

May 2010

Acquired Immune Deficiency Syndrome (AIDS) was first clinically recognized as a disease in 1981, though researchers have found evidence that people likely died from the disease as early as the 1950's and 1960's (HIV In Site, 2003). AIDS develops from an infection called the Human Immunodeficiency Virus (HIV), which was identified as the causative agent for AIDS in the mid-1980's.

When initially infected with HIV, individuals often experience an "asymptomatic" period averaging from two months to ten years. During that time, the HIV virus multiplies and accumulates in the blood, attacking and killing CD4+T cells in the immune system. Eventually, the body's ability to fight infection and disease is destroyed, making the individual highly susceptible to opportunistic infections (such as pneumonia, tuberculosis, and hepatitis) and malignancies that are less harmful in a healthy human body. The most advanced stages of HIV infection are characterized by symptoms of multiple opportunistic infections and a CD4+ T cell count less than 200 per cubic millimeter of blood (a normal, healthy range is 500-1800 per cubic millimeter of blood). Once an HIV-infected person exhibits these indicators, he or she is officially diagnosed with AIDS (National Institute of Allergy & Infectious Diseases (NIAID), 2009; The Body, 2007).

National Statistics

Since 1981, approximately 1.7 million people in the United States have been diagnosed with HIV or AIDS, including more than 580,000 people who have already died. The mortality rate peaked in 1995, when HIV was the leading cause of death for 25 to 44 year old Americans.

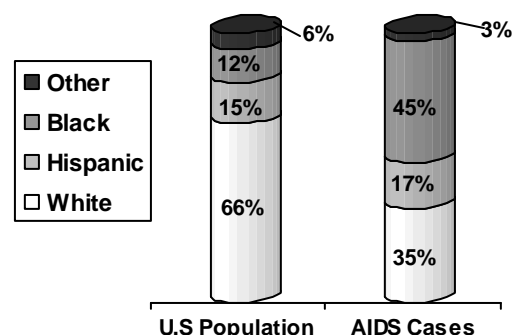
Since then, the mortality rate due to HIV has declined by more than 70%, becoming the 6th leading cause of death in 2003 for 25 to 44 year olds. This decline comes from improved medical treatment and fewer new HIV infections, whose incidences plummeted from around 150,000 cases per year in the 1980's to 56,300 new cases per year today (Kaiser Family Foundation (KFF), 2009a). Statistical estimates regarding the disease in the year 2007 are as follows:

▲ New HIV diagnoses	56,300
▲ AIDS Deaths	14,561
▲ People living with AIDS/HIV	1.1 million
% diagnosed with AIDS	43%
% diagnosed with HIV	36%
% undiagnosed with AIDS/HIV	21%
	(KFF, 2009a)

Race/Ethnicity

AIDS affects minority populations at a disproportionate rate. In 2007, minorities represented 67% of Americans living with AIDS and 71% of new AIDS diagnoses.

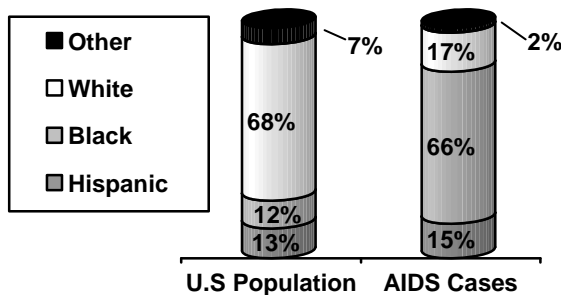
Comparison of 2006 U.S. Population and AIDS cases by race/ethnicity (KFF, 2009a)



Gender

Although the AIDS diagnosis rate has declined over the past twenty-five years, the yearly incidence among women continues to grow. In 1985, women represented 8% of new AIDS cases; in 2007, 27% of AIDS diagnoses (approximately 9,579 people) were women. Imitating the national trend, minority women were disproportionately represented, constituting 83% of all reported female AIDS cases. African-American women were 22 times more likely and Hispanic women 5 times more likely to be diagnosed with AIDS than White women (Kaiser Family Foundation (KFF), 2009b).

Comparison of 2007 U.S. Female Population and new AIDS cases by race/ethnicity (KFF, 2009b)



Age

Teens and young adults under the age of 30 are considered a high risk group for new AIDS diagnoses, constituting approximately 34% of cases in 2006 (KFF, 2009a). Within this age group, minorities and females are also over-represented. In 2007, young African Americans accounted for 68% of AIDS cases reported among 13-19 year olds; Hispanic teens represented 19%. Teen girls represented 40% of the HIV cases reported for the same year and age group (KFF, 2009a).

Transmission of the HIV infection

The HIV infection can be transmitted through sexual contact, needles, blood transfusions using infected blood, and exposure to the virus prior to or during the birth process (Centers for Disease Control and Prevention [CDC], 2006). During the two and a half decades spent tracking HIV/AIDS, incident rates have varied among the groups at highest risk for the disease, including men who have sex with men (MSM) and injecting drug users (IDU). Though the

incidence of perinatal infection has declined significantly due to the availability of antiretroviral treatment, transmission between HIV-infected pregnant women and their babies continues to take place. The majority of these infections occur among African American women (KFF, 2009b).

Distributions of U.S. AIDS Cases* by Transmission Exposure Group over Time				
Transmission Exposure Group	Percent in Exposure Group			
	1983	1992	2001	2007
MSM	71%	52%	40%	48%
IDU	17%	25%	26%	25%
MSM IDU	NA	5%	4%	7%
Heterosexual contact [#]	5%	9%	28%	18%
Blood/blood product recipient	2%	1%	0%	NA
No risk identified/other	6%	6%	2%	2%**

* Adult incident cases in 2001 adjusted for reporting delays and redistribution of cases initially reported with no risk identified (31% of reports in 2001).

Includes "Born out of United States," formerly a separate group in 1983 (4%).

**CDC combines this group with blood product recipients.

(HIV In Site, 2003; CDC, 2009)

Regional Statistics

By 2007, Texas ranked fourth in the nation for the highest cumulative reported AIDS cases per 100,000 people. Representing 7.1% of all United States cases, there were more than 72,000 people living with AIDS in Texas during 2007 (KFF, 2009a). In 2005, Bexar County ranked third of major Texas counties for the highest number of cumulative AIDS cases.

Dallas County	14,253 cases
Harris County	22,948 cases
Bexar County	4,643 cases
Travis County	4,253 cases

(AIDSAction, n.d.)

The following table outlines more recent HIV/AIDS statistics from the Texas Department of State Health Services for Texas, San Antonio, and its outlying counties.

2008 TEXAS HIV/AIDS SURVEILLANCE REPORT									
	Cumulative HIV cases*		2008 HIV diagnoses		Cumulative AIDS cases**		2008 AIDS diagnoses		Currently living with HIV/AIDS
Texas	28,593		3,353		75,697		2,865		63,700
<i>Male</i>	21,161	75%	2,548	76%	63,949	85%	2,162	76%	
<i>Female</i>	6,982	25%	778	24%	11,274	15%	693	24%	
<i>White</i>	9,765	35%	901	27%	34,153	45%	799	28%	
<i>Black</i>	11,637	41%	1,482	45%	24,012	32%	1,203	42%	
<i>Hispanic</i>	6,339	23%	864	26%	16,553	22%	813	28%	
Bandera	3		0		10		0		7
Bexar	1,755		203		5,206		196		4,284
Comal	36		4		77		3		77
Kendall	5		0		16		1		13
* Includes all reported since 1980 that have not progressed to AIDS									
** Includes all reported since 1980, including cases originally reported as HIV which have progressed to AIDS									
(Texas Department of State Health Services, 2008b)									

Regional HIV/AIDS Programs

There are currently at least twenty agencies or clinics that provide services for people with HIV/AIDS in Bexar County; some of these include the Alamo Area Resource Center, BEAT AIDS, Hope Action Care, and the San Antonio AIDS Foundation. The Comal County Office of Public Health in New Braunfels and the Department of State Health Services in Bandera and Boerne serve patients in San Antonio’s outlying counties. These agencies provide most if not all of the following resources and services: health and prevention information, counseling, case management, drug assistance, support groups, mental health services, substance abuse treatment, anonymous HIV/AIDS testing, advocacy services, emergency housing assistance, financial assistance, transportation, clothing, and nutritional support. The San Antonio AIDS Foundation also has a Special Care Facility and Residential AIDS Hospice License, providing medical services and end-of-life care (Texas Department of State Health Services, 2008a). San Antonio also has a variety of agencies that offer AIDS-related services as a part of their broader purpose and operations. Such organizations include the Deaf and Hard of Hearing Resource Center, FFACTS/Immunosuppression Clinic, the Diversity Center

of San Antonio, Family Support Services, and the community clinics at the University Health System and the San Antonio Metropolitan Health District.

Funding Resources for HIV/AIDS

Funding for HIV/AIDS programs is provided by the Federal government through the Departments of Health and Human Services and Housing and Urban Development. The funding agencies for Texas HIV/AIDS programs include the Centers for Disease Control and Prevention (CDC), the Office of HIV/AIDS Housing, and the Health Resources & Services Administration (HRSA). Funding for HIV/AIDS programs in Bexar County is available through the Texas Department of Health, the San Antonio Area Foundation, San Antonio Metropolitan Health District, City of San Antonio’s Department of Community Initiatives, and Bexar County Housing and Human Services.

The primary allocation of HIV/AIDS funds is provided through the Ryan White CARE Act of 1990, which was reauthorized in 2009. Consisting of four Titles and several other sections, the act secures and provides emergency funds to eligible metropolitan areas (including Bexar County), state funds, early intervention funds, and women, infant, children, and youth funds for community and state

services helping people with HIV infection and AIDS (Texas Department of State Health Services, 2006; AIDSAction, n.d.). The following table displays fiscal year 2008 Texas funding for the Ryan White Care Act and other HIV/AIDS programs.

TEXAS HIV/AIDS FEDERAL FUNDING FY 2008		
	Funding Agency	Amount
HIV prevention	CDC*	\$18,321,872
Housing Opportunities for Persons with AIDS (HOPWA)	Office of HIV/AIDS Housing	\$15,086,000
Ryan White Act		
-Title I	HRSA**	\$44,980,064
-Title II	HRSA	\$89,738,958
-Title III	HRSA	\$7,698,708
-Title IV	HRSA	\$6,163,204
-AIDS Education and Training Centers (AETC)	HRSA	\$1,247,956
-Dental Reimbursement	HRSA	\$111,890
-Special Projects of National Significance (SPNS)	HRSA	\$884,770
Ryan White Act Total		\$150,713,660
* Centers for Disease Control and Prevention ** Health Resources & Services Administration (KFF, 2009c)		

Prevention and Treatment

HIV testing is a crucial component of both prevention and treatment measures. Despite recent innovation and efforts to make testing more accessible, approximately 21% of those infected with HIV remain unaware of the availability of new technologies such as rapid testing. A further 42% to 59% of people living with HIV/AIDS do not receive regular HIV care (KFF, 2009a).

The innovation of more effective HIV/AIDS treatments within the last decade has significantly altered when and how it affects patients. Health care providers typically prescribe one or more medications that fall into the five classes of FDA-approved drugs

administered to treat HIV infection: nucleoside inhibitors, fusion inhibitors, protease inhibitors, integrase inhibitors, or a combination of one or more of the drug classes (HHS, 2009a). The first class of drugs helps delay the spread of HIV and the onset of opportunistic infections by interrupting the early stages of virus reproduction, while the second class works to shield HIV from entering the cells (HHS, 2009a). Similarly, protease inhibitors are designed to prevent the virus from copying itself, but work at later stages during its life cycle. The more recent drugs approved by the Food and Drug Administration (FDA) are fusion and integrase inhibitors. Fusion inhibitors have been integral in the HIV treatment process and are designed to hinder HIV’s ability to infect the body’s immune cells; additionally, integrase inhibitors have been successful anti-HIV medication, used to disable the protein in which HIV needs to infect a cell (HHS, 2009a).

Highly active antiretroviral therapy (HAART) is a form of combination therapy that was developed in the mid-1990s. Although HAART does not cure AIDS, it has been largely responsible for declines in AIDS diagnoses and deaths throughout the past decade (HHS, 2009a; NIAID, 2009). Its effectiveness has allowed people with AIDS to survive longer and HIV-infected persons to live longer without ever developing AIDS by allowing the patient to combine three or more medications from different classes (HHS, 2009b). Despite its beneficial effects, HAART is not an appropriate or effective treatment for all cases of HIV/AIDS. It requires a consistent, long-term commitment and involves strict schedules of complicated medication combinations. There are many potential side effects associated with the use of antiviral treatment: liver damage, hyperglycemia, inflammation of the pancreas, low red and white blood cell count, rashes, osteoporosis, painful nerve damage, and even death (HHS, 2009b).

Improvements in AIDS progression rates and survival have leveled off over the past several years. Research suggests that viral resistance, treatment failure, and enhanced vulnerability to other fatal illnesses are the probable causes for

this deceleration in progress (IASUSA, 2007). The greatest threat to the effectiveness of antiviral treatments such as HAART is the emergence of drug resistant HIV viral strains, most of which are resistant to more than one class of drugs. In order to reduce drug resistance: 1) new drugs must be developed, 2) standardization of drug resistance testing, 3) treatment with HAART must begin as soon as possible, and 4) patients must follow treatment schedules exactly (IASUSA, 2007).

Continued efforts also need to be made to decrease the stigmas associated with HIV and AIDS. Furthermore, there is an even greater need to increase public knowledge and understanding of HIV/AIDS.

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