (MSM) are still disproportionately impacted by the epidemic, recent national trends suggest a shift in the epidemic towards women, blacks, and high-risk heterosexuals. As the national epidemic continues to change and the number of persons living with HIV continues to grow, it is extremely important to identify those populations most impacted and most at-risk for HIV infection in order to effectively plan for HIV prevention and care and to allocate limited resources.

Early in the epidemic, AIDS case data were the only available method to describe persons diagnosed with HIV infection. During the 1980s, AIDS cases alone provided an adequate picture of HIV trends because the time between infection with HIV and progression to AIDS was predictable (9-12 years). This predictability, however, has diminished since 1996, when highly active antiretroviral therapies (HAART) became available. Access, adherence, and response to HAART affect whether or when HIV progresses to AIDS. Thus, trends in AIDS cases alone no longer accurately reflect trends in HIV infection. Today, trends in the epidemic are better reflected by new HIV infections, regardless of whether they have progressed to AIDS.

Compared with the rest of the nation, Nebraska is considered a low HIV/AIDS incidence state. In 2005, the most current data available from CDC, state-specific AIDS rates ranged from 1.0 per 100,000 in Vermont to 32.7 per 100,000 in New York. Nebraska had the 11th lowest AIDS rate (3.0 per 100,000 persons). Compared with the surrounding states (IA, KS, CO, WY, and SD), Nebraska rates are very similar to Iowa and Kansas, at 3.2 and 3.9 per 100,000, respectively. Colorado has the highest rate at 7.7 per 100,000, while Wyoming has the lowest, 1.2 per 100,000, followed by South Dakota at 2.4 per 100,000.

Data will be presented by the year the case was diagnosed with HIV, regardless of a subsequent AIDS diagnosis. The data reflect reported cases that were residents of Nebraska at the time of diagnosis. Cases that were diagnosed in another state, but are receiving care and treatment in Nebraska are not included in this analysis. Cumulative HIV/AIDS cases include all reported cases, living or deceased.

Notes: Data are also provisional. The data contained in this epi profile reflects cases diagnosed through 2006, based on the information that was received through March 2007.

Two common terms used throughout the epi profile are incidence and prevalence. Incidence or incident cases, refers to new HIV and/or AIDS cases diagnosed during a particular time period; for example, from January 1, 2006, to December 31, 2006. Prevalence, or prevalent cases, refers to the number of people living with HIV and/or AIDS at any given time, for example, through the end of 2006.

Cumulative AIDS Cases

Reporting of AIDS cases began in Nebraska when the first case was reported in 1983. Implementation of HIV reporting by name began in 1995. As of the end of 2006, a total of 2,241 persons had been reported with Human Immunodeficiency Virus (HIV) or Acquired

Immunodeficiency Syndrome (AIDS) in Nebraska; of these, 35% are known to have died. During 2006, 117 new cases of HIV and AIDS were diagnosed, reflecting an incidence rate of 6.7 per 100,000 population.

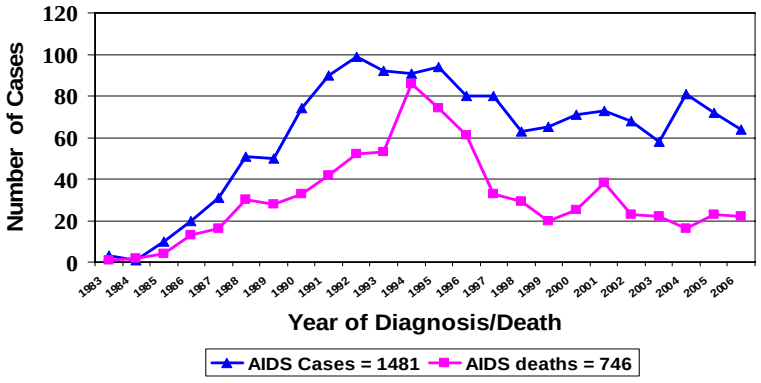
Overall AIDS Trends

From 1983 to 2006, a total of 1,487 incident AIDS cases have been diagnosed among Nebraska residents. (see Figure 2). Since reporting of AIDS cases first started in 1983, the number of cases per year increased rapidly, reaching a peak of 99 cases in 1992. The number of AIDS cases remained stable from 1992 through 1995. Beginning in 1996, both the number of newly diagnosed AIDS cases and the number of deaths among AIDS cases declined sharply. This is primarily due to the success of new antiretroviral therapies including protease inhibitors. These treatments do not cure, but can delay progression to AIDS among persons with HIV (non-AIDS) infection and improve survival among those with AIDS. Since 1998, the number of reported AIDS cases in Nebraska has varied from 60 to 80 cases per year.

The total number of deaths in persons with AIDS between 1983 to 2006 was 746. The number of deaths has also leveled off to 21 deaths in 2006 from a high of 86 deaths in 1994. Information on deaths is received from yearly reviews of deaths certificates listing HIV or AIDS as one of the causes of death. Death certificates are obtained primarily from the HHSS Office of Vital Records. Other sources include local and state health departments, and active surveillance efforts.

Figure 2:

Number of Newly Diagnosed AIDS Cases and Deaths, Nebraska, 1983 – 2006



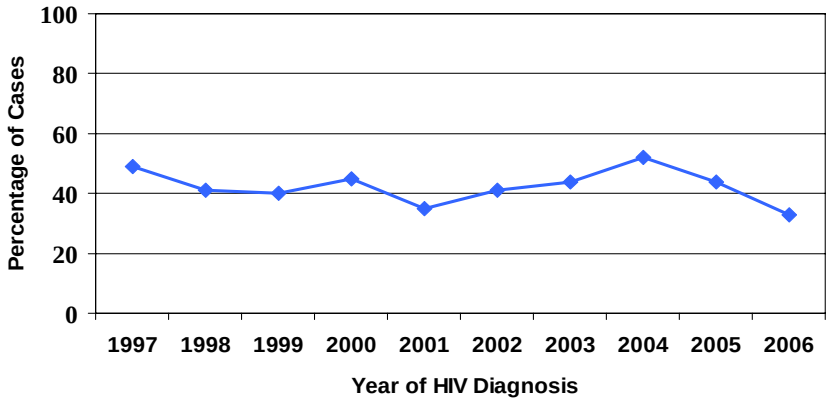
Source: Nebraska HIV/AIDS Reporting System

AIDS at First Diagnosis

Figure 3 below shows the percentage of people who were diagnosed with AIDS within one year of their HIV diagnosis. In the time period from 1997 to 2006, there were 460 persons who were diagnosed with AIDS in the time period of less than 13 months from the time that they were diagnosed with HIV. These represented an average of 42% of all persons who were newly diagnosed with HIV infection in this time period. This compares with the national average of 40% for persons reported with AIDS in the United States in 2002. The percentage of those testing in the later stages of HIV disease varied from 49% in 1997 to 33% in 2006. This decline in the proportion of patients diagnosed at an advanced stage of disease is consistent with declines in mortality. However, reporting accuracy and insistence of surveillance staff on accurate dates of earliest diagnosis have likely improved the quality of dates of earliest diagnosis, and may explain some of the apparent improvement. These data suggest either that the average clinical latency from HIV to AIDS diagnosis has been prolonged, or that at-risk persons are testing earlier in the course of their infection. It is likely that both have occurred: clinical latency has been extended by antiretroviral therapy and early testing has increased as a result of public awareness of HIV, attributed to HIV prevention programs.

Figure 3:

Percentage of Cases Diagnosed with AIDS within 1 Year of HIV Diagnosis, 1997 to 2006 N = 460



Includes persons who were diagnosed with HIV that received an AIDS diagnosis within the next 12 months. Cases were selected if there was an HIV diagnosis between 1997 and 2006, regardless of the current diagnosis (HIV or AIDS).

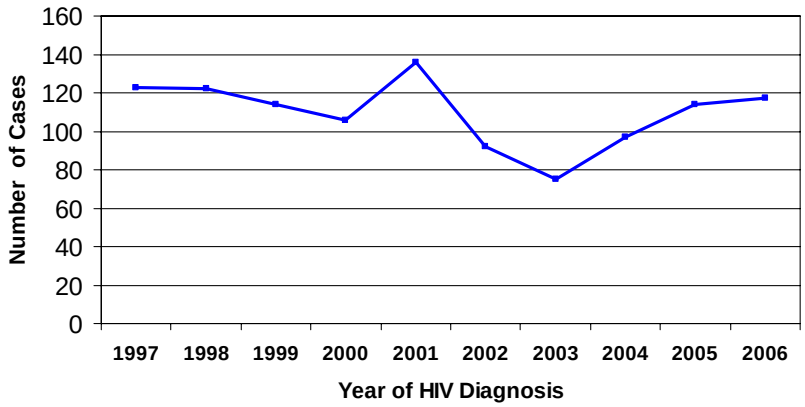
Source: Nebraska HIV/AIDS Reporting System

HIV/AIDS Trends between 1997 and 2006

There were 1,096 incident cases of HIV and AIDS between 1997 and 2006 as shown in Figure 4. The combined number of HIV and AIDS diagnoses remained relatively steady from 1997 to 2000, between 105 and 123 cases per year, until there was a notable increase in the number of cases in 2001, when 136 cases were diagnosed. The number of cases then declined sharply to 75 cases in 2003, before increasing again to 114 cases in 2005 and appears to have leveled off again to 117 cases in 2006. The increase in incident cases in 2001 can be explained by the increase in the number of reported cases among white males, aged 25 to 44 years old.

Figure 4:

Number of All Newly Diagnosed HIV* Cases
Nebraska, 1997 to 2006
N = 1096



*** HIV cases include those diagnosed with HIV infection as well as AIDS**

Source: Nebraska HIV/AIDS Reporting System

The remainder of this section will compare and contrast the trends in HIV disease, looking at trends over time and also by using a 3-year snapshot in time. The following data for new HIV and AIDS cases represent those diagnosed between 1997 through 2006. The three-year snapshot includes those cases diagnosed between 2004 and 2006. This was done because of the small numbers of cases diagnosed each year in Nebraska. Combining three years worth of data provides a better description of the most recent trends.

GENDER:

Figure 5 illustrates the incidence of HIV/AIDS by gender from 1997 to 2006. There were a total of 817 males and 279 females diagnosed with HIV/AIDS during this time period. Males have historically been the majority of new cases, and they continue to be so. Overall, males represented 75% of all the cases diagnosed in this ten-year time period, while females represented 25%.

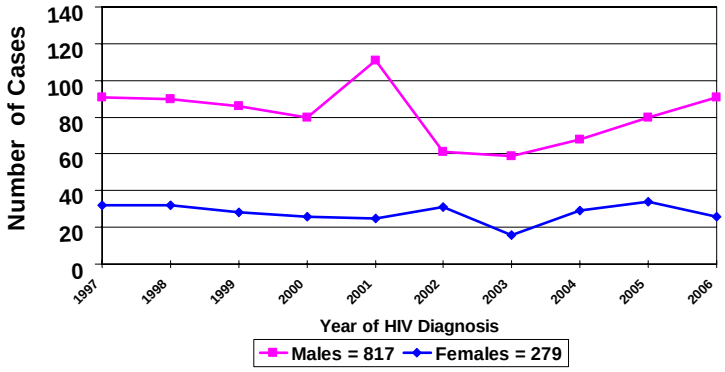
The trend for males newly diagnosed with HIV/AIDS declined slightly from 91 cases in 1997 to 80 cases in 2000, then increased to 111 cases in 2001. After declining to 61 cases in

2002, there has been an increasing trend in the number of males diagnosed with HIV/AIDS.

The trend for new female HIV/AIDS cases is very different. Female cases have remained relatively stable, since 1997, with the numbers of females with HIV/AIDS fluctuating between 16 to 34 cases per year.

Figure 5:

Number of All Newly Diagnosed HIV* Cases by Gender & Year of Diagnosis, Nebraska, 1997 - 2006 N = 1096



*** HIV cases include those diagnosed with HIV infection as well as AIDS**

Source: Nebraska HIV/AIDS Reporting System

Table 10 below compares the incidence of males with HIV/AIDS to females. Between 2004 to 2006, the rate of new HIV/AIDS diagnoses was 9.2 for males and 3.4 for females.

Table 10: HIV/AIDS diagnoses among persons in Nebraska, by age group and gender, 2004-2006

	Males			Females			Total		
Age (yrs)		**%**	**Avg. Rates***	**No.**	**%**	**Avg. Rates***	**No.**	**%**	**Avg. Rates**
0-4	2	1%	1.1	3	3%	1.7	5	2%	1.4
5-12	2	1%	0.5	0	0%	0.0	2	1%	0.3
13-24	31	13%	7.6	12	13%	3.1	43	13%	5.4
25-44	162	68%	22.5	63	71%	9.0	225	69%	15.9
45-64	40	17%	6.5	11	12%	1.7	51	16%	4.1
>64	2	1%	0.7	0	0%	0.0	2	1%	0.3
Total	239	100%	9.2	89	100%	3.4	328	100%	6.3

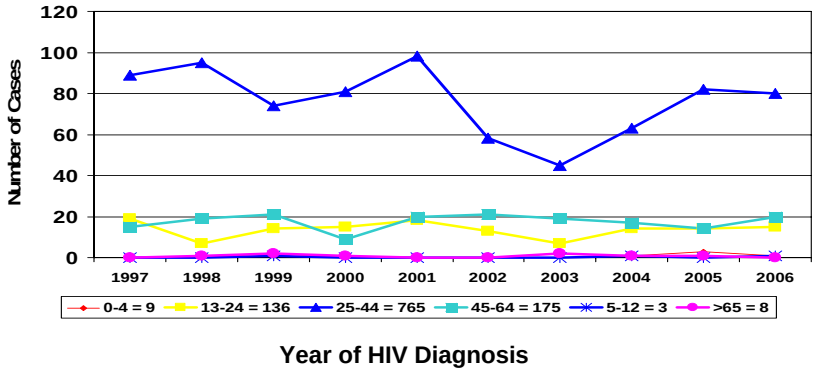
Source. Nebraska HIV Surveillance Program
**Average yearly rate per 100,000 based on 2004 population – caution must be used in interpretation because of small numbers*

Age Groups

To look at changes in age at diagnosis, newly diagnosed HIV/AIDS cases are presented by the time of their HIV diagnosis in Figure 6. The 25 to 44 year old age group represents the largest age group and had the widest fluctuation in the number of cases per year. The number of cases varied in this age group from 89 cases in 1997 to a high of 98 cases in 2001 and declined to 80 cases in 2006. Trends for this age group mirror the overall HIV/AIDS trend, since they represent the largest age group. There was no obvious trend in all the other age groups.

Figure 6:

Number of Newly Diagnosed HIV* Cases by Age Group at Diagnosis, Nebraska, 1997 – 2006 N = 1096



*** HIV cases include those diagnosed with HIV infection as well as AIDS**

Source: Nebraska HIV/AIDS Reporting System

Age and Gender

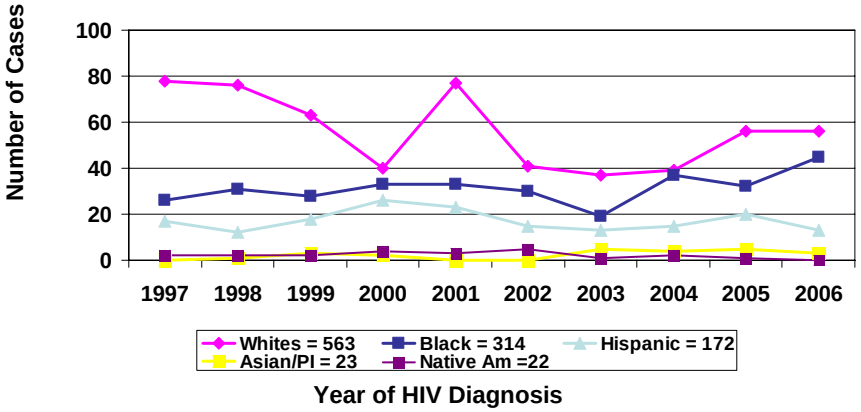
Table 10 shows the distribution of age group with gender. The majority of all the newly diagnosed HIV/AIDS cases, for both males and females, were in the age group 25-44. This age group represented 69% of all newly diagnosed HIV/AIDS cases, and also had the highest overall rate at 15.9 cases per 100,000.

Race/Ethnicity

All persons of color have been disproportionately affected by HIV disease compared to whites, especially Blacks, in Nebraska. Figure 7 provides information on the trends for the number of HIV/AIDS cases by race/ethnicity by year of HIV diagnosis. The overall trend for White, non-Hispanic HIV/AIDS cases was a decline in cases from 78 cases in 1997 to 56 cases in 2006. The exception to this was in 2001 when the number of cases increased to 77 cases. HIV/AIDS cases among Blacks have increased from 26 in 1997 to 45 cases in 2006, nearly matching the number of White cases. The trend for HIV/AIDS cases among Hispanics has been stable, fluctuating between 12 to 26 cases per year. Trends for Asian/Pacific Islanders and Native Americans are not discernable because the number of cases per year was 5 or less.

Figure 7:

Number of Newly Diagnosed HIV* Cases by Race/Ethnicity, and Year of Diagnosis, Nebraska, 1997 – 2006 N = 1096



In addition, there were 2 of multi-race/ethnicity

Source: Nebraska HIV/AIDS Reporting System

Race/ethnicity compared to Nebraska population

Figures 8 and 9 below compares the proportion of HIV/AIDS cases by race/ethnicity to the distribution of race/ethnicities in the Nebraska population. While the majority of Nebraskans are white (86%), they only represent 46% of the HIV/AIDS cases. Blacks comprise 4% of Nebraska's population, but are 35% of all the HIV/AIDS cases. Hispanics are 15% of the cases while only 7% of the population. Native American and Asian/Pacific Islanders are represented only slightly higher among the HIV/AIDS cases than in the Nebraska population.

Figure 8: Percentage of 2004 Nebraska Population by Race and Ethnicity
Population = 1,747,214

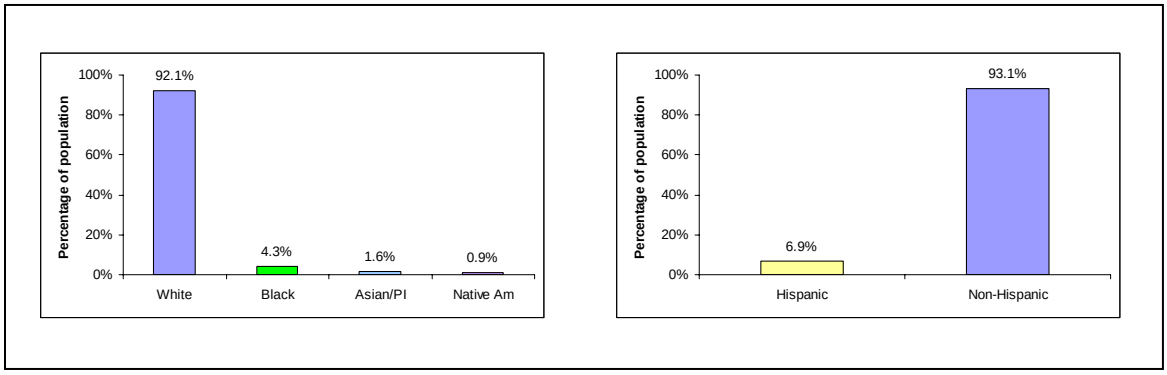
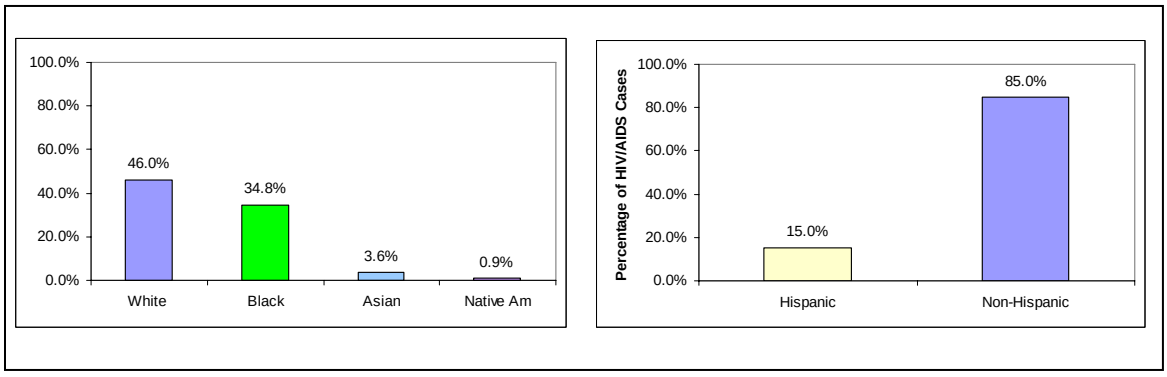


Figure 9: Percentage of HIV/AIDS Cases Diagnosed 2004 to 2006, Nebraska

N = 328



Race/ethnicity and Gender

As demonstrated in Table 11, even though male HIV/AIDS cases are primarily white, non-Hispanic (53%), and blacks account for 28% of these cases, the rates for these two groups is vastly different. The highest rate for HIV/AIDS is 59.3 per 100,000 for black males, while the rate for white males is very low at 5.3 per 100,000. The second highest rate for males is 21.0 per 100,000 for Hispanic males. When the number of cases varies as widely as these numbers, rates allow a better comparison between these race/ethnicities.

The majority of female HIV/AIDS cases are black (54%), while whites represent 27%, a very different distribution compared to males. The rates are highest for black female HIV/AIDS cases (42.4 per 100,000), followed by 16.9 per 100,000 for Asian females, 11.8 per 100,000 for Native American females, 4.2 per 1000,000 for Hispanic females, and lowest for white females (1.0 per 100,000).

Table 11: HIV/AIDS diagnoses and rates per 100,000 population in Nebraska, by race/ethnicity and gender, 2004-2006

	Males			Females			Total		
Race/Ethnicity	No.	%	Rate*	No.	%	Rate*	No.	%	Rate[a]
Hispanic or Latino	41	17	21.0	7	8	4.2	48	15	13.3
Not Hispanic or Latino									
White alone	127	53	5.3	24	27	1.0	151	46	3.1
Black alone	66	28	59.3	48	54	42.4	114	35	50.8
American Indian/Alaska Native alone	0	0	0.0	3	3	11.8	3	1	6.0
Asian/Native Hawaiian/Pacific Islander alone	5	2	12.2	7	8	16.4	12	4	14.3
Total	239	100	9.2	89	100	3.4	328	100	6.3

Source. Nebraska HIV Surveillance Program
Average yearly rate per 100,000 based on 2004 population - caution must be used in interpretation because of small numbers

Race/ethnicity by age groups

Table 12 compares the distribution of HIV/AIDS cases diagnosed between 2004 and 2006 by age groups and race/ethnicity. Reported HIV/AIDS cases tended to be 25 years and older, across all race/ethnicity groups. In addition, only Black and Asian/Pacific Islanders had HIV/AIDS cases less than 13 years of age.

Table 12: HIV/AIDS diagnoses, Nebraska, by race/ethnicity and age group, 2004-2006

	White		Black		Hispanic		Asian/ PI		Native Am		Total	
Age (yrs)	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	0	0%	3	3%	0	0%	2	17%	0	0%	5	2%
5-12	0	0%	2	2%	0	0%	0	0%	0	0%	2	1%
13-24	20	13%	15	13%	7	15%	1	8%	0	0%	43	13%
25-44	94	62%	87	76%	34	71%	8	67%	2	67%	225	69%
45-64	35	23%	7	6%	7	15%	1	8%	1	33%	51	16%
>64	2	1%	0	0%	0	0%	0	0%	0	0%	2	1%
Total	151	100%	114	100%	48	100%	12	100%	3	100%	328	100%

Source. Nebraska HIV Surveillance Program

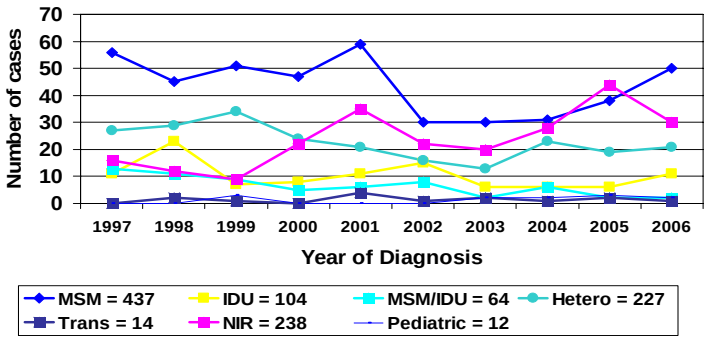
Risk behaviors

Since the start of HIV/AIDS surveillance in Nebraska, the majority of HIV/AIDS cases have been among men who have sex with men (MSM), representing 40% of all risk behaviors. Figure 10 shows the trends in risk behaviors over time for new HIV/AIDS cases. Between 2004 and 2005, the number of cases that are classified as no identified risk (NIR) approximated the number reported as MSM. Cases reporting heterosexual contact have remained fairly stable, between a high of 34 cases in 1999 to 21 cases in 2006.Trends for all other risk behaviors cannot be determined since the number of cases for each has been less than 20 cases per year. Please refer to the Data Sources in the Introduction where the definitions for risk behaviors are described.

Cases reported as an NIR occur for a variety of reasons. One is that information on how a person believes they may have acquired HIV infection may not be shared with their health care provider, because of fears about disclosure of participation in culturally stigmatized behaviors. These behaviors include both injecting drug use and men who have sex with men. Often a person with HIV infection does not know at first how they may have acquired HIV, but after sufficient time, they realize what their risk behaviors was. Then, they must feel comfortable enough with their provider to share this information. Another reason is that a person who reports only heterosexual contact will be listed as an NIR unless they know their partner was HIV-infected or at increased risk for HIV. Often this level of knowledge about sexual partners (anonymous, casual, or exclusive) may be unknown. According to a study conducted by CDC, it is likely that 80% of women with no identified risk acquired HIV infection through heterosexual contact. Also recently diagnosed cases are more likely to not have a specific risk behaviors reported, compared to cases that have been reported for a longer period of time. Cases reported without a specific risk will likely be reclassified as epidemiologic follow-up is completed.

Figure 10:

Number of Newly Diagnosed HIV & AIDS Cases by Year of Diagnosis and Risk Behavior, Nebraska, 1997 – 2006
N = 1096



Source: Nebraska HIV/AIDS Reporting System

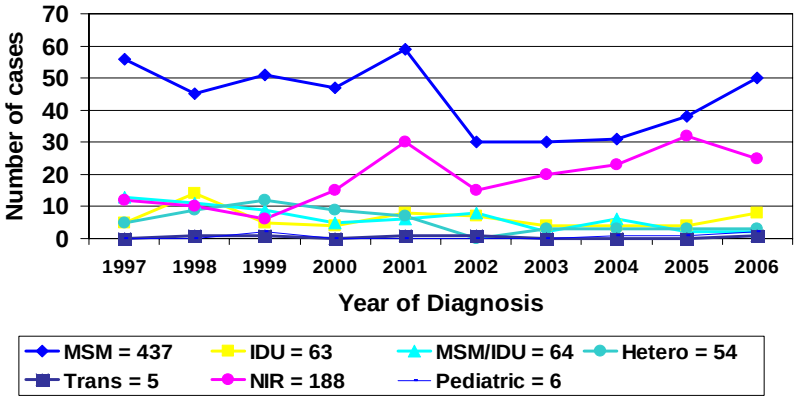
Risk behaviors and Gender

Figures 11 and 12 show the trends in risk behaviors over time for new HIVAIDS cases by gender. Men who have sex with men (MSM) represent the majority (53%) of new male HIV/AIDS cases, and the number of MSM has fluctuated from 56 cases in 1997 to a high of 59 cases in 2001. Cases of MSM then declined to 30 cases in 2002 and have shown a steady increase to 50 cases in 2006. During this same time period, cases of NIRs began increasing in 2001 and have fluctuated between 20 and 30 cases per year. NIRs among males in this 10 year time period were 23% of the total number of males with HIV/AIDS. All other reported risk behaviors have been below 15 cases per year.

The main risk behaviors for females is heterosexual contact. As shown in Figure 12, cases reporting heterosexual contact decreased from 22 cases in 1997 to 10 cases in 2003, and then increased to18 cases in 2006. Heterosexual contact represented 62% in this 10-year time period. All other reported risk behaviors have been below 10 cases per year, making any interpretation difficult. From 1997 to 2006, NIRs accounted for 18% of all female cases, increasing from 4 cases in 1997 to a high of 12 cases in 2005 and then decreasing to 5 cases in 2006.

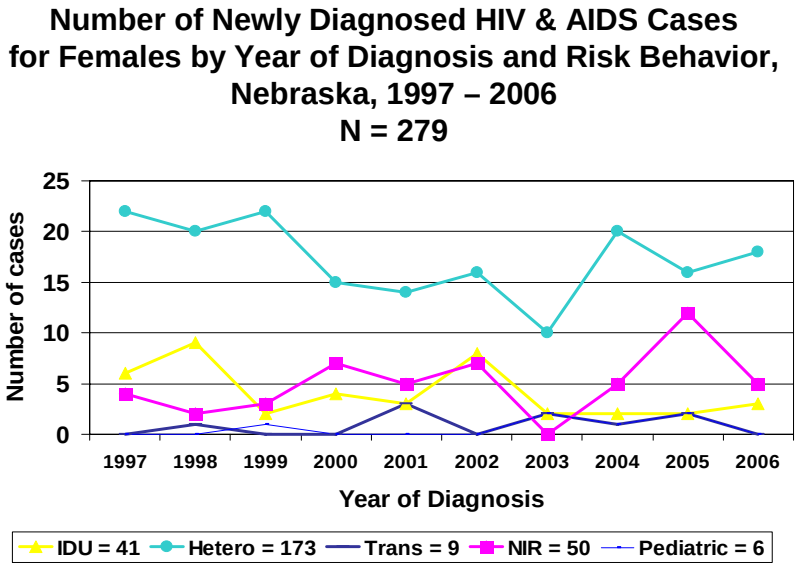
Figure 11:

Number of Newly Diagnosed HIV & AIDS Cases for Males by Year of Diagnosis and Risk Behavior, Nebraska, 1997 – 2006
N = 817



Source: Nebraska HIV/AIDS Reporting System

Figure 12:



Source: Nebraska HIV/AIDS Reporting System

Table 13 provides the breakdown of risk behaviors by gender. The majority (50%) of all male HIV/AIDS cases diagnosed between 2004 and 2006, are men who have sex with men (MSM). The next highest risk group is injecting drug use, which represented 7% of all male cases. All other specific risk behaviors account for less than 5% each, except for NIRs, which represent 33% of all male cases. Among females, the majority (61%) HIV/AIDS cases are related to heterosexual contact, and 8% are related to injecting drug use. One quarter of all female cases have no specific risk identified at the time of report.

Table 13: HIV/AIDS diagnoses among persons in Nebraska, by risk behavior and gender, 2004-2006

	Males		Females		Total	
Risk Behavior	**No.**	**%**	**No.**	**%**	**No.**	**%**
Male-to-male sex	119	50	NA		119	36
Injection drug use	16	7	7	8	23	7
Male-to-male sex and injection drug use	10	4	NA		10	3
Heterosexual contact	9	4	54	61	63	19
Other	5	2	6	7	11	3
No Identified Risk (NIR)	80	33	22	25	102	31
Total	239	100	89	100	328	100

Source. Nebraska HIV Surveillance Program
Other includes: Transfusion and pediatric cases (children under 13 years of age)

Race and risk by gender

The proportion of cases attributable to a specific mode of exposure differs not only by gender, but also by race, as shown in Table 14. Of the new HIV/AIDS cases among male adult and adolescents 13 years of age and older diagnosed between 2004 and 2006, MSM accounted for 65% of white males, 34% of black males, 34% of Hispanic males, and 40% of Asian males. Injecting drug use represented 7% of all the male cases, and 6% of white and 10% of black. Men who have sex with men and use injecting drugs (MSM/IDU), represented 4% of all the male cases, with the percentage of MSM/IDU among whites at 5% and 6% for blacks. Caution must be used when interpreting these numbers since the number of cases is so small. The NIR percentage was high in all race/ethnicity groups, making interpretation of risk behaviors difficult.

Table 14: Male adult/adolescent HIV/AIDS diagnoses, Nebraska, by risk exposure and race/ethnicity, 2004-2006

			Not Hispanic or Latino									
	Hispanic or Latino		White alone		Black Alone		American Indian/ Alaska Native alone		Asian/ Native Hawaiian/ Pacific Islander Alone		Total	
Risk Behavior	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Male to male sex	14	34	82	65	21	34	0	0	2	40	119	51
Injection drug use	2	5	8	6	6	10	0	0	0	0	16	7
Male-to-male sex and injection drug use	0	0	6	5	4	6	0	0	0	0	10	4
Heterosexual contact	2	5	2	2	5	8	0	0	0	0	9	4
Transfusion	1	2	0	0	0	0	0	0	0	0	1	0
No identified risk	22	54	29	23	26	42	0	0	3	60	80	34
Total	41	100	127	100	62	100	0	0	5	100	235	100
Source. Nebraska HIV Surveillance Program												

Table 15 describes female adult/adolescent (13 years of age and older) HIV/AIDS cases by risk behaviors and race/ethnicity. The primary mode of exposure for females was heterosexual contact across all race/ethnic groups, representing 54% of whites, 70% of blacks, 43% of Hispanics, 100% of Native Americans, and 40% of Asian/Pacific Islanders. Injecting drug use occurred mainly in white and Hispanic females, 21% and 14% respectively. Caution must be used when interpreting these numbers since the number of cases is so small. It is also difficult because of the high numbers of NIRs in each race/ethnic group, ranging from 60% of Asian/Pacific Islanders to 21% of Blacks.

Table 15: Female adult/adolescent HIV/AIDS diagnoses, Nebraska, by risk behavior and race/ethnicity, 2004-2006

			Not Hispanic or Latino									
	Hispanic or Latino		White alone		Black alone		American Indian/ Alaska Native alone		Asian/ Native Hawaiian/ Pacific Islander alone		Total	
Risk Behavior	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Injection drug use	1	14	5	21	1	2	0	0	0	0	7	8
Heterosexual contact	3	43	13	54	33	70	3	100	2	40	54	63
Transfusion	0	0	0	0	3	6	0	0	0	0	3	3
No identified risk	3	43	6	25	10	21	0	0	3	60	22	26
Total	7	100	24	100	47	100	3	100	5	100	86	100
Source. Nebraska HIV Surveillance Program												

Country of Birth

Although the vast majority of HIV/AIDS cases in Nebraska are among individuals born in the U.S., a consistent number of cases have been reported annually among individuals born outside of the U.S. Foreign-born persons with HIV/AIDS are included in U.S. case counts once they come to this country. A summary of the number of cases by origin diagnosed between 2004 and 2006 is provided below in Table 16. For these purposes, those with an unknown country of birth, or when no country was noted on the case report, are assumed to be a U.S. born case. This box is more likely to be marked on the case report if the person is known to have arrived in this country fairly recently.

Foreign-born cases represented 28% of all the HIV/AIDS cases diagnosed between 2004 and 2006. Of the foreign-born, over half (54%) come from an African country, while those from Mexico/Central and South American countries represent 34%.

By gender, 60% of the foreign-born cases were male and 40% were female. Of the males, 41% were from Africa, and 51% were from Mexico/Central and South American countries. Females on the other hand, were primarily from Africa (76%) while only 11% were from Central and South American countries.

Table 16: HIV/AIDS Diagnoses in Nebraska by Country of Birth, 2004-2006

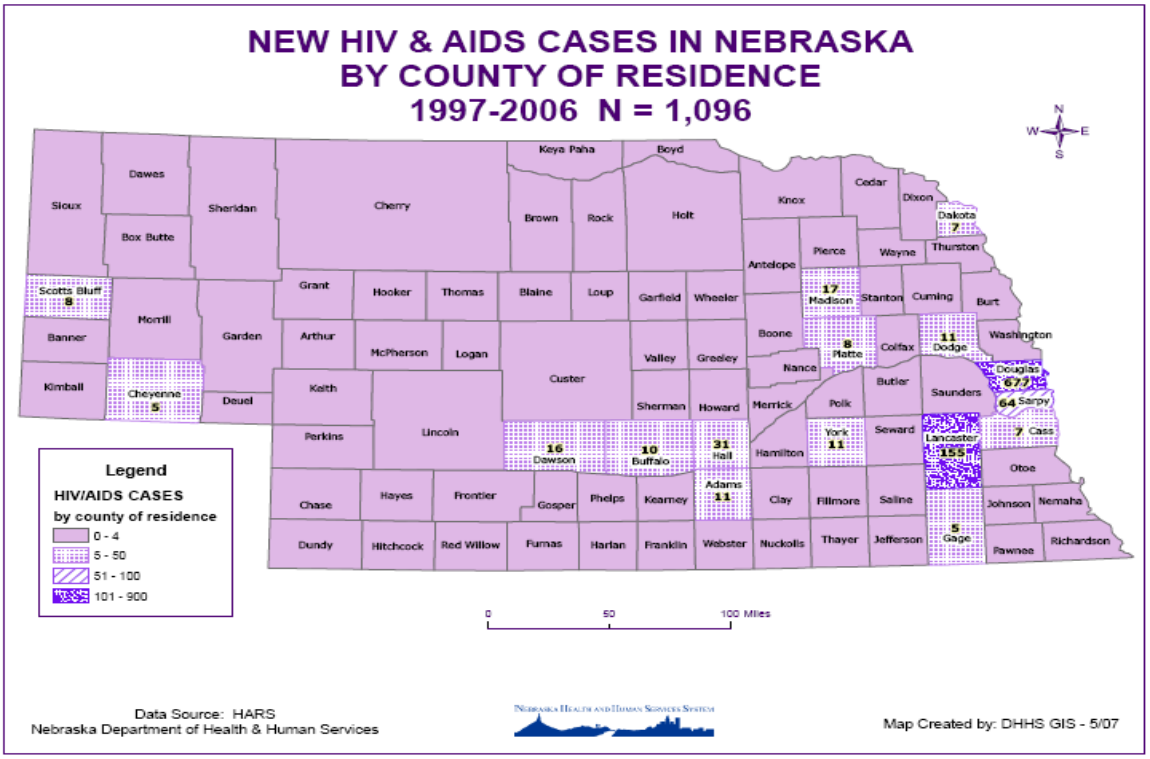
	#	%
US born/US dependency	238	72%
Foreign born total	90	28%
Total	328	100%
- Africa	49	54%
- Mexico/Central/South America	31	34%
- Asia/Other	5	6%
- Not specified	5	6%
Total	90	100%
Source: Nebraska HIV Surveillance Program		

HIV/AIDS BY RESIDENCE AT HIV DIAGNOSIS IN NEBRASKA

The map shown below in Map 2 demonstrates the variation in total number of HIV and AIDS cases reported in each county. Numbers are given in ranges to highlight the difference as well as to protect confidentiality of the persons reported

Most of the 1096 HIV/AIDS cases newly diagnosed between 1997 and 2006, resided in the eastern part of the state, more specifically in Douglas, Lancaster and Sarpy counties, where most of the population is concentrated.

Map 2:



Douglas County had the highest number of newly diagnosed HIV and AIDS cases in the state at 677. Lancaster County was next highest with 155 cases reported. Sarpy County had 64 cases reported; Hall County had 31 cases; thirteen counties had between 5 and 50 cases reported, while seventy-one counties in Nebraska had less than 5 cases reported.

- Douglas and Lancaster counties, the two most populous counties in Nebraska with 41.7% of the total population of the state, reported 76% of all HIV/AIDS cases.
- Douglas and Sarpy counties (the Omaha metro area) represent 34% of Nebraska's population and 68% of newly diagnosed HIV/AIDS cases.

- Douglas County by itself represents 62% of all the cases, while making up 27% of the state's population.

- Lancaster County comprises 14.6% of the state's population, and accounts for 14% of the newly diagnosed HIV/AIDS cases.

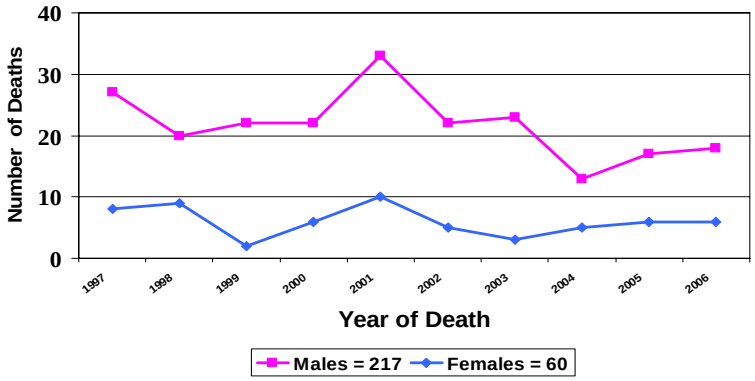
Note: The number of cases by county may not accurately reflect the geographical distribution of where persons with HIV and AIDS are currently residing, because the only information received from case reports is the address at the time of the HIV or AIDS diagnosis. Persons can relocate in-state as well as move out of state, and this would not be reflected in these numbers. These numbers also do not include persons who were diagnosed elsewhere and moved into the state and are receiving care and treatment here in Nebraska.

HIV/AIDS-Related Mortality

Deaths due to HIV/AIDS are obtained from health care providers, the HHSS Office of Vital Records, and other states HIV/AIDS surveillance programs. From 1983 to 2006, there have been 780 deaths among persons diagnosed with HIV/AIDS in Nebraska. There were more deaths among males with HIV/AIDS than there were among females, but this is to be expected since the number of incident cases is much greater among males than females. Figure 13 below describes the trends in the number of deaths per year by gender for HIV/AIDS cases that died between 1997 and 2006. HIV/AIDS deaths among males have declined from 27 cases in 1997 to 18 cases in 2006, except for an increase in 2001, when 32 deaths occurred. Deaths among females with HIV/AIDS have varied between 2 and 10 cases per year, and have remained stable at 6 deaths per year for the last 3 years.

Figure 13:

Number of HIV/AIDS Deaths by Gender,
Nebraska, 1997 – 2006
N = 277

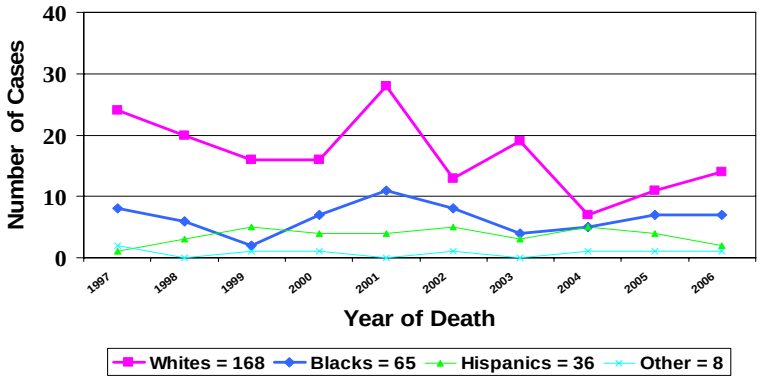


Source: Nebraska HIV/AIDS Reporting System

Figure 14 demonstrates the trends in HIV/AIDS-related deaths by race/ethnicity. Most deaths were among whites, while blacks made up a smaller proportion. Whites experienced a significant decline in deaths between 1997 and 2006, falling from 24 deaths in 1997 to 14 deaths in 2006, except for a spike in deaths in 2001. The number of HIV-related deaths for blacks has varied from 2 cases in 1999 to 11 cases in 2001, when blacks experienced the same increase in deaths as whites, though to a smaller degree. HIV-related deaths for Hispanics and Others (representing Native American and Asian/Pacific islanders have remained low, ranging from 5 cases to 1 case between 1997 and 2006.

Figure 14:

Number of HIV/AIDS Deaths by Race/Ethnicity , Nebraska, 1997 – 2006
N = 277



Source: Nebraska HIV/AIDS Reporting System

Deaths related to HIV infection are not listed in the top 10 leading causes of death in Nebraska in 2004, according to the Department of Vital Records. HIV-related deaths are also not reported as one of the top 10 leading causes of death for males or females in Nebraska.

HIV Prevalence - Persons Living with AIDS

Prevalence is defined as the number of cases living at a certain point in time. The decrease in the number of deaths among persons with AIDS, combined with an increase in the number of new cases of HIV/AIDS, has contributed to an increase in the prevalence of HIV disease in Nebraska (i.e., the number of persons living with HIV disease). The total number of persons known to be living with HIV/AIDS (PLWHA) was 1,397 as of December 31, 2006. Table 19 below compares persons who were newly diagnosed with HIV/AIDS between 2004 and 2006 to those who are living with HIV/AIDS in Nebraska, as of December 31, 2006.

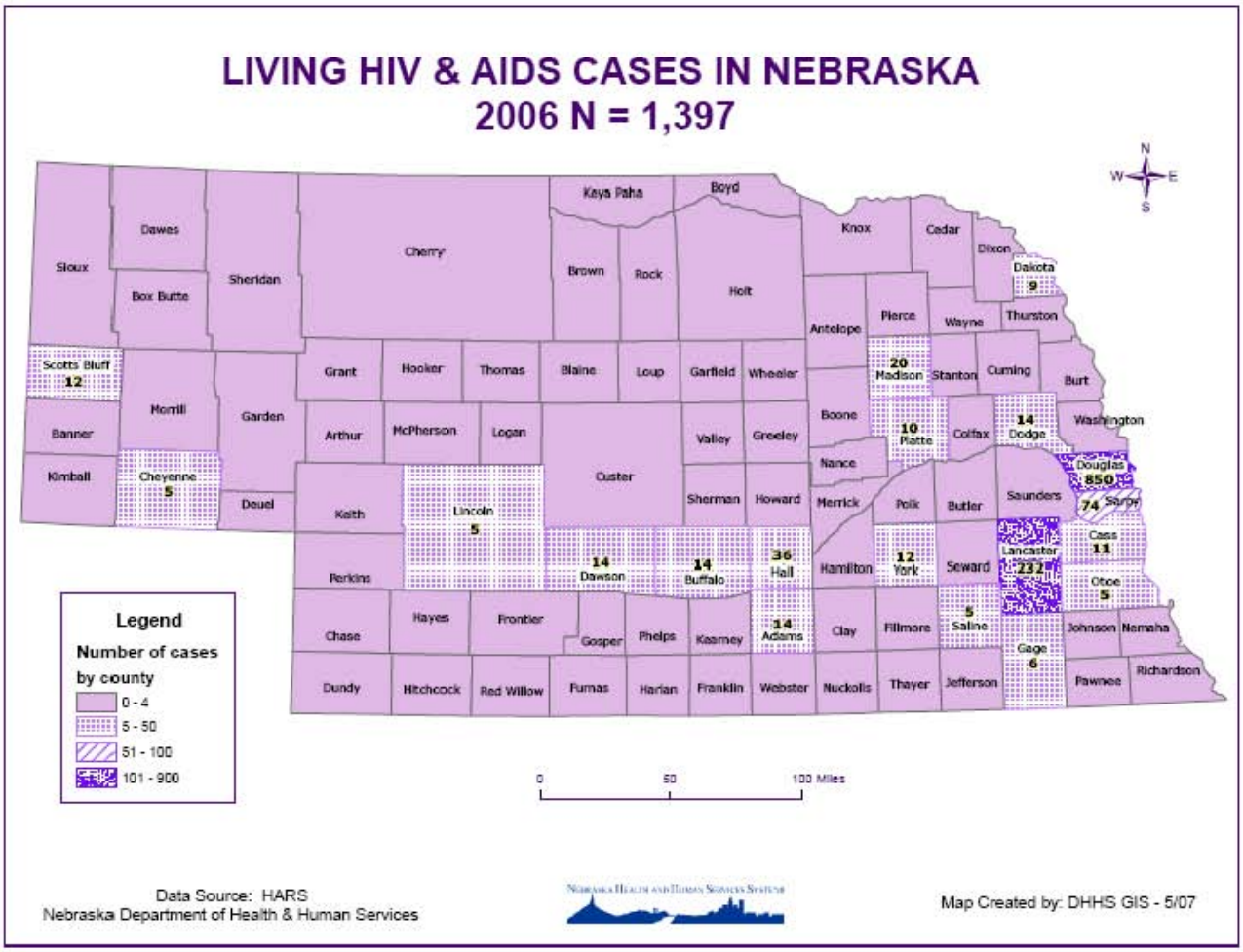
Males constitute the majority of newly diagnosed cases (73%), as well as those living with HIV/AIDS (77%). Whites constitute the largest racial group for both newly diagnosed cases and those living with HIV/AIDS (46% and 56% respectively). Blacks continue to be disproportionably impacted by the epidemic. Although the percentage of Blacks in the total population is 4%, they represent 35% of newly diagnosed cases as well as 27% of prevalent cases. The majority (59.7%) of the PLWHA are currently 25 to 44 years of age, which is similar to newly diagnosed cases of HIV/AIDS. Prevalent cases, however, are more likely to be older, over 44 years of age, than newly diagnosed cases. MSM is the predominate risk behaviors (44%) of PLWHA, as well as those newly diagnosed with HIV/AIDS. Injecting drug use is higher when combined with MSM/IDU among PLWHA, 16%, compared to 10% of the newly diagnosed cases. NIRs are much less among prevalent cases than among newly diagnosed cases, 17.7% and 30.5%, respectively.

Table 17: Characteristics of persons with HIV/AIDS, Nebraska, Data through 2006

	Persons with new HIV/AIDS diagnosis, 2004 to 2006		Persons Presumed to be Living with HIV/AIDS as of 12/06	
Characteristic	**#**	**%**	**#**	**%**
GENDER				
Male	239	72.9	1075	77.0
Female	89	21.0	322	21.0
Total	328	100.0	1397	100.0
RACE/ETHNICITY				
White	151	46.0	783	56.0
Black	114	34.8	380	27.2
Hispanic	48	14.6	180	12.9
Asian/ Pacific Islander	12	3.7	25	1.8
American Indian/AK Native	3	0.9	27	1.9
Multi-race	0	0.0	2	0.1
Total	328	100.0	1397	100.0
AGE*				
0-4	5	1.5	5	0.4
5--12	2	0.0	7	0.5
13-24	43	9.7	42	3
25-44	225	72.1	834	59.7
45-64	51	16.8	480	34.4
65(+)	2	1.1	29	2
Total	328	100.0	1397	100
	* Age at diagnosis is used for new HIV/AIDS cases. For living HIV/ AIDS cases, the age group used is the current age.			
Risk behaviors				
MSM	119	36.3	612	43.8
IDU	23	7.0	137	9.8
MSM/IDU	10	3.0	89	6.4
Heterosexual contact	65	19.8	271	19.4
Adult Hemophilia	0	0.0	9	0.6
Transfusion	4	1.2	19	1.4
Pediatric	7	2.1	22	1.6
No Risk Reported (NIR)	100	30.5	238	17.0
Total	328	100.0	1397	100.0

The majority of persons diagnosed with HIV/AIDS (77%) live in Douglas and Lancaster Counties; Douglas County had 61%; and Lancaster County had 17%. However, 54% of Nebraska's 93 counties have been affected by HIV/AIDS. See Map 3..

Map 3:



Estimated Numbers of Persons Living with HIV/AIDS in Nebraska

The combination of living HIV and AIDS cases that have been reported provides a minimum estimate of HIV prevalence in Nebraska. These numbers do not include persons with HIV infection who have not been tested and are unaware of their status, and it does not include those persons with HIV who have tested anonymously, nor those who have died. It also does not include those who were diagnosed in another state and who are now living in Nebraska and receiving treatment for HIV.

The prevalence estimation method used here allows only a gross estimate of the number of infected persons living in Nebraska. The method utilized here is based on cases already reported and extrapolated from the national data. The Centers for Disease Control and Prevention (CDC) estimates that nationwide the total number of persons living with HIV/AIDS is between 1,039,000 to 1,185,000. The actual numbers of persons living with HIV/AIDS, based on cases reported nationwide to CDC, is 640,643. Since only 38 states have HIV reporting by name, and some of these states only recently began HIV reporting, national HIV estimates are likely to be low. Using the estimation procedure provided by CDC, and adjusting the data for those unreported and undiagnosed persons, the HIV/AIDS prevalence in Nebraska is **2,182 to 2,489**. (See Table 20 below.) Therefore, based upon the prevalence estimate and the known number of HIV/AIDS cases as of December 31, 2005, one can infer that between 36% to 44% of persons with HIV/AIDS and residing in Nebraska are unaware of their HIV infection. Nationally, the CDC estimates that between 24% and 27% of persons who are infected with HIV/AIDS are unaware of their infection.

Although the estimation of HIV prevalence is Nebraska yields an imprecise estimate, it is done to emphasize that the number of persons currently infected is much larger that the number of persons reported with HIV or AIDS, because not all persons currently infected with HIV have been tested. Some HIV infected persons seek testing only when they are known to be exposed or have become sick. The prevalence estimate can be useful to provide health care planners and educators information on the burden of HIV disease in Nebraska.

Table 18: Calculation of Prevalence Estimate of HIV/AIDS in Nebraska, 2006

# of known living HIV/AIDS cases in Nebraska	1,397
# of known living HIV/AIDS cases in U.S.	640,643
Proportion of persons living in NE compared to U.S.	0.0021
Lower estimate of U.S. HIV prevalence	1,039,000
Upper estimate of U.S. HIV prevalence	1,185,000
HIV Prevalence in Nebraska, lower estimate	2,182
HIV Prevalence in Nebraska, upper estimate	2,489

Section 3: Indicators of risk for HIV infection in Nebraska

Persons most likely to become infected with HIV are those who engage in high-risk behaviors with persons that live in communities with high HIV prevalence. Although Nebraska is considered to be a low prevalence state in terms of HIV, the following section examines the trends and characteristics of populations practicing high-risk behaviors in Nebraska, to help community planning groups understand the varying risks for HIV infection in Nebraska. The primary focus of this section is on two high-risk populations: injection drug users and heterosexuals, even though Men Who have Sex with Men (MSM) is the majority risk group in Nebraska. There are no external data sources for MSM in Nebraska who are at risk for HIV infection, but have not yet been diagnosed with HIV.

This section examines several measures of risk behavior in groups most at risk for acquiring HIV infection. The following measures of risk behavior are available in Nebraska to provide important information on factors that may indirectly affect risk for acquiring or transmitting HIV infection:

- Substance abuse
- Treatment Episode Data Set
- Binge drinking
- Hepatitis C
- Sexually transmitted disease (STD) rates
- Unintended pregnancy
- Attitudes towards HIV/AIDS
- HIV testing

To examine these behaviors, the following data sources were used:

National Household Survey on Drug Use & Health (NHSDUH)/National Household Survey on Drug Abuse (NHSDA)

The 2003-2004 National Household Survey on Drug Use and Health, formerly called the National Household Survey on Drug Abuse, was conducted by the Department of Health and Human Services: Substance Abuse and Mental Health Services Administration (SAMHSA) Office of Applied Studies. This data is from an ongoing survey of the civilian, noninstitutionalized population of the United States aged 12 years or older. Approximately 136,100 persons were interviewed in 2004-2005.

Behavioral Risk Factor Surveillance System (BRFSS)

The Nebraska Behavioral Risk Factor Surveillance System Report 2001-2005 was conducted by the Nebraska Risk Factor Surveillance Program, Nebraska Department of Health and Human Services. BRFSS has been conducting surveys annually since 1986 in order to collect data on the prevalence of major health risk factors among adults residing in the state. The Nebraska BRFSSS uses guidelines and reports survey results to CDC to be compared with those of all the other states and the nation. The 2001-2005 report results are based on telephone surveys with 30,225 randomly selected Nebraska residents aged 18 and older.

Youth Risk Behavior Survey (YRBS)

To monitor priority health-risk behaviors among youth and young adults, CDC developed the Youth Risk Behavioral Surveillance System (YRBSS). The YRBS is a statewide survey of a sample of youth in grades 9-12 enrolled in public schools across Nebraska. Since 1991 Nebraska has conducted the survey biannually in the spring of odd years. Survey procedures were designed to protect the privacy of students by allowing for anonymity and voluntary participation. Local parental permission procedures were followed before survey administration.

Sixty high schools with students in grades 9-12 were randomly selected in the spring of 2005 from all Nebraska public schools with students in these grades. Seventy-two percent of these schools agreed to participate in the YRBS, with 93% (3,755) of the students participating, resulting in an overall response rate of 67%. Statistically, the results are weighted to be representative of all Nebraska public school students in grades 9-12. These survey results provide an important description of priority health risk behaviors.

Nebraska Pregnancy Risk Assessment Monitoring System (NE PRAMS)

PRAMS is an ongoing, population-based surveillance system designed to identify, monitor and provide high quality, timely data on selected maternal health behaviors and experiences before, during, and after pregnancy among women who have had a live birth. Nebraska is one of 32 states and one city who formally participate in the CDC PRAMS initiative.

The 2004 data is based on findings from a random sample of 2,432 Nebraska resident women who had a live birth in the year 2004; 80% of women selected to participate responded. Nebraska data is not available for African American or Native American populations because the response rate for each of the two racial groups was below the established guideline set by the Centers for Disease Control (CDC) of 70% for calculation of weighted numbers representative of each population. The NE PRAMS survey has 82 questions covering a range of topics.

NHHSS Sexually Transmitted Disease (STD) Program

STDs are among the most frequently reported infectious diseases in Nebraska. The goal of the NDHHS Sexually Transmitted Disease Program is to control and prevent sexually transmitted diseases and reduce the burden and cost of these infections. The program assists state, local, and community efforts to help prevent the spread of Chlamydia, gonorrhea, syphilis, hepatitis, and other STDs**.**

Treatment Episode Data Set (TEDS)

The Treatment Episode Data Set (TEDS) provides information on the demographic and substance abuse characteristics from the 1.9 million annual admissions to treatment for abuse of alcohol and drugs in facilities that report to individual State administrative data systems. TEDS is an admission-based system. TEDS admissions do not represent individuals, i.e., an individual admitted to treatment twice within a calendar year would be counted as two admissions.

1. Injecting Drug and Other Substance Use

National Survey on Drug Use and Health (NHSDA)

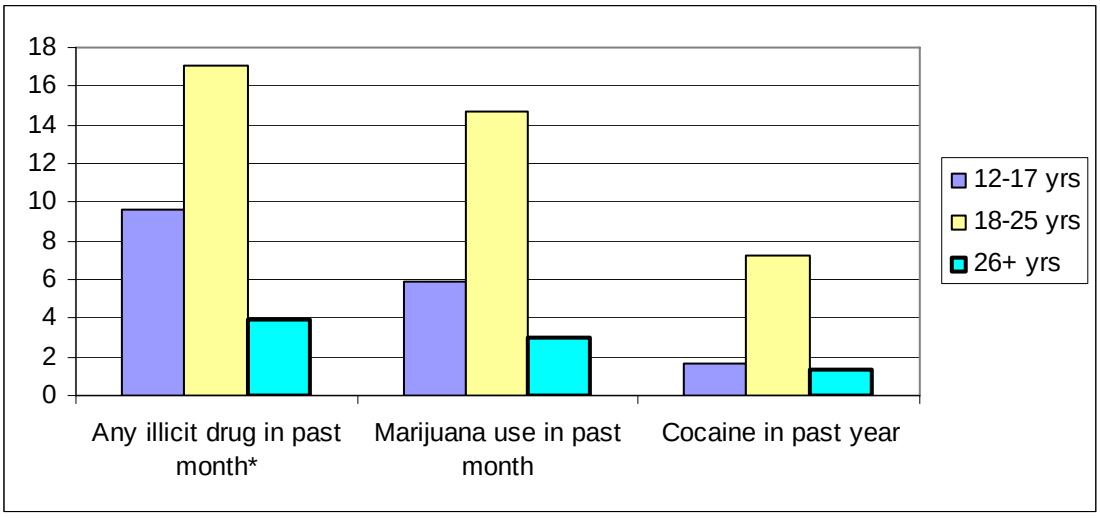
Table 21 provides data for the general population in Nebraska interviewed for the 2004-2005 NHSDAS. Seven percent of persons 12 year of age and older reported using an illicit drug at least once during the past month. Illicit drugs included marijuana/hashish, cocaine (including crack), heroin, inhalants, or any prescription-type psychotherapeutic used nonmedically. Regardless of type of illicit drug, drug use was highest among person 18-25 years of age with 17% reporting that they had used illicit drugs in the past month, followed by 9.6% of the younger age group (12-17 years of age), and 4% the older age group (26+ years). Figure 15 compares this data by age group.

Table 19 : Selected measures of substance abuse for persons aged 12 years and older, by age, Nebraska, 2004-2005

	Age Group			
Measure	**12-17**	**18-25**	**26+**	**12 or older**
Percentages reporting past month use of any illicit drug*	9.58	17.03	3.98	6.47
Percentages reporting past moth use of marijuana	5.88	14.73	3.02	5.02
Percentages reporting past year use of cocaine	1.62	7.22	1.31	2.21
Percentages reporting past month use of alcohol	18.63	71.30	57.61	55.60
Percentages reporting past month binge alcohol use	13.05	51.31	24.41	27.17
Percentages reporting perceptions of great risk of having five or more drinks of an alcoholic beverage once or twice a week	35.03	23.50	38.11	35.65
Percentages reporting past year dependence on or abuse of any illicit drug or alcohol	9.38	26.12	7.55	10.45
Percentages reporting needing but not receiving treatment for illicit drug use in the past year	4.07	6.58	1.17	2.26

Source: 2004-2005 National Survey on Drug use and Health, US Department of Health and Human Services: Substance Abuse and Mental Health Services Administration Office of Applied Studies
**Illicit drugs included marijuana/hashish, cocaine (including crack), heroin, inhalants, or any prescription-type psychotherapeutic used nonmedically.*

Figure 15: Percentage reporting drug use in last month for selected measures of substance abuse by age group, Nebraska, 2004-2005



Source: 2004 & 2005 National Survey on Drug Use and Health, US Department of Health and Human Services: Substance Abuse and Mental Health Services Administration- Office of Applied Studies

** Illicit drugs included marijuana/hashish, cocaine (including crack), heroin, inhalants, or any prescription-type psychotherapeutic used nonmedically.*

Treatment Episode Data Set (TEDS)

TEDS is a compilation of data on the demographic characteristics and substance abuse problems of those admitted for substance abuse treatment. TEDS data comes primarily from facilities that receive some public funding. The goal of TEDS is to collect information on complete treatment episodes; therefore SAMHSA has expanded the TEDS system to include discharge data that can be linked to admissions data. Currently about 20 States, including Nebraska, submit discharge data.

From 2001 through 2005, the number of drug-related treatment admissions to publicly funded facilities in Nebraska varied from drug to drug with increases reported for methamphetamine and marijuana and decreases reported for cocaine and heroin. The TEDS data in Table 22 indicates that methamphetamine-related treatment admissions almost doubled during the five year time period, reflecting the increasing problem methamphetamines poses to Nebraska.

Table 20: Drug Related Treatment Admissions to Publicly Funded Facilities in Nebraska, 2001-2005

Year	Methamphetamine	Cocaine	Marijuana	Heroin
2001	1,294	757	862	11
2002	1,485	713	774	13
2003	1,722	680	861	8
2004	2,064	735	1,057	NR
2005	2,060	666	1,052	NR

Source: Nebraska Treatment Episode Data Set

Youth Risk Behavior Survey (YRBS)

Juvenile drug abuse is a concern in Nebraska. The 2005 Youth Risk Behavior Survey reported that, of 3,755 high school students who responded in Nebraska, 23.9% of males and 20% of females reported that they were offered, sold, or given an illegal drug on school property during the past 12 months.

According to the 2005 CDC "Youth Risk Behavior Survey 9-12th Grade" Nebraska has had a 1.1% increase in the use of illegal intravenous drug use since 2003 and is now 1% above the national average. With 68% of all new Hepatitis C cases and 31% of all new HIV cases being related to the use of illegal injectable drugs this is an alarming trend for the youth of Nebraska.

Table 21: Comparison of Selected Behavior Risk in Nebraska to U.S.

	U.S.		Nebraska	
Behavior Risk	**2003**	**2005**	**2003**	**2005**
Ever Injected Illegal Drugs	3.20%	2.10%	2.00%	3.10%
Ever Used Heroin	3.30%	2.40%	2.70%	3.10%
Source: Nebraska Youth Risk Behavior Survey 2003-2005				

Hepatitis C and HIV Co-Infection

The CDC has estimated that one out of every 3 people infected with the Human Immunodeficiency Virus (HIV) is also infected with the Hepatitis C virus (HCV). The presence of both the Hepatitis C virus and HIV in a client can impact both the treatment and management of both HCV and AIDS. Co-infection with the AIDS virus and the Hepatitis C virus has been associated with a more rapid progression to liver disease and an increase risk for cirrhosis of the liver. Liver disease is currently the 7th leading cause of death for Americans age 24-65 yr. Since highly active antiretroviral therapy and prophylaxis treatment for opportunistic infections have increased the life span of AIDS patients, Hepatitis C related liver disease has become a major cause of hospital admissions and death among AIDS patients. Currently Hepatitis C is the leading cause of death for those Americans co-infected with both the HCV and HIV virus.

2004 Nebraska Co-Infection HCV Project

As the HIV and Hepatitis C surveillance programs use different software programs and are unable to talk to each other, in 2004 a demonstration project using both rapid HCV testing and rapid HIV testing was conducted at 3 HIV testing sites in Nebraska. The overall objective of this project was to establish a co-infection rate within Nebraska. As Nebraska has a low incidence rate of HIV, no new cases of HIV were discovered but there was an overall HCV positive rate of 21%. The analysis of the client demographics clearly shows a need for more minority studies with Hepatitis C prevalence.

Analysis of client demographics from this study revealed the following:

- While only 17.7% of those tested were Hispanic 28.5% of all positives were Hispanic
- While only 2.3% of those tested were Native American, 3.5% of all positives were Native American
- While only 1.6% of those tested were African American, 3.5% of all positives were African American

- Women made up 38.3% of those tested and 13.8% of those testing positive
- Men made up 61.7% of those tested and 86.2% of those testing positive

Nebraska Hepatitis C Trends

Based on the CDC estimates and Nebraska's 2001 census statistically there are an estimated 31,307 Nebraskan's currently infected with the Hepatitis C virus. As of December 31, 2003 the Nebraska carries only 10,375 on the state epidemiology Hepatitis C roster. The Nebraska Hepatitis C roster does not track client demographics, but a statistical analysis can be done by applying national statistics to Nebraska's population. Table 24 provides information on Hepatitis C, using the 2005 estimated census for Nebraska and the national trends for high risk populations.

Table 22:

Hepatitis C in Nebraska, 2005			
	#	National Average % HCV positive	Statistical # NE Positive
NE 2005 Population Estimate	1,706,976	1.8 %	30,725
NE HCV State Registry Total as of December 31, 2005			13,984
Estimated un-diagnosed Nebraska HCV cases			16,741
HCV Known High Risk Populations Statistics:			
2005 Substance Abuse Treatment Admissions	14,470	50 %	7,235
2005 Nebraska Veteran Population 12.2%	208,251	7.5 %	15,619
2005 Nebraska Inmate Population	4,928	20 %	986
2005 Nebraska Living with HIV/AIDS	1,285	33 %	424
Statistical Positives for Nebraska High Risk Populations			24,264
Source: Nebraska Hepatitis Program			

Behavioral Risk Factor Surveillance System Survey (BRFSS)

Binge drinking is defined as having five or more drinks of alcohol (beer, wine, wine coolers, cocktails, or liquor) on an occasion, one or more times during the past 30 days.

As shown in Table 25, among respondents aged 18 and older in 2005, a higher percentage of men than women reported binge drinking. Young men were more likely than young women to report binge drinking. More than one-third of the male respondents aged 18 through 24 (38%) had participated in binge drinking in the past month, compared to 26% of women in this aged group.

The proportion of respondents who reported binge drinking increased by educational attainment. Eleven percent of those with less than a high school education reported drinking five or more drinks in the past month, compared to 21% of those with some college education. The proportion of binge drinking was similar across all income levels.

Table 23: Prevalence of binge drinking by gender, age group, education and income, aged 18 years and older in Nebraska, 2005

Overall Rate	17%
Male	26%
Female	10%
Gender and Age Group	
Male	
18-24	38%
25-34	38%
35-44	30%
45-54	21%
55-64	15%
65-74	6%
Female	
18-24	26%
25-34	13%
35-44	11%
45-54	7%
55-64	3%
65-74	1%
Education	
Less than HS	11%
HS Graduate/GED	18%
Some College/Tech	21%
College Grad	15%
Income	
<$20,000	16%
$20,000 = $34,999	17%
$35,000 - $49,999	18%
$50,000 +	20%

Source: Nebraska Health & Human Services System: BRFSS

Note: Five or more drinks of alcohol on at least one occasion during the last month for men and four or more drinks for women.

2. Heterosexual contact

Behavioral Risk Factor Survey (BRFSS)

According to results of the 2004 BRFSS, women aged 18-44 were asked whether or not they or their partner were using any kind of birth control at the time of the survey. Birth control was defined for them as "having your tubes tied, vasectomy, and the pill, condoms, diaphragm, foam, rhythm, Norplant, shots (Depo-Provera) or any other way to keep from getting pregnant."

Seven out of every ten respondents in this age group (70%) said they were currently using a form of birth control (Table 26). Sixteen percent (16%) reported that they were not currently using any form of birth control to prevent pregnancy. Fourteen percent (14%) reported they did not have a regular partner or had a same sex partner. One (1%) percent of respondents didn't know if they were using birth control or refused to answer the question.

Of the women who reported that they or their partner were currently using birth control, 14% percent of respondents reported using condoms to prevent pregnancy.

Table 24: Use of birth control for women age 18-44, Nebraska, 2004

Using birth control	70%
Not sexually active	14%
Not using birth control and at risk for unintended pregnancy	16%
Don't know if using birth control or did not answer	1%
Source: Nebraska Health & Human Services System: BRFSS	

Youth Risk Behavior Survey

Results of the 2005 YRBS are shown in Table 27. In Nebraska the percentage of high school students who ever had sexual intercourse during their lifetime was 41%, compared to 47% nationwide. The percentage of Nebraska students who had sexual intercourse for the first time before the age of 13 years was 4%, compared to 6% of students nationwide. Approximately one third (33%) of students nationwide reported having had sexual intercourse during the three months preceding the survey (i.e., currently sexually active), as compared to 30% of Nebraska students.

Of the currently sexually active students in Nebraska, 24% reported they had drunk alcohol or used drugs before their last sexual intercourse, compared to 23% of students nationwide. Finally, 88% of students nationwide had been taught in school about AIDS or HIV infection, as compared to 85% of Nebraska students.

Table 25: Comparison of Selected Risk Behaviors, Nebraska to U.S.

	Nebraska	United States
Ever had sexual intercourse	40.8%	46.8%
First sexual intercourse <13 years old	4.4%	6.2%
>4 sex partners in lifetime	11.9%	14.3%
Currently sexually active	29.9%	33.9%
Condom use during last sexual intercourse	61.6%	62.8%
Birth control use during last sexual intercourse	21.6%	17.6%
Alcohol or drug use before last sexual intercourse	24.0%	23.3%
Had been pregnant or impregnated someone	3.4%	4.2%
Taught about AIDS and/or HIV infection in school	85.4%	87.9%
Source: 2005 Youth Risk Behavior Survey		

Condom Use during the Last Sexual Intercourse

Among the currently sexually active students nationwide, 63% reported that either they or their partner had used a condom during the last sexual intercourse. Overall, the prevalence of having used a condom during the last sexual intercourse was higher among male (70%) than female (56%) students. In Nebraska, among students who reported ever having sexual intercourse, 62% reported using a condom the last time they had sexual intercourse, which is almost equal to students nationwide. Among Nebraska students, 38% did not use a condom during the last sexual intercourse and 78% did not use birth control pills before their last sexual intercourse.

Four or More Partners

Nationwide, 14% of high school students had sexual intercourse during their lifetime with four or more sex partners. In Nebraska, the percentage of high school students who have had sexual intercourse with four or more people during their lifetime was 12%. Overall, the prevalence of having had more than four sex partners was higher among male (17%) than female (12%) students.

Taught in School about AIDS or HIV Infection

Nationwide, 88% of students reported having been taught in school about AIDS or HIV infection as compared to 85% of Nebraska students.

Nebraska Pregnancy Risk Assessment Monitoring System (PRAMS)

Pregnancy is considered to be unintended when the woman did not want to be pregnant (unwanted) or desired a later pregnancy (mistimed). In 2004, 43% of the women surveyed, who had given birth in 2004, reported that they wanted to be pregnant later (34%) or did not want to become pregnant then or at any time in the future (9%) (Table 28).

Table 26: Pregnancy Intention

Wanted to become pregnant sooner	17%
Wanted to become pregnant then	39%
Wanted to become pregnant later	34%
Did not want to become pregnant then or at any time in the future	9%
No response	1%
Total	100%
Source: PRAMS 2004, Nebraska	

Overall, 73% of women surveyed, who gave birth in 2004, reported that they had been talked to about HIV testing during their pregnancy. Eighty two percent of Hispanic mothers, 76% Asian American and 70% of White mothers reported being talked to during their pregnancy about HIV testing (Table 29). (Note: PRAMS data is not available for African American or Native American populations.)

Table 27: Talked to About HIV Testing, 2004 PRAMS, Nebraska

	Overall	Caucasian	Asian American	Hispanic
Yes	73	70	76	82
No	27	30	24	18
Total	100	100	100	100
Source: 2004 PRAMS, Nebraska				

Overall, 60% of women surveyed, who gave birth in 2004, reported that they had been tested for HIV during their pregnancy. Seventy nine percent of Hispanic mothers, 70% of Asian American and 55% of Caucasian mothers report that they were tested for HIV during their pregnancy (Table 30).

Table 28: Tested for HIV,

	Overall	Caucasian	Asian American	Hispanic
Yes	60	55	70	79
No	40	45	30	21
Total	100	100	100	100
Source: 2004 PRAMS, Nebraska				

Sexually Transmitted Diseases (STD)

STD Surveillance data provides information that may help identify the potential occurrence of high-risk heterosexual behavior. While STD rates may reflect unsafe sexual behavior, they do not necessarily correlate with HIV infection. National data suggest that syphilis rates, especially when related to crack cocaine use or the exchange of sex for drugs, may be more closely associated with HIV risk than either gonorrhea or Chlamydia. However, the presence of non-ulcerative STDs, such as Chlamydia and gonorrhea, can facilitate the transmission of HIV. If you have gonorrhea or Chlamydia, you have a five times greater chance of contracting HIV, and if you have syphilis, you have a 100 times greater chance of contracting HIV.

In Nebraska the STDs Chlamydia, gonorrhea, primary/secondary syphilis, early latent syphilis and genital herpes are reportable diseases. From 2001 to 2005 the total number of STDs reported increased from 5,177 to 7,477 cases. The incidence rate for STDs also increased from 302.5 per 100,000 population in 2001 to 427.9 per 100,000 population in 2005.

Table 31 shown below summarizes STD information from 2001 to 2005. The most frequently reported STD is Chlamydia, with 5,080 cases reported in 2005, followed by gonorrhea with 1,158 cases. Nebraska's rate for Chlamydia was 290.7 per 100,000 in 2005, compared to 332.5 per 100,000 nationally. The gonorrhea rate in Nebraska in 2005 was 66.3 per 100,000, compared to 115.6 per 100,000.

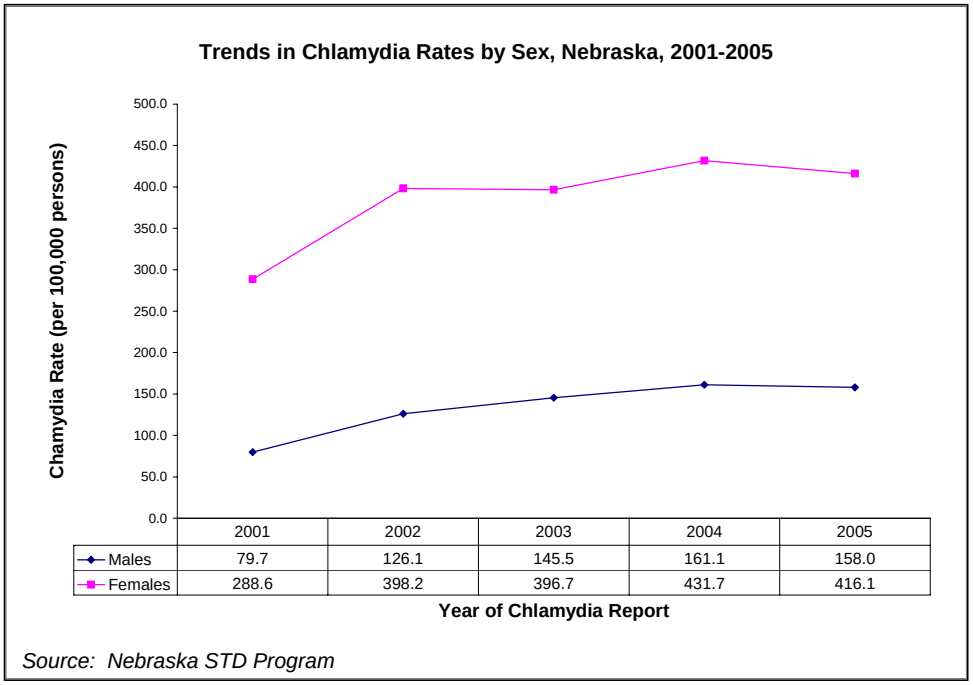
Table 29: Number of Cases and Incidence Rates of STDs, 2001-2005

STD	2001		2002		2003		2004		2005	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Chlamydia	3196	186.8	4595	268.2	4825	279	5241	301.3	5080	290.7
Gonorrhea	1187	69.4	1423	83.1	1664	96.2	1144	65.8	1158	66.3
Primary /Secondary Syphilis	6	0.4	4	0.2	10	0.6	5	0.3	3	0.2
Early Latent Syphilis	0.0	0.0	0.0	0.0	1	0.1	0.0	0.0	2	0.1
Genital Herpes	673	39.3	779	45.5	648	37.5	730	42	986	56.4
All STDs	5177	302.5	6934	404.7	7301	422.2	7381	424.4	7477	427.9
Source: Nebraska STD Program										

Chlamydia

Figure 16 compares the trends in Chlamydia rates by gender. Between 2001 and 2005, Chlamydia rates were consistently and substantially (2.8 to 3.9 times) higher in females as compared to males. Between 2003 and 2005, yearly Chlamydia rates for both males and females varied only slightly.

Figure 16:



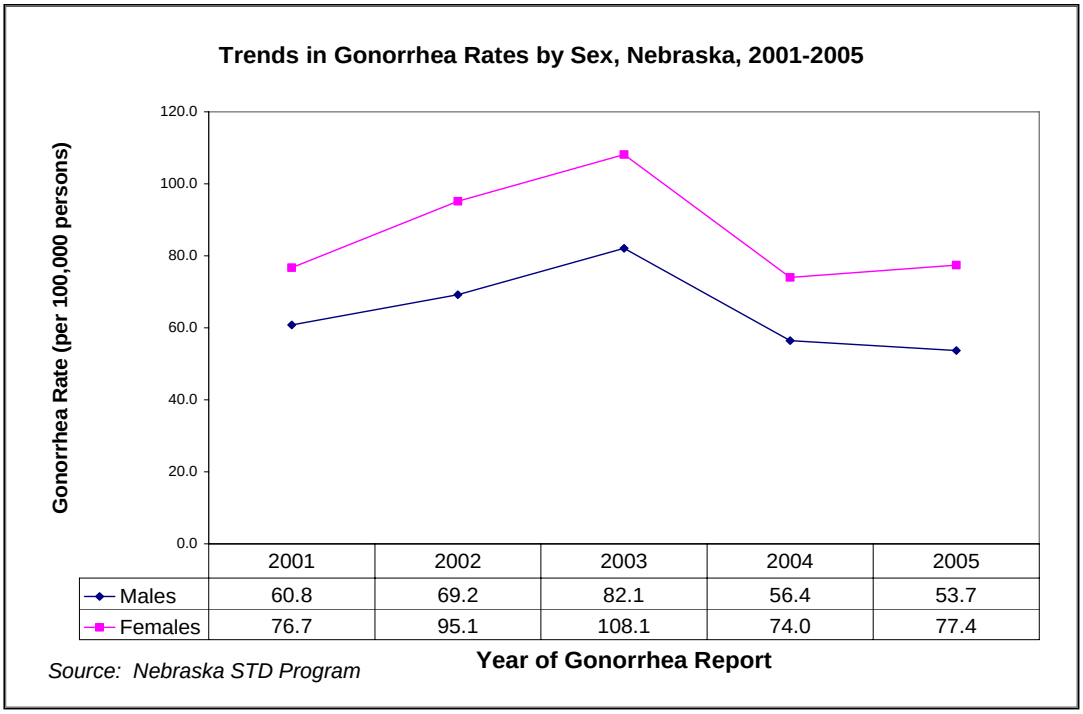
	2001	2002	2003	2004	2005
Males	79.7	126.1	145.5	161.1	158.0
Females	288.6	398.2	396.7	431.7	416.1

Source: Nebraska STD Program

Gonorrhea

In Figure 17, the trends in gonorrhea rates by gender are shown. Between 2001 and 2005, gonorrhea rates were consistently higher in females as compared to males. In comparison, the yearly gonorrhea rate for both males and females remained consistent for 2004 and 2005, but remained lower than the highest rate for the past five years that was recorded in 2003.

Figure 17:



	2001	2002	2003	2004	2005
Males	60.8	69.2	82.1	56.4	53.7
Females	76.7	95.1	108.1	74.0	77.4

Source: Nebraska STD Program

ATTITUDES TOWARDS HIV/AIDS

Behavior Risk Factor Surveillance System (BRFSS)

According to 2004 BRFSS results, approximately one-third of respondents aged 18-64 years (34%) said their blood had been tested for HIV infection (excluding tests they may have had as part of blood donations). Men and women were equally likely to have had their blood tested for this infection (29% and 33%, respectively). One-half (46%) of young adult respondents aged 25-34 had been tested for HIV. (Table 32)

Table 30: Percentages who have ever had their blood tested for HIV by age and gender, aged 18-64

Age	
18-24	31%
25-34	46%
35-44	38%
45-54	22%
55-64	14%
Gender	
Male	29%
Female	33%

Source: Nebraska BRFSS 2004

Reasons for having blood tested for HIV infection varied, but two-thirds (68%) of those tested stated that the HIV test was done as a requirement of some kind (e.g. pregnancy exam, routine checkup, life insurance checkup, etc.). One fifth (17%) of respondents who had been tested cited reasons that may indicate that the respondent felt he or she was at increased risk for contracting HIV (e.g. for own information, possible exposure, illness, etc.). (Table 33)

Table 31: Main reason for most recent HIV blood test, aged 18-64

Routine Reasons	
It was required	25%
Routine medical checkup	23%
Pregnancy	20%
Subtotal	68%
Perceived Risk Reasons	
Just wanted to find out	13%
Someone suggested it	2%
May have been exposed	2%
Worried about passing it on	< 1%
Subtotal	17%
Other reasons	
Other	14%
Don't know	< 1 %
Refused	< 1 %
Subtotal	15%
Source: Nebraska BRFSS, 2004	

HIV Treatment

According to 2004 BRFSS results, of all individuals surveyed in 2004, 98% agreed that treatment exists to live longer with HIV but only 77% agreed that treatment exists to reduce HIV in babies.

HIV Testing

Counseling, Testing, and Referral (CTR) Data

The CTR program has federally funded HIV test sites that are located across Nebraska. These sites do not include physician offices, hospitals, or medical clinics. At these test sites, the client has the option of testing anonymously (by number) or confidentially (by name). (See Appendix A for more details.) The test sites gather risk behavior and demographic information on all individuals seeking HIV testing during pre-test counseling. Test results, when reported, are linked to demographic and risk information. CTR testing data include both HIV positive and negative test results. This permits the measurement of demographics and high risk behaviors, by those testing positive as well as those testing negative.

As shown in Table 34, in 2005, 8,234 tests were done. The percent of positive tests was 0.7%. Two-thirds of the HIV tests performed at counseling and testing sites in Nebraska in 2005 were confidential.

Table 32: Counseling, Testing, & Referral: Summary Statistics, Nebraska, 2005:

	#	%
ALL TESTS	**8234**	**100%**
TYPE OF TEST		
Anonymous	2748	33.0%
Confidential	5445	66.0%
TEST RESULT		
Positive Tests	56	0.7%
Negative Tests	8140	99.0%
Source: Nebraska Counseling, Testing and Referral, 2005		

Note: Numbers do not add up due to incomplete information

Table 35 provides a comprehensive list of results from persons being tested at the counseling and testing sites in 2005. Most of the tests (53.2%) were male, and they were also the majority of the positive tests (71.4%). By race/ethnicity, 45.6% of the positive tests were for whites, and 33.3% were for blacks. The most common age of the positives was 20 to 29 years old (42.9%), followed closely by the 30 to 39 years old at 37.5%. The most common risk behaviors of the positive tests was MSM (41.1%), while heterosexual contact came in a very close second at 39.3%. Interpretation from data collected at counseling and testing sites must be used with caution. The data is not deduplicated, and persons may have been tested and entered into the database more than one.

Table 33: Characteristics of Clients Utilizing Counseling, and Testing Clinics

	TESTS		POSITIVE TESTS	
	#	%	#	%
GENDER				
Male	4,378	53.2%	40	71.4%
Female	3,855	46.8%	16	28.6%
Not Specified	1	0.0%	0	0.0%
Total	8,234	100%	56	100%
RACE/ETHNICITY				
White	4931	59.9%	26	45.6%
Black	1911	23.2%	19	33.3%
Hispanic	893	10.8%	7	12.3%
Asian/ Pacific Islander	150	1.8%	2	3.5%
American Indian/AK Native	190	2.3%	2	3.5%
Other	115	1.4%	1	1.8%
Undetermined	42	0.5%	0	0.0%
Not Specified	2	0.0%	0	0.0%
Total	8234	100.0%	57	100.0%
AGE				
<5	1	0.0%	0	0.0%
5-12	5	0.1%	0	0.0%
13-19	1272	15.4%	1	1.8%
20-29	3884	47.2%	24	42.9%
30-39	1612	19.6%	21	37.5%
40-49	1004	12.2%	8	14.3%
50+	447	5.4%	2	3.6%
Unknown	0	0.0%	0	0.0%
Not Specified	9	0.1%	0	0.0%
Total	8234	100.0%	56	100.0%
RISK BEHAVIORS				
MSM IDU	67	0.8%	2	3.6%
MSM	841	10.2%	23	41.1%
Heterosexual IDU	642	7.8%	1	1.8%
Sex Partner at Risk	4092	49.7%	22	39.3%
Children of HIV+ Women	0	0.0%	0	0.0%
Diagnosed w/STD	519	6.3%	2	3.6%
Sex for drugs/money	26	0.3%	0	0.0%
Sex while using drugs	632	7.7%	3	5.4%
Hem/Blood Recipient	18	0.2%	0	0.0%
Victim Sexual Assault	**52**	0.6%	**0**	0.0%
Health care exposure	30	0.4%	0	0.0%
No acknowledged risk	467	5.7%	0	0.0%
Heterosexual/No other risk	799	9.7%	3	5.4%
Other	29	0.4%	0	0.0%
Not Specified	20	0.2%	0	0.0%
Total	8234	100.0%	56	100.0%
Source: Nebraska Counseling, Testing, and Referral, 2005				

Section 4: Care and Services Utilized by Persons with HIV in Nebraska

Congress authorized the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act in 1990 to provide medical care and medication to people living with HIV/AIDS (PLWHA) who would not otherwise be able to afford them. These funds were reauthorized in 2006 and are now known as the HIV/AIDS Treatment Modernization Act. The HIV/AIDS Bureau of the Health Resources and Services Administration (HRSA), is the largest single source, next to the Medicaid and Medicare programs, of federal funding for HIV/AIDS care for low-income, uninsured, and underinsured individuals. In order to participate in the Nebraska CARE Program during Calendar Year 2006, an individual had to be a resident of Nebraska, have proof of HIV diagnosis or perinatal exposure, and an income less than 200% of the federal poverty level.

Ryan White HIV/AIDS Treatment Modernization Act in Nebraska
There are three programs that provide financial resources specifically for persons with HIV/AIDS. They are categorized as Parts A, B, and C. Nebraska receives federal funding from Part B of the *HIV/AIDS Treatment Modernization Act in Nebraska* from the Health Resources and Services Administration (HRSA). Part B of this grant funds both the Direct Emergency Assistance Program, which provides assistance for rent, utilities, transportation, food, health insurance, nutritional supplements and limited home health care to individuals with HIV disease, as well as case management services and the AIDS Drug Assistance Program (ADAP). In the 2007 federal grant, Nebraska received $2,381,505 for the Part B portion of the 2007 Ryan White Care grant.

ADAP: The AIDS Drug Assistance Program provides access to needed pharmaceuticals for treatment of HIV disease. Nebraska's ADAP formulary currently includes 120 medications, all medications approved by the FDA for the treatment of HIV disease. In addition to Federal funding, ADAP receives an additional $900,000 annually in State funding for HIV medications. The University of Nebraska Medical Center (UNMC) acts as the ADAP provider for the State. Qualified individuals statewide receive medications either through walk-in pharmacy services at the hospital or through a mail order system.

Part C: Ryan White Part C funding provides for ongoing medical care, oral health care, psychosocial services, nutritional, and other care services or persons with HIV infection. Part C services include:

- Risk-reduction counseling, antibody testing, medical evaluation, and clinical care;
- Antiretroviral therapies; protection against opportunistic infections; and ongoing medical, oral, nutritional, psychosocial, and other care services for HIV-infected clients;
- Case management to ensure access to services and continuity of care for HIV-infected clients; and
- Attention to other health problems that occur frequently with HIV infection, including tuberculosis, and substance abuse.

Funding goes directly to providers of medical care, and patients are charged fees according to a sliding scale. Part C healthcare and healthcare related services are offered through the University of Nebraska Medical Center in Omaha which provides services to the eastern two-

thirds of the State, and Western Community Health Resources, located in Chadron, which provides services in the Panhandle region. For the fiscal year (April 1, 2007 to March 30, 2008), UNMC received $557,640 for Part C funds and the Panhandle received $129,233. Together these services allow individuals who do not qualify for Medicaid, Medicare, or private insurance to access needed services. Ryan White Part C data cannot be generalized to all HIV-infected persons living in the state because they are collected only for persons who (1) know their HIV status and (2) are currently seeking care and treatment services from Part C funded providers.

*AETCs***:** AIDS Education and Training Centers (AETCs) support a network of regional centers that conduct targeted, multi-disciplinary education and training programs for health care providers of clinical care for persons with HIV/AIDS. There are also several national, cross-cutting components of the AETC program which support and complement the regional training centers. The award for Nebraska's AETC was $146,377 for the funding year July 2006 to June 2007.

AETC Name: Nebraska AETC

Training Models: Direct training; mini-sabbaticals; case conferences; clinical consultations; interactive educational offerings for larger groups

Target Audience: Targeted health care providers are physicians, physician assistants, nurse practitioners, nurses, dentists, dental hygienists and assistants, and pharmacists; we attempt to reach providers who care for rural patients as well as providers in our community health centers who treat the urban poor as well as minority patients, specifically African American, Hispanic, and Sudanese.

Program Description: The Nebraska AETC provides education to targeted providers over the entire state of Nebraska using many different training models as appropriate for the audience. NAETC also provides Level III preceptorships at the HIV Clinic at the University of Nebraska. Clinical consultations are provided by HIV care specialists from the University of Nebraska Medical Center. Because Nebraska is a low incidence state, much education is directed at basic HIV recognition and testing issue

Training Components: On-going needs assessment process, direct training events; case conferences; Level III clinical preceptorships, clinical consultations, program evaluation using standard MPAETC tools.

CARE Services:

As of December 31, 2006, the Nebraska CARE Program (Part B and Part C) had 904 clients. There were 1,397 persons living with HIV/AIDS reported to the HIV Surveillance Program. Individuals enrolled in the Nebraska CARE program, are a subset of individuals living with HIV/AIDS in Nebraska. In Table 36 below, a summary of services utilized by Ryan White clients is provided. Most of the visits were medical-related services, but the largest average number of visits per client occurred for those seeking substance abuse treatment. (Note: The Part C data in this section includes only UNMC Part C clients. The Panhandle Part C clients are not included in this section.)

Table 34: Utilization of health care services by Ryan White Part B & Part C clients, Nebraska, 2006

Service	# of clients	# of visits	Avg # visits/client
Ambulatory	886	3101	3.5
Mental Health	84	226	2.7
Oral Health	85	140	1.7
Substance Abuse	11	88	8.0
Case Management services	417	417	1.0
Source: Nebraska Ryan White Program			

Comparing demographic and other characteristics of CARE clients and PLWHA reported to the Nebraska HIV Surveillance program allows for a comparison between CARE clients and the total reported Nebraska HIV/AIDS cases. However, it is important to note that some CARE clients may not be accounted for in HARS if they lived in another state when they were diagnosed with HIV. On the other hand, some PLWHA reported to HIV surveillance may no longer live in Nebraska, and therefore, are not eligible to participate in CARE. Also, the demographics for CARE clients represent both Nebraska and non-Nebraska cases, whereas, the demographics for persons living with HIV/AIDS at the end of 2006, represent only cases residing in Nebraska at the time of diagnosis. The comparison of the two data sets, although limited, is the best comparison available.

Table 37 illustrates the demographic characteristics of CARE Act Part B and Part C Clients Compared with Characteristics of Person Living with HIV Disease in Nebraska. The proportional demographic distribution of persons enrolled in CARE does not differ substantially from individuals living with HIV disease at the end of 2006, by gender, race/ethnicity, or age. There may be slight differences by age group since the age for the CARE Act and ADAP clients is the age they were at enrollment, and the age for PLWHA is their current age.

Table 35: Comparison of Demographic Characteristics of CARE Act Part B & C Clients to Persons Living with HIV/AIDS, Nebraska, 2006

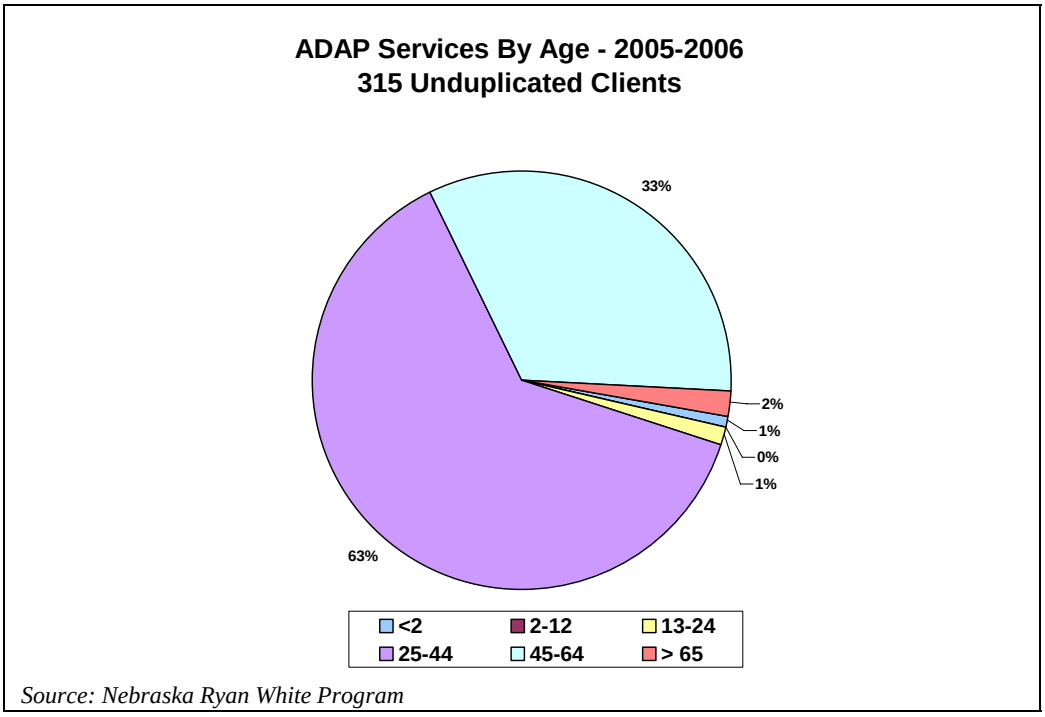
Characteristic	CARE Act Clients (N=904)		Persons Living with HIV/AIDS (N=1397)	
GENDER				
Male	665	73.6%	1075	77.0%
Female	234	25.9%	322	23.0%
Transgender	5	0.6%	0	0.0%
Total	**904**	**100.0%**	**1397**	**100.0%**
RACE/ETHNICITY				
White	535	59.2%	783	56.0%
Black	238	26.3%	380	27.2%
Hispanic	106	11.7%	180	12.9%
Asian/Pacific Islander	3	0.3%	25	1.8%
American Indian/AK Native	14	1.5%	27	1.9%
Multi-race	8	0.9%	2	0.1%
Total	**904**	**100.0%**	**1397**	**100.0%**
AGE				
0-4	3	0.3%	5	0.4%
5-12	5	0.6%	7	0.5%
13-24	26	2.9%	42	3.0%
25-44	546	60.4%	834	59.7%
45-64	315	34.8%	480	34.4%
<65	9	1.0%	29	2.1%
Total	**904**	**100.0%**	**1397**	**100.0%**

Note: Age for ADAP clients represents the age at enrollment in CARE. Age for PLWHA is the current age as of December 31, 2006.

Source: Nebraska Ryan White Program

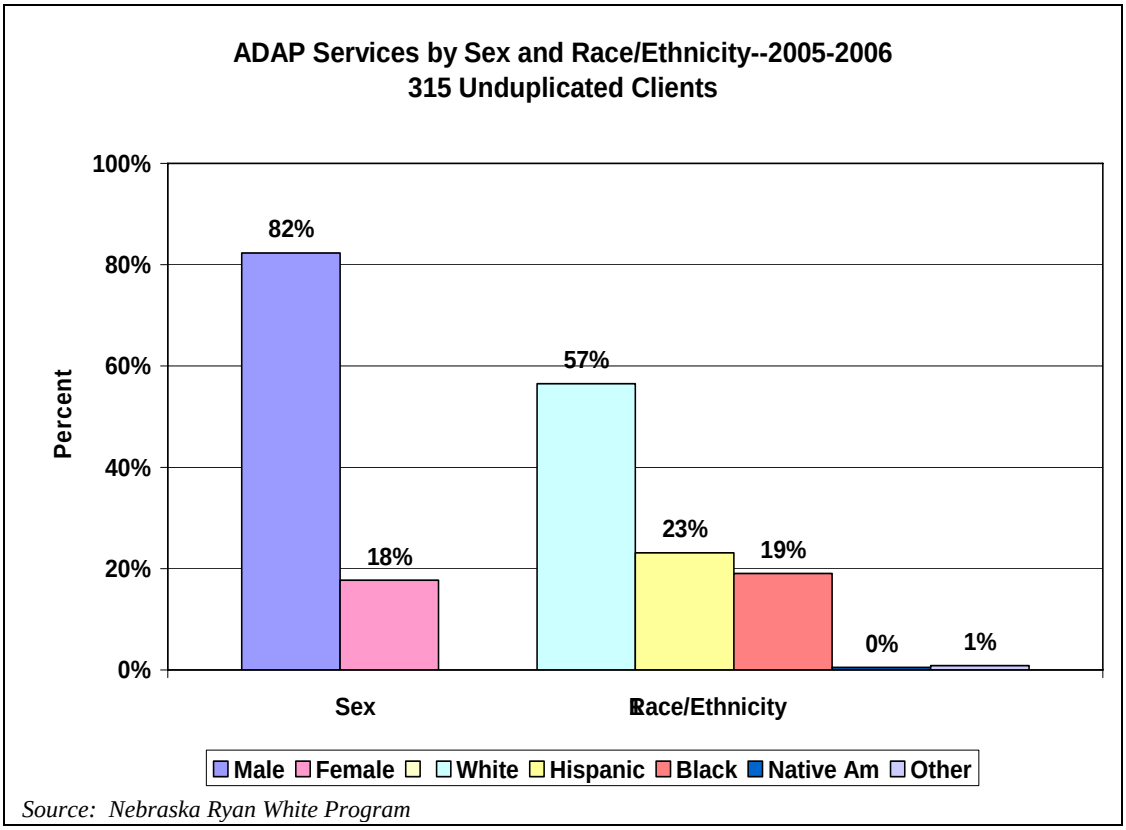
The AIDS Drug Assistance Program (ADAP) served 315 unduplicated clients for the period April 2005 through March 2006. There was an average of 179 clients served per month, with an average expenditure on drugs of $120,348 per month and an average of $671 per client. There were approximately two new clients admitted to the program per month. During this time, ADAP was closed to new admissions due to a shortage of funds and a waiting list resulted. When state funds were allocated to the program in July 2006, the additional funds enabled the program to eliminate the waiting lists. Figures 18, 19, and 20 represent ADAP services for this period by age group, sex and race/ethnicity, and by region. Proportionately, females were slightly more likely to utilize services than males, while use of services by race/ethnicity and age group were essentially the same as those living with HIV/AIDS.

Figure 18:



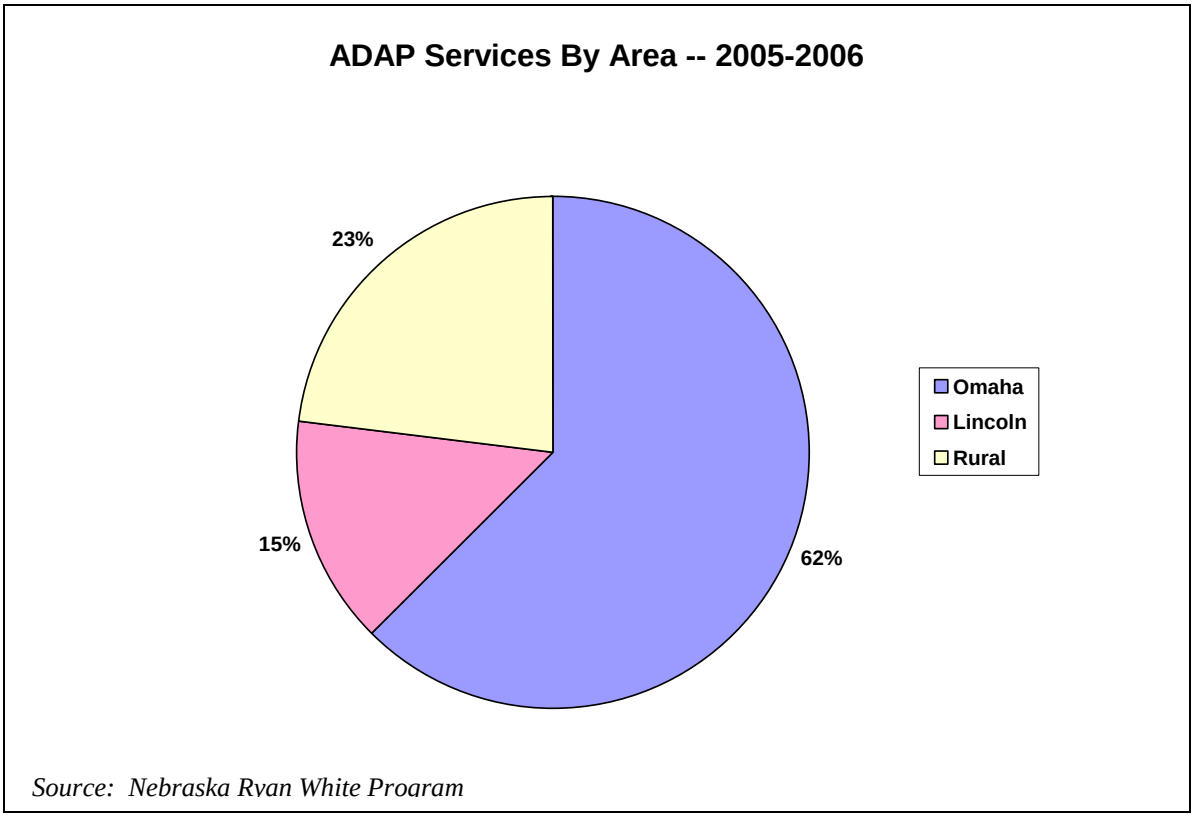
Source: Nebraska Ryan White Program

Figure 19:



Source: Nebraska Ryan White Program

Figure 20:



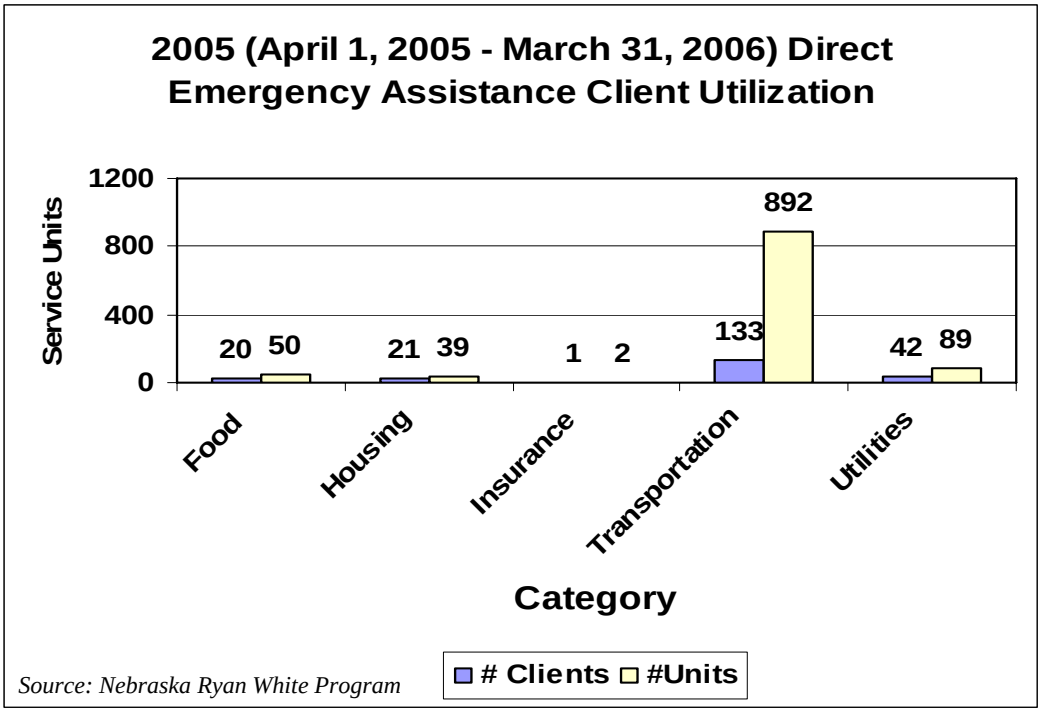
Source: Nebraska Ryan White Program

Case Management and Direct Emergency Assistance (DEA)

Case management is provided across the state by Nebraska AIDS Project. There were a total of 524 unduplicated clients served. Of those, 517 were unduplicated HIV positive clients (seven were family members). There were a total of 5,244 case management service units provided to the 517 HIV positive clients; an average of 10.14 service units per client. Of these 517 clients, 217 received direct emergency assistance, consisting of housing (rent), utility, transportation, insurance and food assistance. A total of $33,250 was spent providing DEA services.

The CARE Act Data Report provided information shown in Figure 21. Transportation was by far the most utilized assistance category, with 892 units of service and 133 clients served. Utilities followed, with 89 units of services and 42 clients served.

Figure 21:



Housing Opportunities for Persons with AIDS (HOPWA)*:*

In March 2004, Nebraska Health and Human Services (NHHS) was awarded a 3-year HOPWA grant from the U.S. Department of Housing and Urban Development (HUD) in the amount of $1,357,192 to provide services statewide to persons and their families living with HIV/AIDS. Activities funded through this grant include case management services, permanent housing placement, short-term rental and mortgage assistance, tenant-based rental assistance, move-in expenses (first/last month rent, security deposit, and application fee), transportation assistance, personal empowerment client education and mental health and substance abuse treatment. Targeted special populations include the chronically homeless, dual diagnosed and post-incarcerated. NHHS submitted a 3 year renewal grant application to HUD for ongoing HOPWA funding for the period 2007 through 2010. Table 38 gives information on how the federal funding for HOPWA was spent in the fiscal year 2006.

Table 36: HOPWA Expenditures for FY 2006

Service	% Utilization	Expenditures
Housing Information/Counseling	5.60%	23,397.00
Resource Identification/TA	10.30%	42,732.00
Rental/Mortgage and Tenant-Based Housing Assistance	51.70%	214,474.00
Supportive Services*	22.70%	94,032.00
Administrative Cost	9.70%	40,136.00
Total	100.00%	$414,771.00
*Case Management, Security Deposits, First Month's Rent, Transportation, Self-Sufficiency Course, Mental Health/Substance Abuse Services)		

The Housing Opportunities for Persons with AIDS (HOPWA) served 133 unduplicated clients and 76 family members in 2006. The most utilized housing type was rental housing (72%) followed by private residence (18%). Other types of housing included living with a relative or friend, group facility, and transitional housing. The demographic characteristics of clients who participated in this program are given in Table 39.

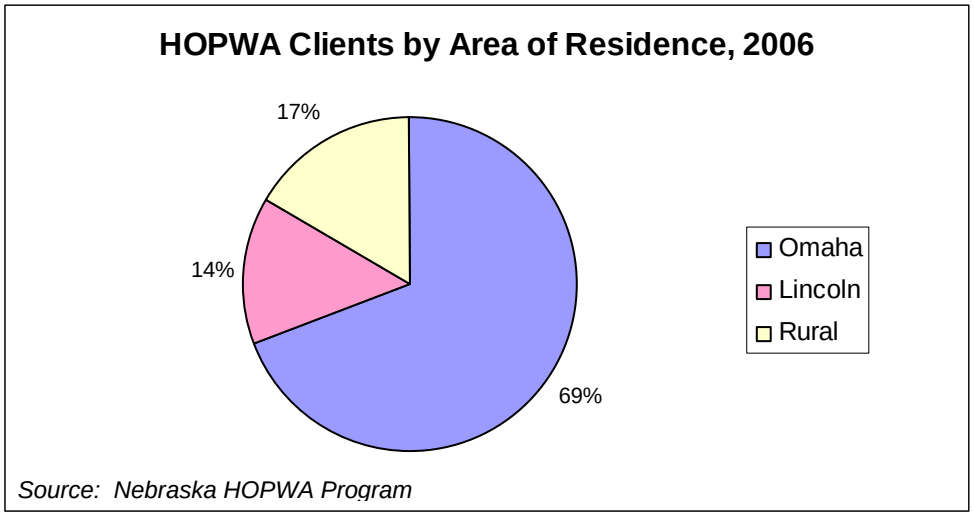
Table 37: Demographic Characteristics of HOPWA Clients, Nebraska 2006

Characteristic	HOPWA Clients (N=133)		Persons Living with HIV/AIDS (N=1397)	
GENDER				
Male	97	72.9%	1075	77.0%
Female	36	27.1%	322	23.0%
Total	**133**	**100.0%**	**1397**	**100.0%**
RACE				
White	82	61.7%	783	56.0%
Black	38	28.6%	380	27.2%
American Indian/AK native	5	3.8%	27	1.9%
Other/Multi-race	8	6.0%	207	14.8%
Total	**133**	**100.0%**	**1397**	**100.0%**
ETHNICITY				
Hispanic	20	15.0%	180	12.9%
Other and non-Hispanic	113	85.0%	1217	87.1%
Total.	**133**	**100.0%**	**1397**	**100.0%**
AGE				
0 - 12	0	0.0%	12	0.9%
13 - 24	2	1.5%	42	3.0%
25 - 44	82	61.7%	834	59.7%
45+	48	36.1%	509	36.4%
Unknown	1	0.8%	0	0.0%
Total	**133**	**100.0%**	**1397**	**100.0%**
RISK BEHAVIORS				
MSM	56	42.1%	612	43.8%
IDU	14	10.5%	137	9.8%
MSM/IDU	n/a	n/a	89	6.4%
Heterosexual contact	47	35.3%	262	18.8%
Adult Hemophilia	n/a	n/a	9	0.6%
Transfusion	2	1.5%	19	1.4%
Pediatric	n/a	n/a	22	1.6%
Undetermined, Unknown, and Not Available	14	10.5%	247	17.7%
Total	**133**	**100.0%**	**1397**	**100.0%**

Source: Nebraska HOPWA Program

Most of the HOPWA clients found housing in Omaha (69%), while 14% resided in Lincoln, and 17% were housed in the rural area of Nebraska, as shown in Figure 22. Females and whites were proportionately more likely to have received these services than their counterparts. It may be that the minority populations who have not utilized these services are not as aware of these services.

Figure 22:



Section 5: The number and characteristics of persons who know they are HIV-positive but who are not receiving HIV primary medical care

The Health Resources and Services Administration (HRSA) require that Ryan White CARE Act grantees estimate unmet need among persons with HIV/AIDS. Unmet need is defined as the proportion of HIV infected persons without basic HIV medical care in a 12-month period. HIV primary medical care is defined as a viral load test or a CD4 lymphocyte count. In Nebraska, unmet need was estimated based on a framework provided by HRSA.

"Met need" was defined as the number of persons with HIV/AIDS with at least one viral load or CD4 lymphocyte test collected during a calendar year. Unmet need was simply the difference between the estimated total number of HIV/AIDS cases and the met need.

The most current analysis of unmet need is for 2005. By December 31, 2005, there were 1,256 persons living with HIV/AIDS in Nebraska. Of these 758 (60%) were determined to be in-care, based on the definitions listed above. This methodology utilized in the framework below indicated that 498 (40%) PLWHA people in Nebraska were out of care during calendar year 2005. See Table 40 below.

Table 38: Measurement of Unmet Need, Nebraska, 2005

Measure	Value	Data Source
Population Sizes		
Total number of individuals known to be living with HIV/AIDS in Nebraska, as of December 31, 2005.	1256	HARS
Care Patterns		
Total Number of PLWHA (aware of HIV+ status) who received specified HIV primary medical care in 2005	758	HARS
Calculated Results		
Total HIV+/aware not receiving specified HIV primary medical care	498	HARS
Quantified estimate of unmet need of HIV+/aware not receiving HIV primary medical care	40%	HARS

One limitation of this estimate is that the population estimate did not take into account the movement of cases out of state. This may have resulted in an artificially high population estimate, thereby resulting in an overestimate of unmet need. Another limitation is that only CD4 counts under 800 are reportable, which means that HIV surveillance is not receiving all CD4 tests. This may also overestimate the amount of unmet need. Table 41 describes the characteristics of those PLWHA who have unmet need in 2005. The majority of persons with unmet need were men. By race/ethnicity: 56% were white; 24% black; 14.5 % Hispanic; 3% Native American; 1.8% Asian. Three persons reported more than one race/ethnicity. Most of those not in care (73%) were 30 to 39 years old, while 16.8% were 40 to 49 years old, and

9.7% were 20 to 29 years old. By risk behaviors, 44% were MSM, 10.6 % IDU, 9% MSM/IDU, and 11.4% heterosexual contact. However, a substantial number were reported without a known risk (NIR) (22.5%) which makes interpretation of risk behaviors difficult.

Table 39: Characteristics of persons with unmet need, Nebraska, 2005

	Persons with unmet need, 2005	
Characteristic	**#**	**%**
GENDER		
Male	399	80.1
Female	99	21.0
Total	498	100.0
RACE/ETHNICITY		
White	278	55.8
Black	121	24.3
Hispanic	72	14.5
Asian/ Pacific Islander	9	1.8
American Indian/AK Native	15	3.0
Multi-race	3	0.6
Total	498	100.0
AGE*		
<13	3	0.6
13-19	2	0.0
20-29	47	9.7
30-39	170	72.1
40-49	180	16.8
50+	96	1.1
Total	498	100.0
Risk behaviors		
MSM	219	44.0
IDU	53	10.6
MSM/IDU	45	9.0
Heterosexual contact	57	11.4
Adult Hemophilia	3	0.6
Transfusion	5	1.0
Pediatric	4	0.8
No Risk Reported (NIR)	112	22.5
Total	498	100.0
Source: Nebraska HIV Surveillance Program		

Appendix A: Epi Profile Data Sources

1. Core HIV/AIDS Surveillance

Tracking of HIV infection in Nebraska began when the first AIDS case in the state was reported in 1983. In July 1995, HIV surveillance was further enhanced by legislation instituting confidential name-based reporting of HIV infection. Persons diagnosed with HIV before July 1995, may not have been reported to the Nebraska Department of Health and Human Services.

Nebraska's communicable disease regulations (Title 173) require physicians and hospitals to report persons diagnosed with HIV infection and laboratories to report all cases with laboratory-confirmation of HIV. Demographics, exposure to the disease and clinical data are collected on each case and entered into Nebraska's HIV/AIDS Reporting System (HARS) database developed by the U.S. Centers for Disease Control and Prevention (CDC).

Population: All persons who confidentially test positive for HIV and those who are diagnosed with AIDS.

Strengths: AIDS Surveillance data has been determined to be > 85% complete nationwide. The data include all demographic groups (age, race/ethnicity, and sex). HIV surveillance data represent persons more recently infected than AIDS surveillance data.

Limitations: Factors that impact the completeness and accuracy of HIV/AIDS surveillance data include; compliance with case reporting, timeliness of case reporting, test-seeking behaviors of HIV-infected individuals, and the availability and targeting of HIV testing services

While HIV case reports do represent persons more recently infected than AIDS case reports, there are still several limitations that affect the completeness and timeliness of the data..

First, CDC estimates that about 30% of HIV-infected individuals are unaware of their status. This is partly because early HIV infection does not produce severe nor distinct symptoms and so delays in testing are common. Additionally many people acknowledge avoiding testing for fear of a positive test result or believing that they are not at risk.

Second, cases of new HIV infection can also go undetected by HIV surveillance due to the availability of anonymous testing at any of the federally funded HIV testing sites. Once a person begins care, however, the HIV/AIDS surveillance system would more likely detect the case.

Thus, although HIV case reporting is our best estimate of new HIV infections, the system does not capture all new cases. There are varying amounts of delay between infection, testing, and reporting. HIV/AIDS data collectively provide a minimum estimate of the number of persons known to be HIV infected.

As of February 2007, forty-eight states, including Nebraska, conduct surveillance using a name-based system. The three remaining states use a code-based or name-to-code system to collect HIV data. This makes it difficult to ensure that duplicate reports are not entered into the national database. HIV reporting laws vary by state; therefore consultation with local

surveillance staff is advised on how to interpret HIV surveillance data. Furthermore, reporting of behavioral risk information may not be complete.

HIV Counseling and Testing Data

Overview: The Nebraska Health and Human Services HIV Prevention/Ryan White/Hepatitis C Program receives federal funds to operate 56 designated HIV Counseling, Testing, and Referral Program (CTRP) sites throughout the state. The CTR program provides HIV antibody testing and risk reduction counseling. For HIV Prevention efforts, voluntary HIV antibody testing and post-test counseling is provided to any Nebraska resident at no charge. Nebraska law requires written informed consent prior to HIV testing at all provider sites throughout the state.

Efforts are made to target individuals practicing high-risk behaviors for testing. Target populations for outreach programs, counseling and testing services, partner counseling and referral services (PCRS), and referral for HIV treatment include: men who have sex with men (MSM); injection drug users (IDUs) and other substance abusers; individuals who trade sex for money or drugs; persons who share needles; sex partners of individuals either infected with HIV or diagnosed with AIDS; individuals with multiple sex partners; patients of STD Clinics; state and local correctional facilities and sexually active youth.

The CTR Program collects information on counseling and testing services delivered, as well as the characteristics of clients receiving the services. The characteristics include demographics, insurance, risk information, and testing information data (data testing history, test result). All sites offer both anonymous and confidential testing options. However, 66% of persons that were tested in 2005 were tested confidentially.

Pre-test counseling is the first step in the counseling and testing process. During this step, the client is informed about HIV, the syndrome it causes, ways to prevent transmission and the implications of a negative or a positive HIV antibody test. In Nebraska, both confidential and anonymous testing options are provided. Confidential testing includes the use of a Unique Identifier (UI) number on CTS report forms as well as the client's name, address, date of birth (DOB) and home phone number. Anonymous testing also utilizes the UI, but no personal information is collected. Consequently, anonymous testing data are analyzed in terms of tests, as opposed to individuals.

The second step of the process is test decision counseling. The option to test or not to test is based on the perceived risk of the client. With the assistance of the counselor, the client determines whether or not to be tested. If the client declines testing, the process ceases. If testing is to be performed, the client is informed of the testing technologies available at the testing site. (OraSure, OraQuick or serum tests are done in Nebraska, based on where the test site is located.) Once testing is completed, the client is reminded to return for the post-test counseling session to retrieve his/her results in person. The client must also retain and present the number (UI) that will be used to identify him/her in order to get the result.

During post-test counseling, the third step, the client is informed of their test result (negative, positive, or indeterminate) and one-on-one HIV/AIDS counseling is reinforced in all outcomes. Additional counseling is provided to those who tested positive for HIV, including information

regarding the reduction of further HIV transmission and the importance of partner notification. All health departments offer services to assist clients with partner notification. Furthermore, seropositive individuals receive referrals for medical and psychiatric follow-up, including early screening for and treatment of other STDs, TB and hepatitis.

If the client tests positive, it is the recommendation of the HIV Prevention Counseling and Testing Program that a trained Disease Intervention/Investigation Specialist (DIS) be available to give results and perform the partner/spousal notification and partner counseling and referral services (PCRS) process at that time. This is a voluntary process, and several options are offered to the client. The DIS are trained to get names and other contact information for sex and/or needle-sharing partners, locate those individuals, inform them that they may have come in contact with an HIV+ individual, and offer testing in the field or make referral to a publicly funded test site or a private physician. This is all done anonymously. No information about the source patient, or the initial HIV+ client, is divulged. That information is protected under both state and federal statutes.

Population: All clients who receive confidential or anonymous HIV testing services at a counseling and testing site funded through a CDC cooperative agreement.

Strengths: CTRP provides standardized data on clients who are tested for HIV, which is available at many sites across Nebraska. It may offer insights into HIV infection rates in an area's high-risk population. CTS testing data can help define the impact of prevention programs upon targeted populations.

Limitations: CTRP collects test-based, rather than person-based data. Since Nebraska offers both anonymous and confidential testing, there is no sure means of discerning if the tests were duplicates or not. Information is collected only from persons who seek counseling and testing services or agree to be tested after consultation with a counselor at a testing site. Therefore, estimation of HIV statewide seroprevalence is not possible with CTS data because the clients self-select for testing. Because a person can repeatedly seek testing, it is not possible to distinguish individuals who have been tested multiple times; however a "previous HIV test" variable is available on the client abstract form to quantify prior testing. Since the CTS system gathers data on HIV testing or program activities, changes in testing patterns may reflect changing program priorities rather than testing patterns of individuals.

STD Surveillance-STD Case Reporting

Overview: The goal of Nebraska Department of Health and Human Services Sexually Transmitted Disease Program is to control and prevent sexually transmitted diseases and reduce the burden and cost of these infections. The STD Program conducts statewide surveillance to determine the number of reported cases of STDs, to monitor trends in the epidemics, and to offer voluntary partner counseling and notification services. The STDs given priority for surveillance and follow-up are Chlamydia, gonorrhea, and syphilis. These cases are reportable by hospitals, physicians and laboratories.

The STD program has developed partnerships with over 80 clinics throughout the state screening for Chlamydia, gonorrhea and other sexually transmitted diseases. These clinics include family planning clinics, community health centers, Indian health clinics, correctional

facilities, county and district health departments, hospitals, women health centers, children and adolescent university health clinics, primary care clinics, youth center clinics, and a large number of private health care providers.

Testing people who have no signs or symptoms of illness is important in the control of STDs. The Nebraska Infertility Prevention Program works with cooperating family planning and health care facilities throughout the state to test approximately 30,000 persons per year for Chlamydia and gonorrhea.

Population: All persons who are diagnosed with an infection that meets the CDC surveillance case definition for the infection and are reported to the health department.

Strengths: STD surveillance data can serve as surrogate markers for unsafe sexual practices and may demonstrate changes in behavior among specific populations that increase their risk for HIV infection. Because of a shorter time from exposure to infection to symptomatic disease, STD diagnoses may better indicate recent unsafe behavior and/or changes in community norms. In addition, certain STDs (i.e., ulcerative STDs) can facilitate transmission and/or acquisition of HIV infection. Finally, changes in trends of STDs may indicate changes in community sexual norms, such as unprotected sex. Nebraska's STD data are available on the web at: http://www.hhs.state.ne.us/std/stindex.htm.

Limitations: STDs are reportable, but requirements for reporting vary across states. The quality of the data is highly dependent on whether the provider is public or private and may be incomplete. Women may be routinely screened whereas men are more likely to be tested only if they are symptomatic. Other data limitations are discussed in the profile. Although STD risk behaviors result from unsafe sexual behavior, they do not necessarily correlate with HIV risk.

Behavioral Risk Factor Surveillance System (BRFSS)

Overview: The BRFSS is a state-based random-digit-dialed land line telephone survey of adults that monitors state-level prevalence of the major behavioral risks associated with premature morbidity and mortality. Each month, a sample of households is contacted, and one person in the household who is 18 years or older is randomly selected for an interview. Multiple attempts are made to contact the sampled household. A Spanish translation of the interview is available. Respondents to the BRFSS questionnaire are asked a variety of questions about their personal health behaviors and health experiences. A sexual behavior module was added to this survey in 1994, 1995, 1996, 1998, and 2000. The questions in this module, for adults (aged 18-49), concerned number of sex partners, condom use, and treatment for STDs. The survey is not conducted on households with only cellular phones. This data is submitted to CDC and compiled with all other states to make a national database.

Population: All non-institutionalized adults, 18 years and older, who reside in a household with a telephone.

Strengths: Data from the BRFSS survey are population-based; thus, estimates about testing attitudes and practices can be generalized to the adult population of a state. Information collected from the BRFSS survey may be useful for planning community-wide education

programs. National comparisons are available.

Limitations: BRFSS data are self-reported; thus, the information may be subject to recall bias. Because BRFSS respondents are contacted by telephone, the data are not representative of households that do not have land-line telephones. In addition, BRFSS data are representative of the general non-institutionalized population in an area, not just persons at highest risk for HIV/AIDS. The extent of the HIV behavioral risk information collected by the BRFSS questionnaire is limited, and inferences can be made only at the state level.

Youth Risk Behavior System (YRBS)

Overview: The YRBS was established to monitor six priority high-risk behaviors that contribute to the leading causes of mortality, morbidity, and social problems among youth and young adults in the United States. YRBS was developed to collect data that are comparable nationally, statewide, and locally. It is a self-administered questionnaire that is given to a random sample of 9th through 12th grade students in Nebraska. The YRBS is part of the Youth Risk Behavior Surveillance System, established by the CDC, and has been completed eight times in Nebraska: 1991, 1993, 1995, 1997, 1999, 2001, 2003, and 2005. The Nebraska YRBSS collects information on six categories of behaviors, of which sexual behaviors that contribute to unintended pregnancy and STDs, including HIV, is one. Questions are also asked about exposure to HIV prevention education materials, sexual activity, contraceptive use, and pregnancy history.

Population: YRBS surveys a random sample of 9th through 12 grade students in Nebraska, but does not include the Omaha Public School System students.

Strengths: In Nebraska, the YRBS samples adolescents in grades 9-12 in public schools. The YRBS questionnaire is administered to students anonymously during school. Repeated attempts are made to contact students who are not in attendance. Inferences from the YRBS estimates can be drawn about behaviors and attitudes of adolescents in school, which makes the information useful for developing state-wide prevention programs aimed at younger persons. The YRBS uses a standardized questionnaire so that comparisons can be made across all states. Each state has the option to ask specific questions to meet their needs.

Limitations: The YRBS relies upon self-reported information; therefore, reporting of sensitive behavioral information may not be accurate (under- or over-reporting may occur). The Nebraska YRBS data are based on randomly selected public high schools sample in the state. It would not be valid to generalize the findings of the surveys to all youths who are not in public schools and the selected grades. These findings are only valid for public high school youths in Nebraska. In addition, the lack of participation by some of the randomly selected schools in the sample resulted in unweighted data in 1993, 1999 and 2001. Findings from these years do not give an accurate representation of the high school youths in the state.

Pregnancy Risk Assessment Data

Nebraska Pregnancy Risk Assessment Monitoring System (NE PRAMS)

Overview: NE PRAMS is an ongoing population-based surveillance system consisting of a monthly survey of new mothers from across Nebraska. PRAMS is designed to identify and monitor selected maternal behaviors and experiences before, during, and after pregnancy. Each month, a stratified sample of approximately 200 mothers is randomly selected from recent birth certificates. Between two to six months after the baby's birth an introductory letter and up to three PRAMS questionnaires are mailed to the mother. If no response is received after the third mailing PRAMS staff then telephones the non-responders and attempts to fill out the survey over the telephone. Responses are collected in a database and weighted to be representative of all women giving birth in Nebraska. Questions include attitudes and feelings about the pregnancy, i.e., was the pregnancy planned, how did the new mother feel about being pregnant, and use of alcohol before, during and after pregnancy.

Populations: Pregnant women in Nebraska

Strengths: The major strengths of PRAMS include: 1) it is flexible and relatively inexpensive for collecting public health data, 2) it is a population-based survey, allowing the data to be generalized to overall state-level populations, and 3) the PRAMS survey has been conducted in 32 states for many years. Thus, states can compare their data with each other, as well as analyze the data for trends over time.

Limitations: PRAMS limitations include: 1) the data collected consist of self-reported information that has not been verified, 2) the survey has a limited number of completed interviews, and the sample size may be too small for analysis on some sub-populations, and 3) the PRAMS survey uses complex sampling methods, and the data from the survey are subject to sampling errors.

Substance Abuse Data

Treatment Episode Data Set (TEDS)

Overview: TEDS is a national data set maintained by the Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA). Data are captured annually on more than 1.5 million records of treatment admissions for substance abuse. TEDS is comprised of data that are routinely collected by states to help monitor their individual substance abuse treatment programs. TEDS collects information on client demographics; information about the number of prior treatments; usual route of administration for each problem substance; frequency of use; age of first use; and services provided. Facilities that report TEDS data usually receive state funding for the provision of substance abuse treatment.

Population: Individuals admitted to substance abuse treatment facilities reporting to TEDS.

Strengths: While TEDS does not represent the total demand for substance abuse treatment, it does include a significant proportion of all admissions to substance abuse treatment. It includes admissions that constitute a burden on public funds.

Limitations: TEDS is based on records of admissions and does not represent individuals.

Because of this, an individual admitted to treatment twice within the same calendar year would be counted as two admissions. Also, because most states cannot identify individuals that have been assigned a unique ID at the state level to protect their confidentiality, TEDS is unable to follow individual clients through a sequence of treatment episodes. TEDS does not represent the total substance abuse treatment burden, or the prevalence of substance abuse in the general population.

National Household Survey of Drug Abuse (NHSDA)

Overview: The NHSDA is an ongoing survey on the use of illicit drugs by the U.S. population aged 12 or older. The survey collects data by administering questionnaires to a representative sample of the population. Face-to- face computer-assisted interviews are conducted at the respondent's place of residence. Information captured by the NHSDA questionnaire includes use of cocaine, receipt of treatment for illicit drugs, and need of treatment for illicit drugs during the past year; use of alcohol, tobacco, or marijuana during the past month; and perceived risk of binge drinking, marijuana use, or smoking.

The NHSDA employed a 50-state sampling design; for the eight states with the largest populations, the sampling design provides a sample large enough to support direct state estimates. For the 42 remaining states and the District of Columbia, small area estimation techniques were used to calculate state estimates. Youth and young adults were over-sampled so that each state's sample was approximately equally distributed among three major age groups; 12–17 years, 18-25 years, and 26 years or older.

Strengths: NHSDA is national, standardized survey of drug use behaviors among the general population. To increase the level of honest reporting, since 1999, information has been collected using a combination of computer-assisted interviewing methods. This provides respondents with a more private and confidential means of responding to questions about substance use and other sensitive behaviors.

Limitations: Direct state-level estimates are available only for 8 states; Nebraska must rely on statistical estimates. NHSDA estimates represent behaviors in the general population, thus the survey may underestimate the level of substance use in the population at highest risk for HIV. Further, data from the NHSDA are self-reported and are subject to recall bias, which may result in under-reporting the level of a sensitive behavior.

Vital Statistics Data

Death data

Overview: The Nebraska Department of Health and Human Services Vital Statistics section receives information on births and deaths through a program of voluntary cooperation with state government agencies (i.e., state departments of health, state offices of vital statistics) called the Vital Statistics Cooperative Program. A standard certificate of death is used to record death information on each decedent. Death certificates capture decedent demographics, underlying cause of death (using an ICD-10 code), and contributions of selected factors to the death (i.e., smoking, accident, or injury).

Population: All deaths occurring in Nebraska and all deaths of Nebraska residents in other states.

Strengths: Reporting of deaths in Nebraska is approximately 100% complete. The data are widely available and can be used to determine the impact of deaths related to HIV infection in a service area. Standardized procedures are used throughout the nation to collect death certificate data.

Limitations: Deaths resulting from, or whose underlying cause was, HIV infection may be under-reported on a death certificate. Clinical information related to HIV or AIDS may be missing.

Ryan White Care Act Data

Since 1993, the HIV/AIDS Program of the Nebraska Department of Health and Human Services has collected data on persons served by the Nebraska Ryan White Part B Program. To be eligible for Part B services, a persons must have HIV, be a resident of Nebraska, and have an income that is equal to or less than 200% of the current year's federal poverty level. Part B services include core medical services such as the AIDS Drug Assistance Program (ADAP), limited home health care, medical health services, and medical case management. Each service provider maintains his/her own database. Information collected from the service providers includes basic demographic and risk information, eligibility verification data (current address, current income, HIV diagnosis date), the type of services received, the date and quantity of services received, the cost of these services, and other pertinent information (history of substance abuse or mental health treatment, veteran status, current pregnancy status). The data indicate which Ryan White resources are being used, how often, and by whom.

Population: All HIV-infected persons receiving services funded by Ryan White Part B. In order to be eligible for Ryan White Part B services a person must be living with HIV/AIDS, be a resident of Nebraska, and have an income that is equal to or less than 200% of current year's federal poverty level.

Strengths: The program database is a comprehensive database that includes key fields of information on all persons receiving Ryan White Part B services. The database is an important tool for monitoring which Ryan White resources are being utilized, how often and by whom. The program is able to "unduplicate" clients within a particular service area and can also "unduplicate" clients across all services. This provides a more accurate picture of how many people are truly seeking care through services provided by Ryan White Part B. Data are collected on an on-going basis as services are utilized.

Limitations: The data cannot be generalized to all HIV-infected persons living in Nebraska These data only reflect persons who (1) know their HIV serostatus, (2) are currently seeking care and treatment services from Ryan White Part B-funded providers, and (3) are financially eligible to receive services. Only aggregate data from the annual summary CARE Act Data Report (CADR) are most readily available.

The AIDS Drug Assistance program provides antiretroviral drugs and a limited number of other medications to persons who qualify for Ryan White Part B services and who are not fully covered for medications through Medicaid or other insurance plans. Although part of Ryan

White Part B funding, a separate database is kept at NHHSS for the ADAP Program. These data are, therefore, unduplicated, client-level data. Information collected in the database is limited to basic demographic information on each client, eligibility verification data, and laboratory information at the time of application.

Nebraska State Data Center

Overview: The NSDC is a cooperative program between Nebraska and the U.S. Bureau of the Census and was created in 1978 to make data available locally to the public through a network of state agencies, universities, libraries, and regional and local governments. The NSDC lead organizations are appointed by the Governor of Nebraska. The NSDC is an official source of demographic, economic, and social statistics produced by the Census Bureau. The web site for the center http://www.census.gov/sdc/www/nesdc.html includes current population estimates and projections; economic, income and poverty status information; demographic profiles and rankings; and census geography. Information is available for the state, counties, cities and metropolitan areas.

Population: Nebraska population

Strengths: A wide range of online statistical data on the Nebraska population is available in different formats (e.g., tables, and maps). Links to other census information Web sites are provided.

Limitations: Some files may take longer to download. Although most data is available at no charge, customized products may have a fee.

U.S. Bureau of the Census (Census Bureau)

Overview: The Census Bureau collects and provides information about the people and economy of the U.S. The Census Bureau's Web site (http://www.census.gov) includes data on demographic characteristics (e.g., age, race, Hispanic ethnicity, and sex) of the population, family structure, educational attainment, income level, housing status, and the percentage of persons living at or below the poverty level. Tables and maps of census data are available for all geographic areas to the block level. Summaries of the most requested information for states and counties are provided, as well as analytical reports on population change, race, age, family structure, and apportionment.

Population: U.S. population.

Strengths: A wide range of online statistical data on the U.S. population is available in different formats (e.g., tables, and maps). State and county-specific data are easily accessible. Links to other census information Web sites are provided.

Limitations: Some files may take longer to download

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