Houston Area
EPIDEMIOLOGICAL REPORT

Prepared for

Houston Area Ryan White Planning Council

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Abbreviations

API	Asian Pacific Islander
CDC	Centers for Disease Control and Prevention
EMA	Eligible Metropolitan Area
HHSD	City of Dallas Health and Human Services Department
IDU	Intravenous drug user
MSA	Metropolitan Statistical Area
MSM	Men-who-have-sex-with-men
OI	Opportunistic infection
PCH	Partnership for Community Health
PHR6	Public Health Region Six
PPG	Prevention Planning Group (Public Health Region Six.)
STD	Sexually transmitted diseases
TCADA	Texas Commission on Alcohol and Drug Abuse
TDH	Texas Department of Health
TSDC	Texas State Data Center

ACKNOWLEDGMENTS

Several individuals and organizations assisted in providing the data for this report. Foremost, PCH would like to thank the Texas Department of Health, Ed Weckerly, an analyst in the HIV/STD Epidemiological Monitoring Branch, and Ms. Sharon King, the Manager of that office. They provided uniform data for this report.

This is an update of the 1999 Epidemiological report prepared by PCH. It continues to use some of the estimates from Dr. Scott Holmberg from the CDC and Dr. Samatha MaWhinney, from the University of Colorado. The odds ratio method of HIV projection was provided by Dr. Patrick Leung from the University of Houston. Ms. Jennifer Janney and Ms. Des Ilegbodu from the Houston RWPC Office of Support, HIV Services Division of the County Health Department have provided assistance and feedback throughout the process.

HOUSTON AREA EPIDEMIOLOGICAL REPORT
Prepared by the Partnership for Community Health
For Houston Area HIV Services Ryan White Planning Council
March, 2001

INTRODUCTION

The epidemiology of HIV and AIDS in the Houston Eligible Metropolitan Area (EMA), like other EMAs, is changing dramatically due to the success of medical treatment efforts and the shift of newly infected from the gay white communities to communities of color. The basic statistics through 1999 for the six-county Houston EMA and larger ten-county Health Service Delivery Area (HSDA) covered by the Consortium are shown in Table 1.

Table 1 AIDS Statistics for Houston

Cumulative AIDS Cases in Houston 10 County Health Services Delivery Area (HSDA) through 1999	18,645
Cumulative AIDS Cases in Houston 6 county Eligible Metropolitan Area (EMA) through 1999	18,538
People living with AIDS (PLWA) in Houston HSDA through 1999	7,674
PLWA in the Houston EMA through 1999	7,632
Projected number living with AIDS in 2003 in Houston area	9,240
Projected number of HIV infected in 2000 in Houston area	15,358 -20,670
Projected number of HIV infected in 2003 in Houston area	17,127- 22,439
Source for Cumulative AIDS and PLWA: Texas Department of Health	

In order to reliably estimate the number of persons who are eligible for care services, epidemiological data reporting all people living with HIV, subdivided by demographic and stage of infection is necessary. That data, however, is not available. The State of Texas began to collect HIV reporting data in 1999, but one year of data tells little about the overall impact of the epidemic. Because AIDS is a reportable disease, data on cumulative AIDS cases and persons living with AIDS are available. Consequently this report focuses on people living with AIDS (PLWA) and trends of people diagnosed with AIDS. While an estimate of the number of persons living with HIV is also presented, this number may not be accurate because of the multiple assumptions that are required to make the estimate. When looking at PLWA, a crude rule of thumb is that there are roughly twice as many HIV cases as living AIDS cases.

In the following section the trends for yearly AIDS diagnosis and PLWA are reviewed from 1992 to 1999 for the HSDA[1]. In interpreting these trends, note that there was a change in the definition of AIDS in 1993 that explains, in part, the increased rate of newly reported cases number after 1994. Also, the use of highly active anti-retroviral therapy (HAART) resulted in a

[1] Because there is often a year or more lag in reporting all AIDS cases, trends are reported through 1999. Attachment 1 shows cases reported through December 31, 1999. Readers should note that 1999 figures may increase as more cases are reported. The trend data is based on epidemiological reports for the 10 county HSDA, although this report is prepared for the HIV Care Council which has responsibility for the care services in the 6 County EMA. Because 99% of the cumulative AIDS cases and PLWA are from the EMA, the trends, analysis, and estimates of PLWA and HIV will be in the same range for the EMA and HSDA.

sharp decline of persons with HIV progressing to AIDS. In the third section, additional demographic and risk group information is presented for those living with AIDS in 1999. The next to last section of this report includes a projection of HIV incidence and the last section presents co-morbidities of STD with HIV infection.

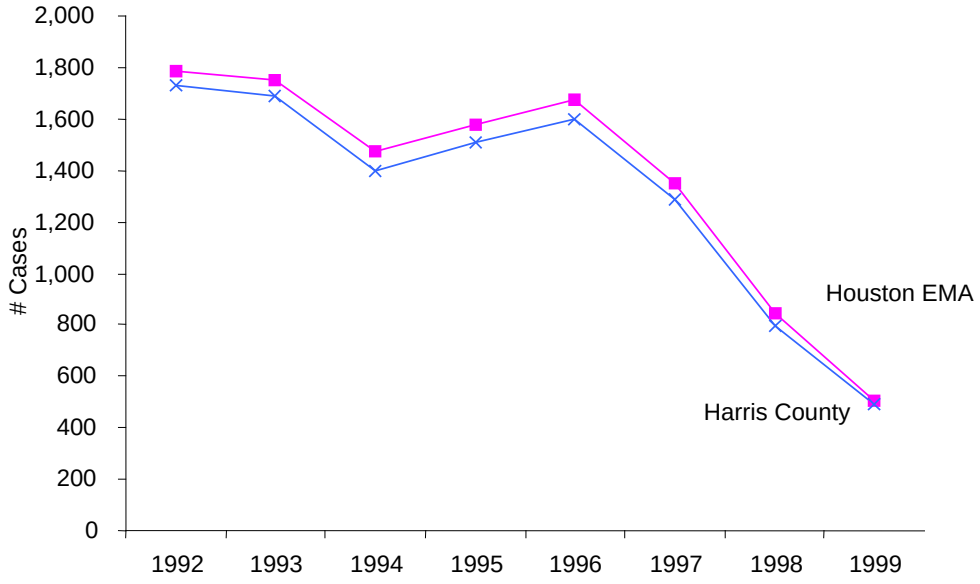
The attachments in the epidemiological profile present an extensive set of tables for cumulative AIDS: PLWA, mortality, and co-morbidity data. The body of this profile presents selected data in graphic form to make it easier to visualize and comprehend. If readers desire to see the exact number or greater detail for any of the figures, they should refer to the attachments.

TRENDS

People Diagnosed With AIDS Each Year

As an outcome of successful anti-retroviral and prophylactic treatments, many HIV infected persons are not progressing to AIDS as rapidly as in the past. In 1992, 1,786 persons were diagnosed with AIDS in the Houston EMA, while in 1999, 504 persons were diagnosed, indicating a decline of about 72%. Harris County accounted for the vast majority of all AIDS cases in the Houston EMA. In Harris County, 1,728 AIDS cases were diagnosed in 1992 (97% of all cases) and 494 in 1999 (98% of all cases). Figure 1 displays the decline in AIDS cases reported yearly in the six county Houston EMA and Harris County.

Figure 1 AIDS Cases by Year of Diagnosis: Houston EMA and Harris County



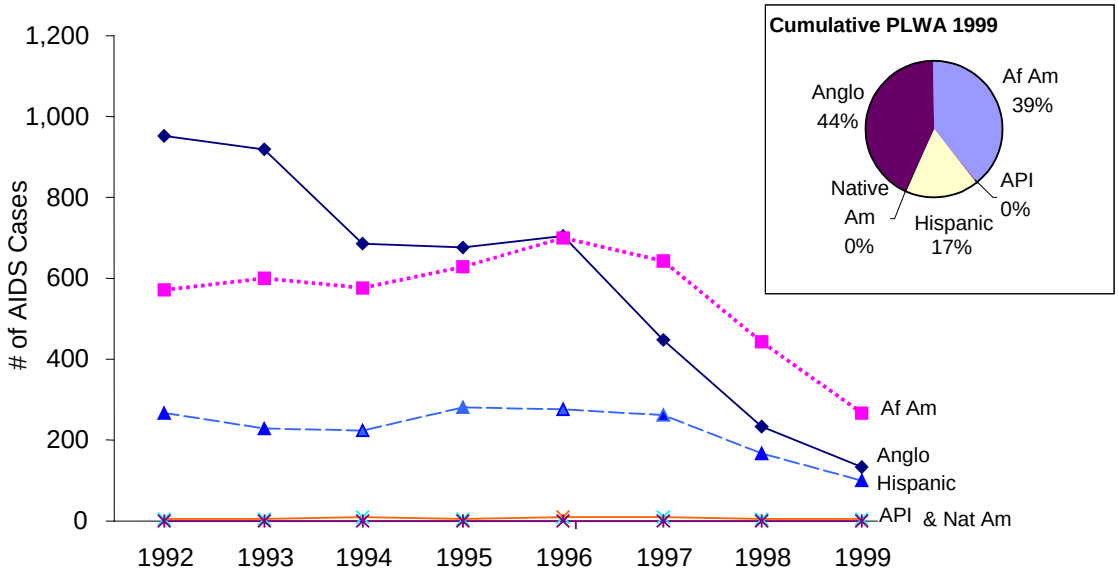
As shown in Attachment 1 Trend Data 1992-1999 Houston EMA and HSDA, at the end of this report, Harris County's decrease (71%) in newly diagnosed AIDS cases is about the same level as the decrease in Fort Bend. There were smaller decreases in yearly-diagnosed AIDS cases in Liberty, Montgomery, and Waller Counties. Austin, Chambers, Colorado, Walker and Wharton

counties had only a few newly diagnosed AIDS cases from 1992 to 1999, and noting trends would not be meaningful for those counties.

The decline in newly diagnosed AIDS cases has been among all races. Figure 2 shows that among Anglos, from 1992 to 1999, the number of newly diagnosed cases dropped 86%, from 954 per year to135 per year. African American cases decreased 54%, from 571 to 265 per year. Newly diagnosed Hispanic cases also declined 62%, from 265 per year to 102 per year.

In terms of absolute numbers, starting in 1997, African Americans have surpassed the number of newly diagnosed cases among all ethnic groups.

Figure 2 AIDS Cases by Year of Diagnosis by Race



Although the number of newly diagnosed AIDS cases is higher among African Americans, as shown in the framed pie chart of Figure 2, the largest number of people living with AIDS in 1999 continues to be Anglo (44% or 3,324 cases) followed by African Americans (39% or 2,984 cases), and Hispanics (17% or 1,326 cases.) There were also 35 Asian Pacific Islanders and 5 Native Americans/ Alaskan Natives living with AIDS at the end of 1999. As shown later in the section New HIV Diagnosis Compared to New AIDS Diagnosis, page 22, there are likely to be more African Americans living with HIV than Anglos.

Figure 3 indicates that while the number of newly diagnosed AIDS cases among males and females is declining, it is decreasing at a faster rate among males. This decline has been visible since 1996, and from 1996 to 1999, the number of newly diagnosed male cases declined 71%, while during that same period newly diagnosed female cases declined from 343 to 118 (66%). Still, in 1999, as shown in the framed pie chart in Figure 3, there were almost five times as many males living with AIDS as females. Also, later in the section estimating HIV, there is an estimated three to four times as many males as females living with HIV.

Figure 3 AIDS Cases by Year of Diagnosis by Gender

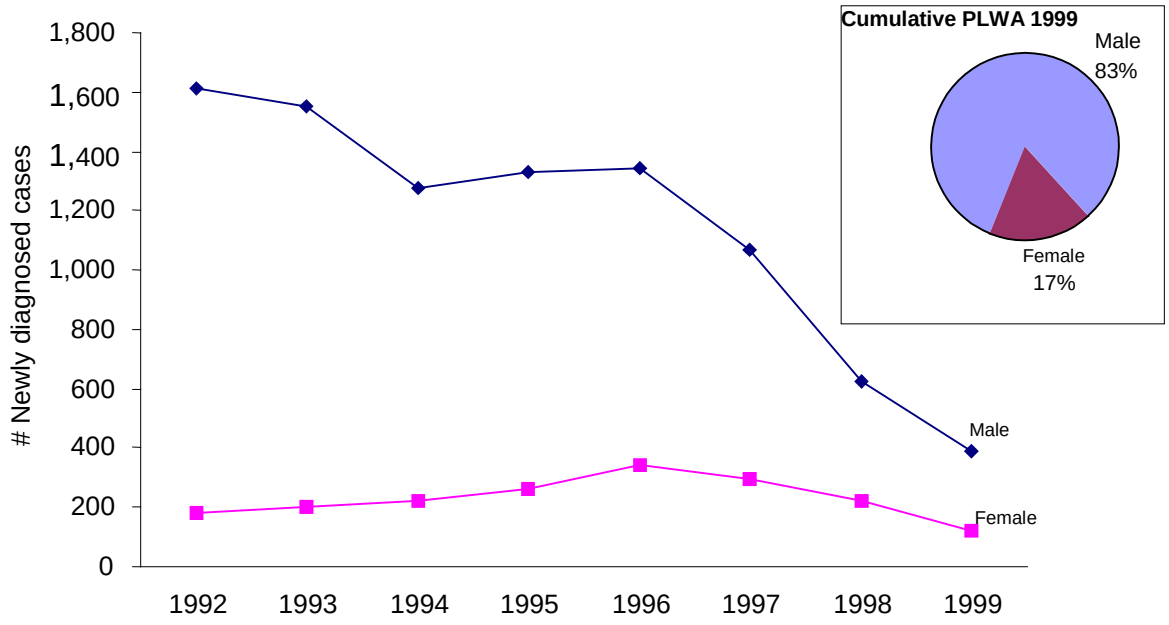
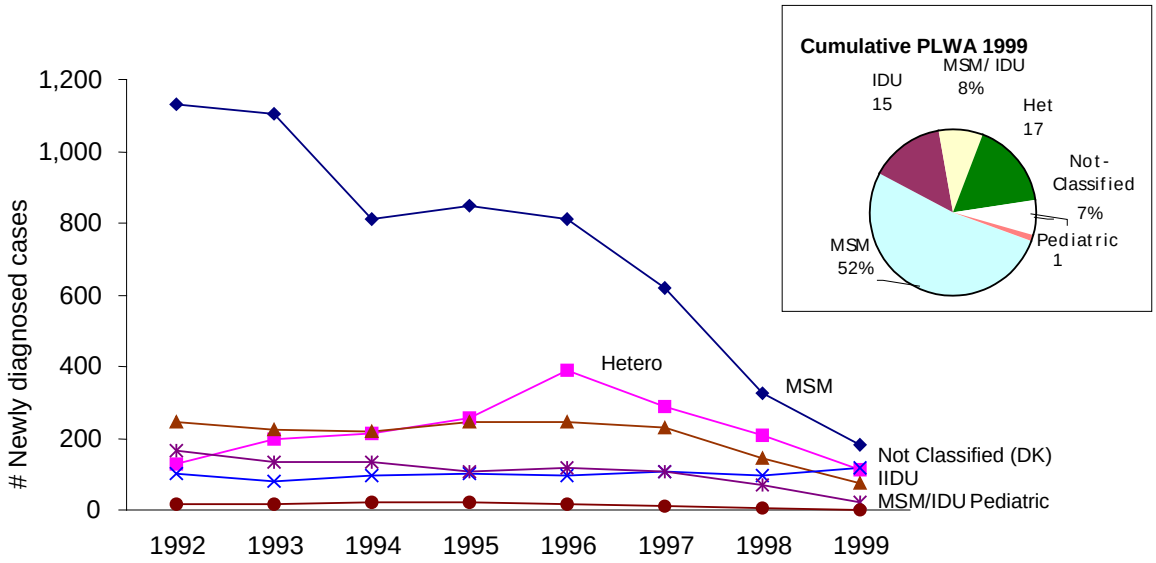


Figure 4 shows a general decline in diagnosed AIDS cases for exposure groups. Since 1992, men-who-have-sex-with-men (MSM) show a significant decline (84%) in the number of AIDS cases diagnosed yearly, while heterosexuals show only a slight decrease (14%). From 1992-1996, while newly diagnosed AIDS cases were declining in all other risk groups, heterosexual cases were increasing by nearly 200%. In part, this increase may reflect the better identification and diagnosis of AIDS among women. Nonetheless, the pie chart in Figure 4 shows that in 1999, the majority (52%) of PLWA continue to be MSM.

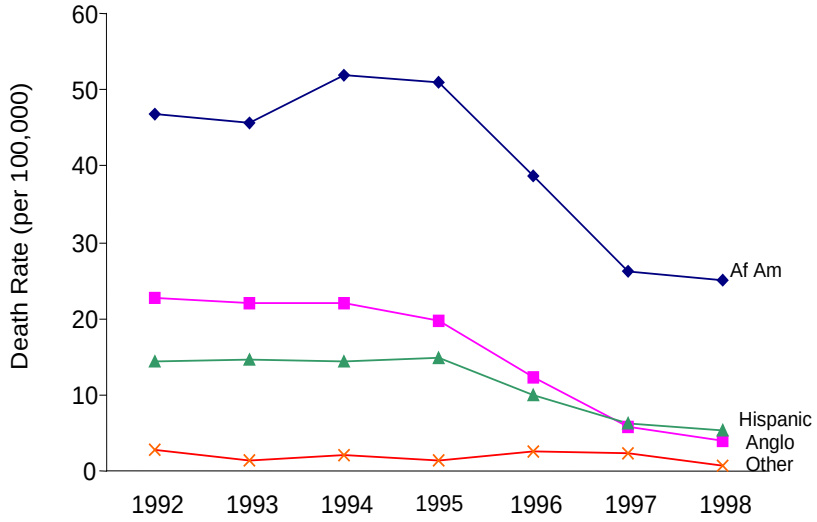
Figure 4 AIDS Cases by Year of Diagnosis by Risk Group



Death Rates

Because fewer persons are progressing from HIV to AIDS, and those with AIDS are living longer, it is not surprising that the overall death rate (defined by the crude death rate per 100,000[2]) is declining. Figure 5 indicates that there has been a decline among all ethnic populations. Although African Americans had the largest decline in the rate dying from AIDS between 1995 and 1997, in 1998 they continued to have three to five times the rate of death from AIDS as other ethnic groups.

Figure 5 HIV/AIDS Deaths by Ethnicity per 100,000 of Houston Area Population



The main reason for the gap between the death rate of African Americans and other ethnic populations is unlikely to be lower quality care, because, as shown in Figure 6, when African Americans in the care system are tracked, their death rate is similar to other ethnic populations. Unlike the death rate per 100,000, case fatality rates is a measure of the PLWA who have entered the care system and are tracked by TDH. Case fatality rates are expected to decline for more recently diagnosed cases because of improved care and shorter periods of time with AIDS.[3]

Figure 6 indicates that fatality rates have declined among all ethnic groups at about the same pace, with the exception of the Asian Pacific Islanders who show an irregular pattern of decline

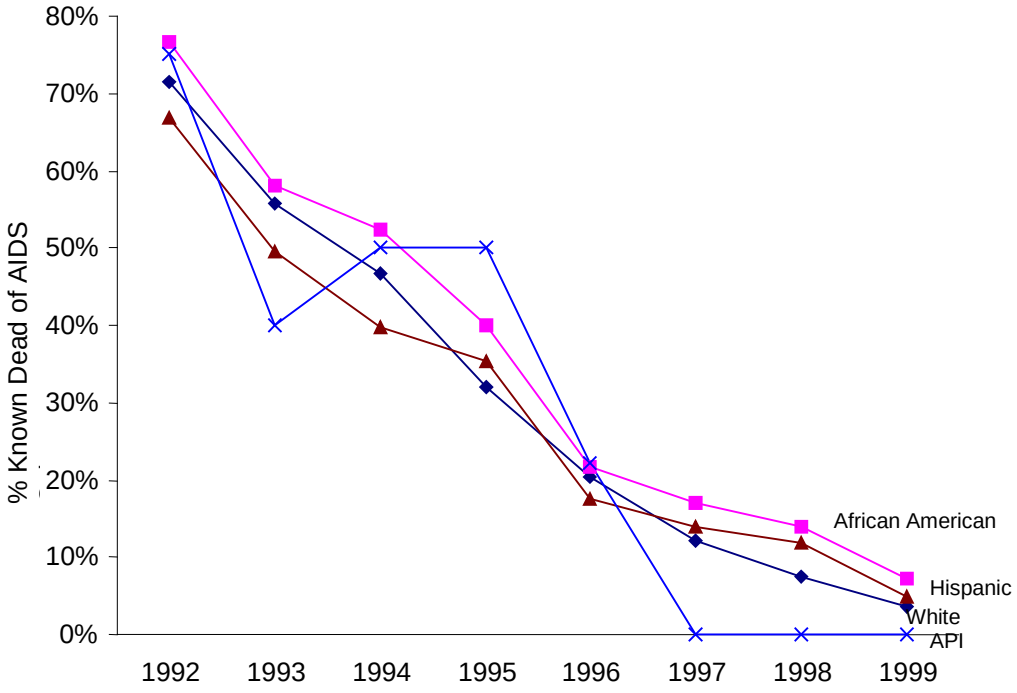
[2] The mortality rate, or rate of death per 100,000 reflects everyone who was recorded by a doctor on the death certificate as dying of AIDS-related disease for a specific year. The mortality rate captures trends in current deaths due to AIDS whether or not they were ever reported to TDH as a person with AIDS and regardless of when they were diagnosed.

[3] TDH notes that the PLWA tracked is a cohort in the sense that it applies to people diagnosed with AIDS during a certain calendar year. They actively pursue death reports on reported AIDS cases, doing matching with Bureau of Vital Statistics death certificates and receiving reports of deaths from our local sites. Each AIDS case is not actively followed. The "fatality rate" among the different ethnic groups measures the death rate among a cohort diagnosed with AIDS during a certain calendar year and tracked by TDH. It is useful for comparing between groups how lethal it was over time to be diagnosed with AIDS.

due to the small numbers diagnosed with AIDS and in care. In 1999, Anglos have the lowest fatality rates, followed by Hispanics and African Americans. While the decline in fatality rates began to level off between 1996 and 1997 for the Hispanics, the Anglo fatality rate continued on a steep decline falling below the Hispanic fatality rate in 1997. The precipitous decline that was noted in the mid 90s has more recently leveled off with the three ethnic groups displaying similar patterns with fatality rates ranging from 3.7% to 7.2%.

The small difference in fatality rates among ethnic populations in the cohort shows that African Americans who access the care system are surviving at about the same rate as Anglo and Hispanic persons living with AIDS. This would suggest that a reason for the higher death among African Americans, noted above, reflects that they are not accessing the care system as early in their disease progression as members of other ethnic groups.

Figure 6 % Deceased of People with AIDS in a Cohort Tracked by TDH by Year



People Living With AIDS

The impact of decreased mortality on the number of PLWA is dramatic. As shown in Figure 7, the number of PLWA increased 370% from 1992 to 1999 (1,630 in 1992 to 7,674 in 1999). The increase in PLWA is consistent across both gender groups (Figure 8), all ethnic populations (Figure 9) and risk groups (Figure 10). Notably, males are increasing at a higher rate than females and African Americans and Anglos at a faster rate than Hispanics. Figure 11 shows that the counties outside of Harris also generally show an increase in PLWA (Austin, Chambers, and Colorado counties each with less than ten AIDS cases are not shown on the graph).

Figure 7 Living with AIDS: Houston EMA and Harris County

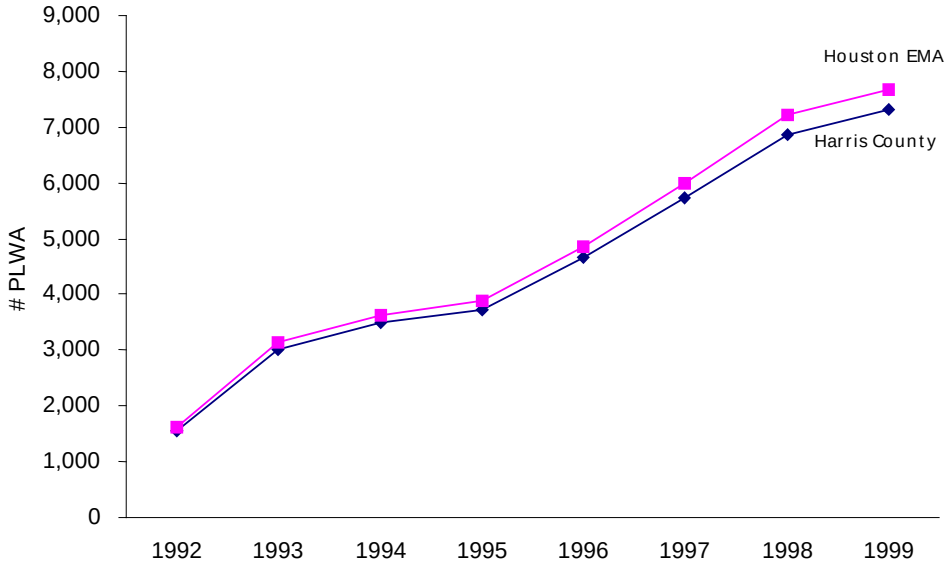


Figure 8 Living with AIDS by Gender

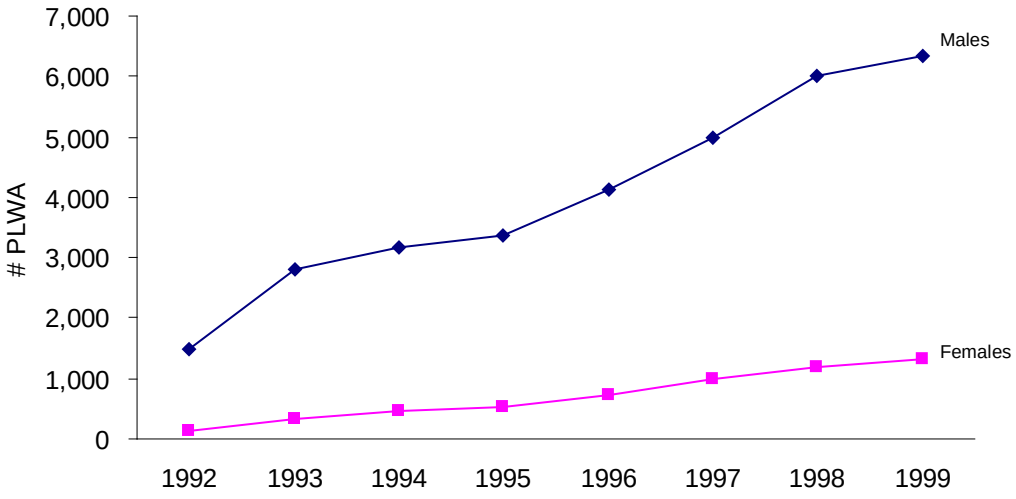


Figure 9 Living with AIDS by Ethnicity

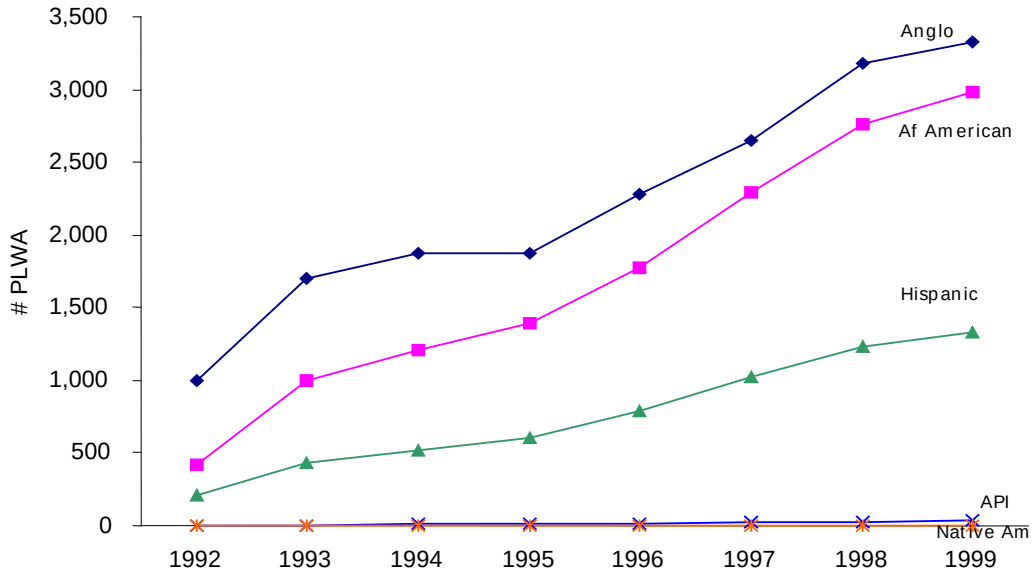


Figure 10 Living with AIDS by Risk Group

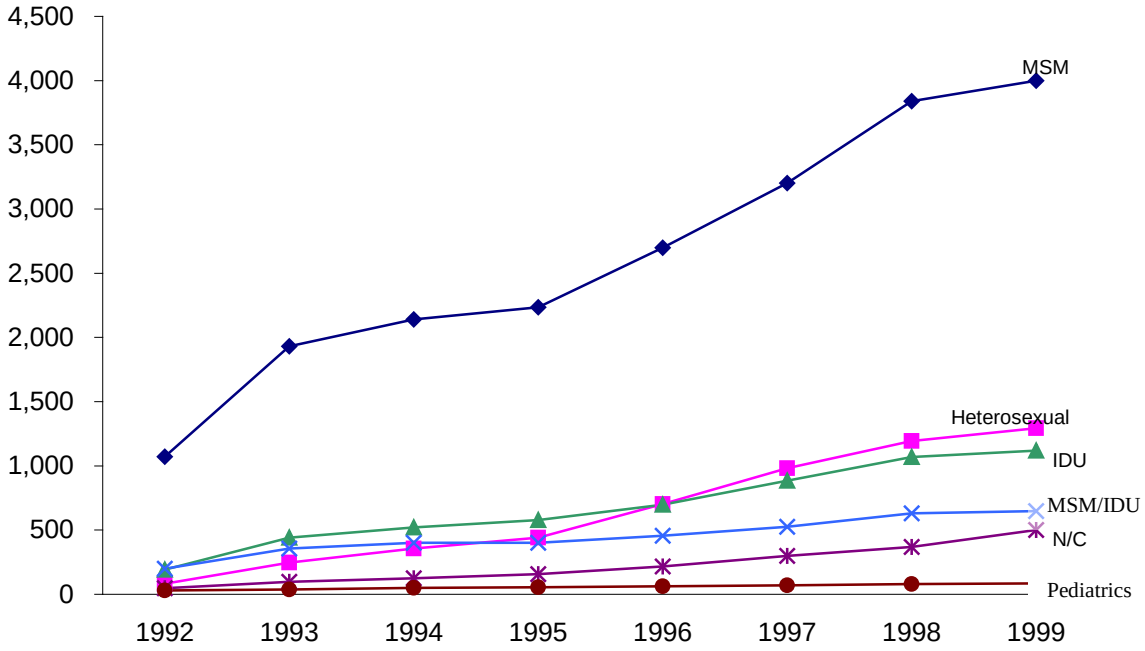
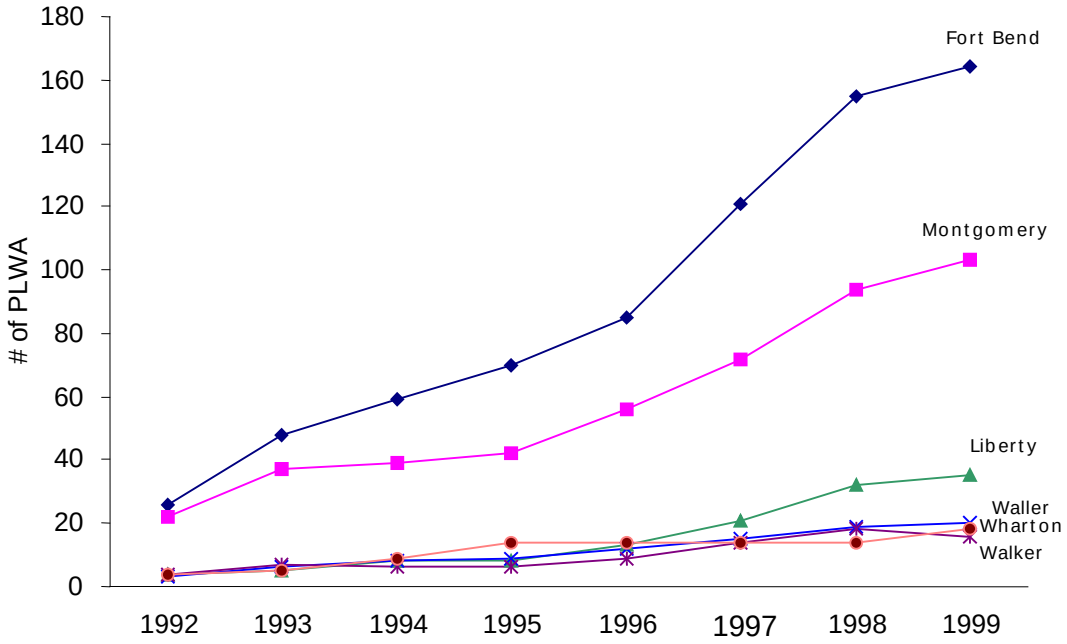


Figure 11 Living with AIDS by Counties outside of Harris County



Projecting The Number Of AIDS Cases Diagnosed Each Year

There is no agreed upon formula for estimating future AIDS cases. Provided the efficacy of treatment continues, fewer persons will die due to AIDS and fewer people will progress from HIV infection to AIDS as currently defined. In addition, there are different patterns of progression among different ethnic populations and risk groups. More widespread and earlier use of prophylactic treatments and anti-viral drugs have delayed the onset of opportunistic infections (OI's) and the decline in T-cell counts. With the continued use of combination therapies, people living with HIV are likely to maintain a higher T-cell count and low viral loads and avoid the progression to AIDS.

While new treatments provide a more optimistic outlook for those infected, the impact of these new treatments on the number of AIDS cases is uncertain. As shown above there is already a trend toward fewer diagnosed cases each year. Yet, there are many unknown factors that make valid projections of AIDS cases unreliable, including:

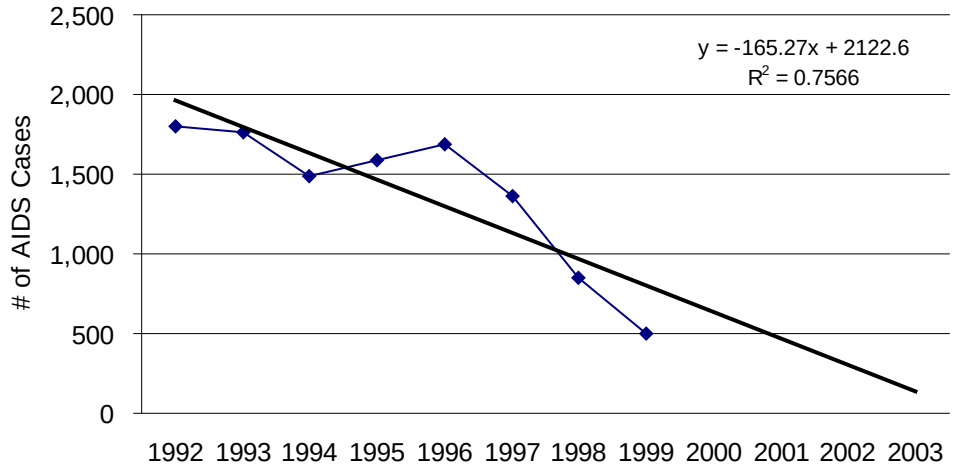
- the percentage of people living with HIV that will not be able to tolerate anti-retroviral treatments,
- the continued efficacy of treatments, and
- the access and availability of the treatments among the different communities most affected by HIV.

There is growing evidence of increased failure rates in some medication and the potential for adverse side effects of medication for long-term survivors. The decreasing rate in decline of mortality and leveling off of the decline in AIDS diagnosis, discussed earlier in this report, suggest that a plateau may have been reached in terms of eliminating AIDS through the current technology. Still, with new medications in the pipeline and the increased likelihood of early detection, the current trend in delay to progression to AIDS will probably continue for the next several years.

Given the great uncertainty, simple projections based on past history, plus some educated guesses about the progression of the disease is likely to be as accurate as more complex mathematical models based on equally uncertain assumptions. For the projected number of new AIDS cases four models are proposed.

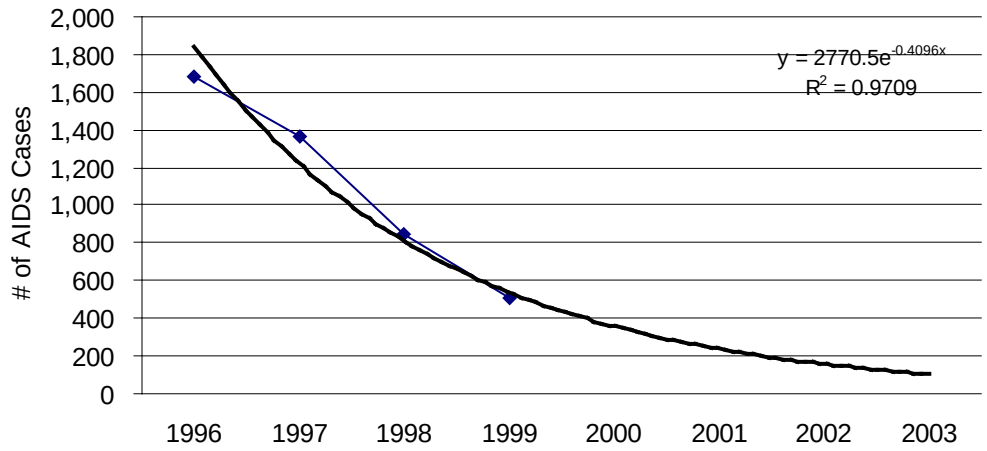
In the first model, Figure 12, a linear trend line is projected based on the pattern of decline from 1996-1999. The number of AIDS cases diagnosed each year in the Houston HSDA is projected to decline from 1,795 cases in 1992 to about 200 in 2003. Empirically, the coefficient of determination (R^2) is relatively high showing that the linear relationship is strong. This is consistent with the epidemic in Houston displaying a downward trend in the past. However, this is an unlikely scenario because the HSDA level in 1999 is 505, and recent studies among populations at risk suggest that the decline in the infection rate is leveling off. For example, infection rates among young MSM nationally and the recent evidence of poor adherence to medical regimens and failures in medical regimes further support a slowing of the rate of decline in new AIDS cases yearly.

Figure 12 Linear Trend for New AIDS Cases by Year of Diagnosis for Houston HSDA



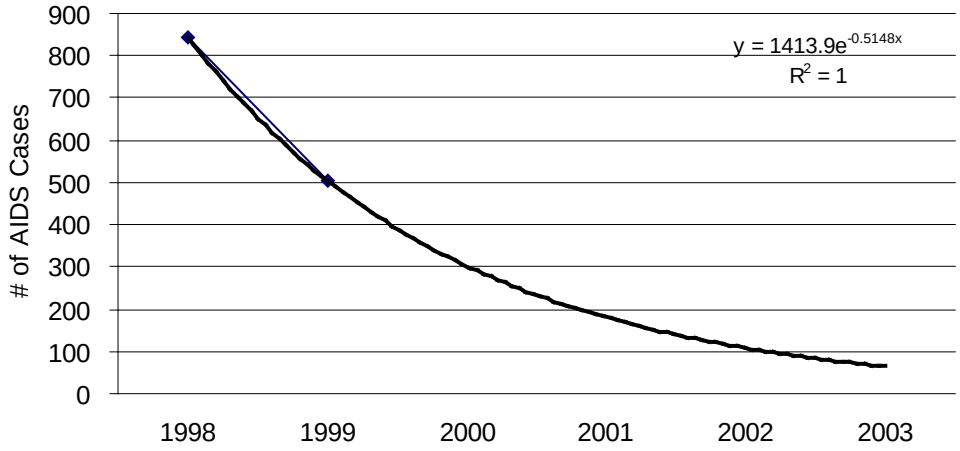
A second model, shown in Figure 13, shows an exponential projection based on the years from 1996 to 1999. An exponential projection is used because of the anticipated leveling off of newly diagnosed cases. Only the last four years are used because since 1996 there has been a consistent decline in the number of newly diagnosed cases that is likely to be the pattern given the efficacy of the medications. The "fit" is dramatically improved from the linear model above as indicated by the high R^2 of .97 shown in Figure 13, and the fit for 1999 appears very close. The projection yields about 100 new cases in 2003.

Figure 13 Loglinear Projection of Newly Diagnosed AIDS Cases (Reported 1999 data)



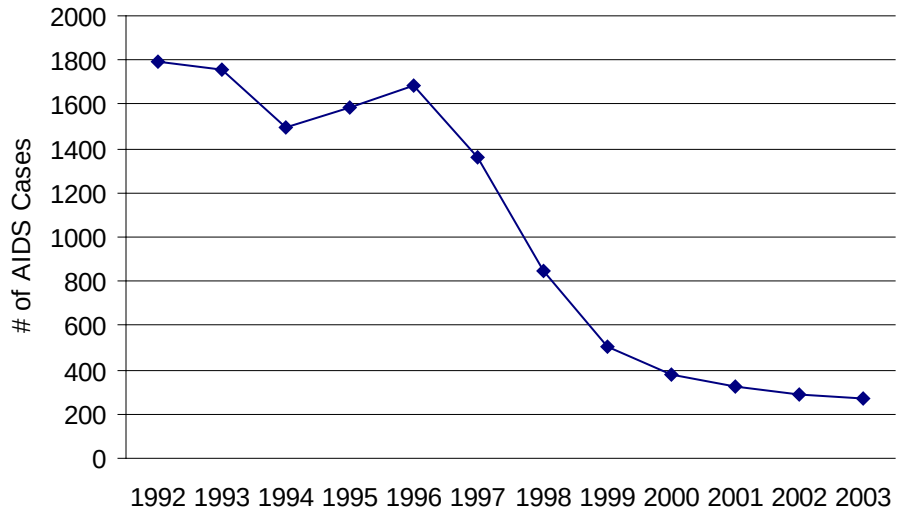
The same exponential projection is made in Figure 14, but assumes that the rate of decline in 1999 will be the same as it was in 1998. This projection yields a lower prediction of about 90 newly diagnosed cases projected for the year 2003.

Figure 14 Loglinear Projection of Newly Diagnosed AIDS Cases (Trend of 1999 cases based on 1997-1998 data)



A fourth model, provided in Figure 15, projects the trend of declining AIDS cases diagnosed. The decrease in newly diagnosed AIDS cases is assumed to accelerate slightly, but not linearly. This is based on the assumption that new medications will prove more effective thus slowing the trend of progression from HIV to AIDS, but that for some persons the medications will be ineffective. The explicit assumptions are that between 1997 and 1998 newly diagnosed cases decreased by 38%[4], and that from 1998 to 1999 it continued with a decline of about 40%. However, it is expected that this current level of decline will not continue and instead a leveling off will begin to be observed starting in 2000 and continuing into 2003. In this scenario, the cases diagnosed from 1992 to 2003 will decline from 1,795 to about 270 newly diagnosed cases.

Figure 15 "Best Guess" Trend of Cases by Year of Diagnosis for Houston HSDA



[4] The rate is based on the difference between the number of newly diagnosed AIDS cases in 1997 and 1998.

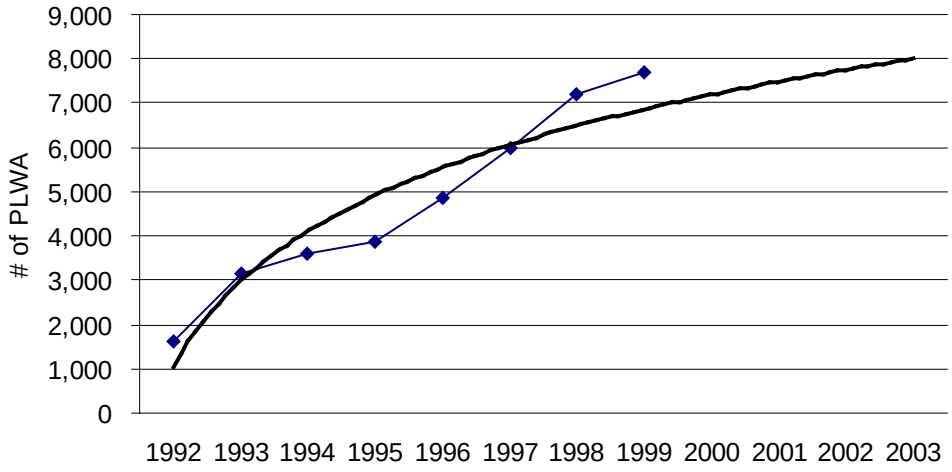
Projecting The Number of People Living With AIDS

As mortality rates continue to decline, the number of people living with AIDS will continue to increase. Two models are presented. The first is a logarithmic projection until 2003 based on the 1992-1999 data (Figure 16). It assumes that PLWA will continue to grow, but at a slowed rate because while fewer people die, fewer persons are also being diagnosed with AIDS. The estimates are that the cumulative number of PLWA will increase from 1,630 PLWA in 1992 to about 8,000 PLWA in 2003. This, however, is probably an underestimate given the current trend of the epidemic in communities of color, where progression to AIDS continues at a higher rate.

The second model, Figure 16, assumes that 94% of those living with AIDS will continue to live in 2000 and then 97% will live each year until 2003. Given the fewer number of persons projected to progress to AIDS, this model projects that cumulative PLWA will increase from 1,630 persons in 1992 to about 9,240 in 2003. As the profile of the PLWA changes, African Americans will increase comparable to Anglos and will account for about as many of the PLWA in the future. It is expected that PLWA will be about evenly divided among African Americans and Anglos, each accounting for about 40% of the PLWA in 2003.

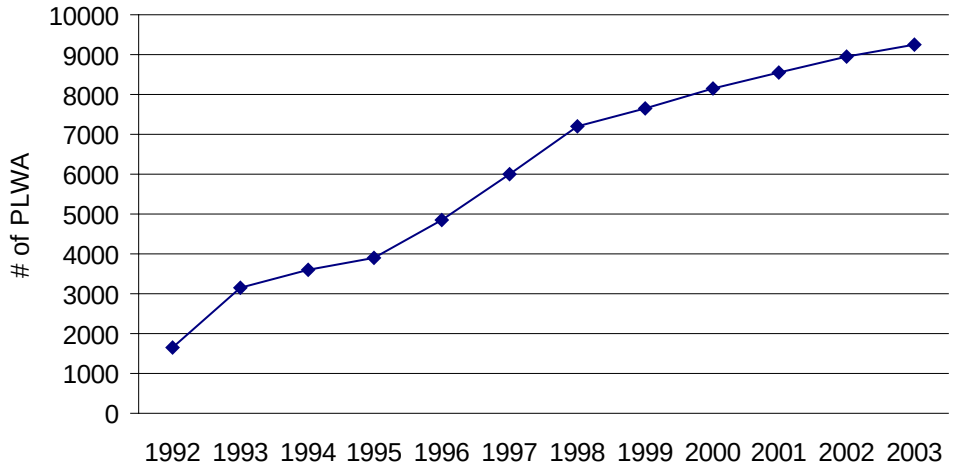
The projected model assumes a greater efficacy of treatment and both models assume a relatively low mortality rate.

Figure 16 Trend for PLWA in Houston Service Delivery Area Loglinear Model[5]



[5] Calculates the least squares fit through points by using the following equation: $y = -28.304x^2 + 801.58x + 568.02$ and represents the natural logarithm function.

Figure 17 Trend for PLWA in Service Area Revised Model



DETAILED PROFILE OF PEOPLE LIVING WITH AIDS IN 1999

The profile of PLWA is detailed below for 1999. The total number of living AIDS cases at the end of the 1999 was 7,674. Mode of exposure, ethnicity, and age, divided by gender, are shown in Figure 18 – Figure 20.

Risk Groups by Sex

About 83% of the cases are male, representing 6,354 cases, and 17% are female, representing 1,320 cases. As shown in Figure 18, more than half the PLWA are MSM. There are slightly more heterosexuals than IDUs. Among the 1,320 females, 721 (54%) report heterosexual exposure and 425 (32%) report IDU exposure. Males represent a majority among IDUs (62%) with 695 cases, but are a minority among heterosexuals (45%) with 573 cases.

Race by Sex

Figure 19 indicates that the 3,324 Anglos living with AIDS constitute about 43% of all those living with AIDS, followed by 2,984 African Americans (39%). The proportion of Anglos living with AIDS is less than the proportion of Anglos in the general population (44% Anglos living with AIDS versus 53% in the general population). In contrast, the proportion of African Americans living with AIDS is much greater than in the general populations. African Americans represent 39% of the PLWA and 18% of the general population. There are 1,326 (17%) Hispanics living with AIDS which is proportionately fewer Hispanics than in the general population (25%).[6] The majority of females living with AIDS (66%) are African American.

[6] General population figures are for 1999 in the Ten County HSDA as estimated by the Texas Population Estimates and Projections Programs.

Figure 18 PLWA through 1999 by Exposure Group and Gender

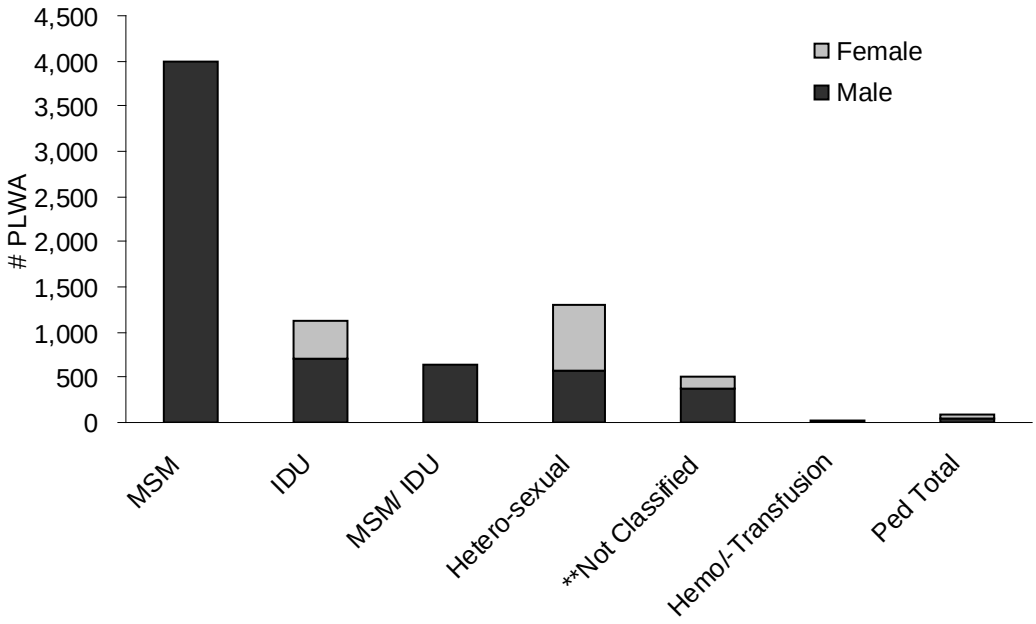
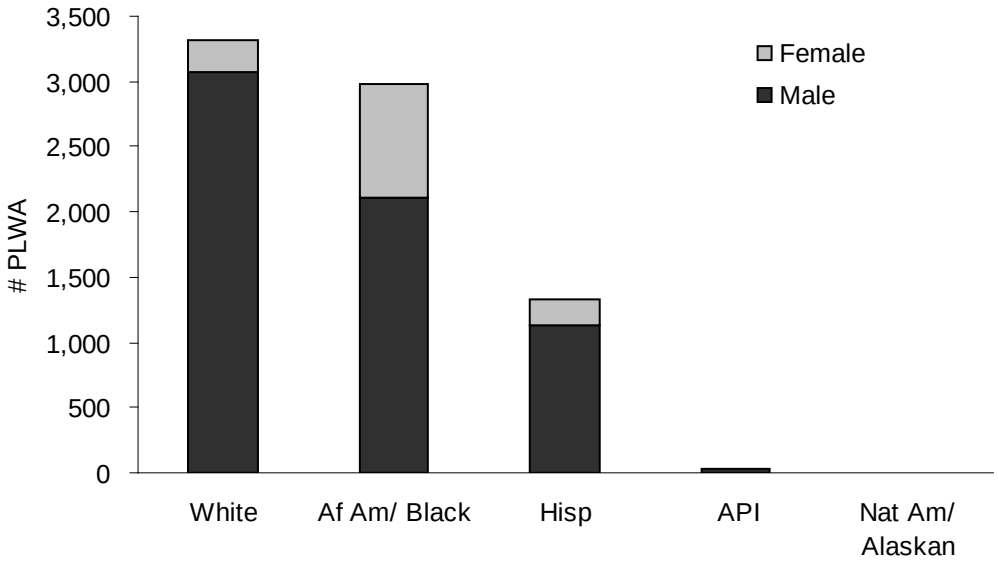


Figure 19 PLWA through 1999 by Ethnicity and Gender

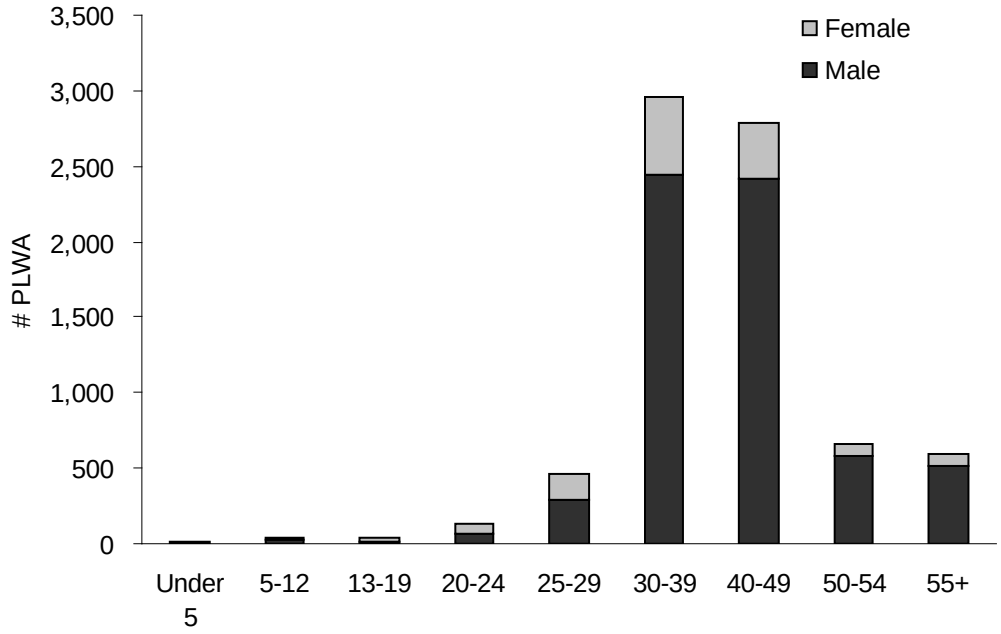


Age by Sex

Figure 20 shows that 39% of those living with AIDS are between 30 and 39 years of age and 36% are between the ages of 40 and 49. About 16% of the PLWA are over 50 and 3% are under 25. There are 17 children under 5 years of age living with AIDS, 43 between the ages of 5 and

12, and 34 adolescents (13-19). Among individuals under the age of 30, females constitute almost one quarter (22%) of those living with AIDS

Figure 20 PLWA through 1999 by Age Group and Gender



In 1999, more PLWA 29 years of age or younger were African American (393 out of 683 cases) than any other ethnicity. Among PLWA between the ages of 30 and 39 years there were roughly an equal amount of African American than Anglos, while among PLWA over the age of 40, almost half were Anglos (2011 out of 4039 cases).

Risk Groups by Race

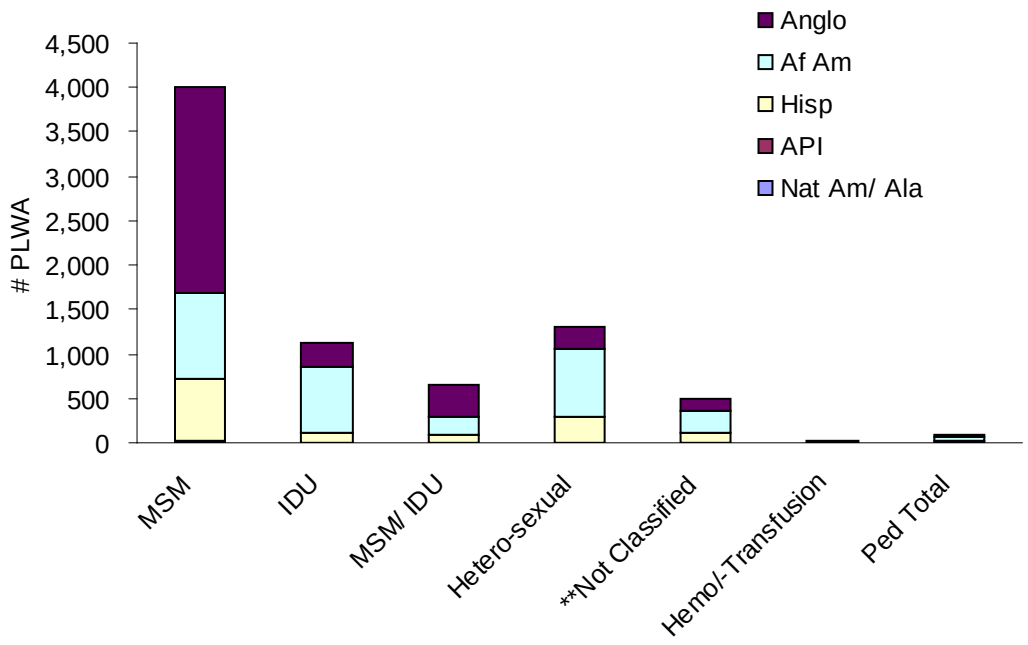
The profiles of the risk groups living with HIV and living with AIDS are different. Figure 21 indicates that:

- MSM living with AIDS are more likely to be Anglo (2,301) than non-Anglo (African American (973), Hispanic (707), Asian and Pacific Islanders (15), and Native American (3)).
- IDUs are more likely to be African American (727) than Anglo (271) or Hispanic (118).
- MSM/IDUs are more likely to be Anglo (358) than African American (210) or Hispanic (81).
- Almost 60% of heterosexual cases are African American (771) followed by Hispanics (284) and Anglos (232).

Fifty-two percent (52%) of those living with AIDS are MSM. Heterosexuals represent about 17% and IDUs represent about 15%. MSM/IDU comprise 8% of those living with AIDS.

Pediatric exposure[7], including parental transmission, transfusion, and hemophiliacs accounted for 84 of the living AIDS cases. Twenty individuals contracted AIDS through blood or blood products.

Figure 21 PLWA in 1999 by Risk Group and Race



Over 95% of the PLWA in 1999 come from Harris County. Fort Bend County has about 2% and Montgomery County has about 1.5%. The remaining counties in the EMA have less than 1% of the PLWA.

While the number of cases in the rural counties is small, the four counties with more than 30 cases, Harris, Fort Bend, Montgomery, and Liberty have similar profiles. Waller County reports only 20 cases and Chambers County reports only three cases.

Young People Living with AIDS

Infants, youth, and adolescents living with AIDS have special needs. The trend of newly diagnosed infections and PLWA is shown in Figure 22. The lines in Figure 22 indicate the number of newly diagnosed cases, and it shows that among those 0-12 years old there has been a decline. In 1999 no newly diagnosed AIDS case was reported among those 0-12 years old. There has also been a decline in newly diagnosed cases among those 13-24. In 1999 there were 34 new cases of AIDS diagnosed among those 13-24 years old.

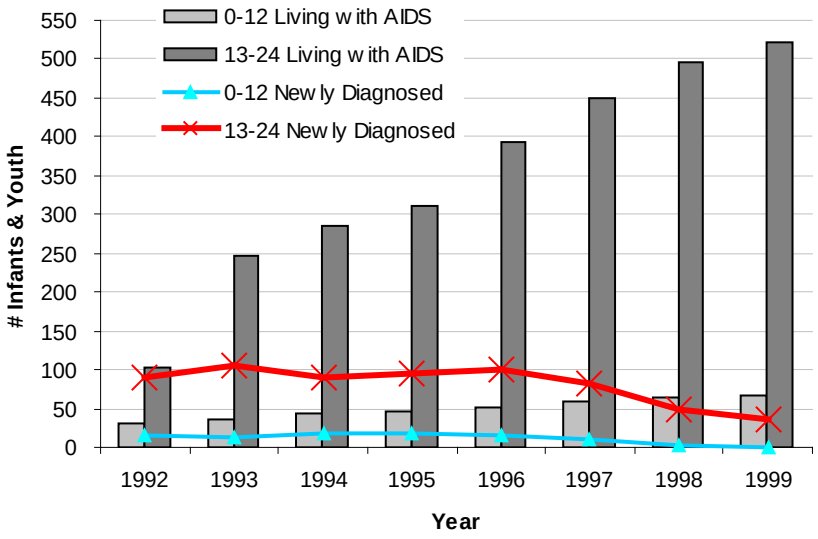
[7] Pediatric exposure cases may not be reflected among the less than 13 age category of the PLWA because the PLWA numbers reflect the person's true age, adjusted to 12/31/99, not their age at diagnosis.

The bars in Figure 22 show the number of young and adolescents living with AIDS. The number of adolescents living with AIDS age 13-24 has increased over 5 times, from 104 in 1992 to 522 in 1999. Those from 0 to 12 have increased over two times, from 30 in 1992 to 67 in 1999. The increasing number of youth and adolescents living with AIDS is an indication of increased survival rates of the young living with AIDS, rather than an increased number being diagnosed with AIDS each year. As an indicator of the growing survival rate for infants living with HIV, 56% of the adolescents indicated becoming infected as an infant (reported as a pediatric exposure).

In 1999 there were 17 infants under the age of 5 living with AIDS. There are 60 children, about evenly split between males and females, under the age of 13. Thirty-four adolescents between the ages of 13 and 19 are living with AIDS, and an additional 127 young adults between the ages of 19-24 living with AIDS. As with the younger cohort, there are about the same number of males and females.

Youth living with AIDS are much more likely to be from communities of color. More than 90% of the adolescents living with AIDS are either African American (65%) or Hispanic (27%). Similarly the pediatric exposure cases are mainly among African Americans (60%) and Hispanics (31%). As an indicator of the growing survival rate for infants living with HIV, 56% of the adolescents indicated becoming infected as an infant (reported as a pediatric exposure).

Figure 22 Infants and Youth Living with AIDS



PEOPLE LIVING WITH HIV IN 1999

Knowing the number of persons living with HIV enables health professionals to plan and anticipate the number of service slots needed in the HIV/AIDS care system. As drug treatments

delay the decline of T-cell counts and delay the progression to AIDS of those infected with HIV, the usefulness of AIDS case data for determining need decreases. While some services, particularly end stage services such as hospice care, may have further requirements of a later stage of infection, for most services supported by Ryan White, HIV infection and low income are the basic eligibility requirements. Consequently, in estimating need and unmet need, the number and profile of persons living with HIV is the most useful data. With an emphasis on early treatment, the Ryan White Care Act reauthorization and HRSA have stated that in the future, need will be based more on the incidence and prevalence of HIV than AIDS.

The CDC has been encouraging all states to develop reliable HIV surveillance systems because the AIDS case reporting system is no longer adequate to track the HIV/AIDS epidemic. In 1998, Texas initiated discussions in the community regarding the implementation of an HIV surveillance system for statewide reporting to enable the State to begin the better tracking of HIV incidence, prevalence, and trends. In January 1999, the Bureau implemented HIV reporting by name. The hope is that this will enable the State to provide more timely services to HIV-infected persons and more effective preventive education.

Currently, however, the one-year of HIV data available reflect only the number of persons who were tested, and not the number of persons living with HIV, and there is no aggregate data on the number of persons living with HIV. It is not comprehensive, as many persons living with HIV do not get tested and remain unidentified. On a national basis, the CDC estimates that about two-thirds of those infected know their status.

The profile of newly diagnosed PLWH is shown from Figure 23 through Figure 29. Key findings include:

- Heterosexuals are the risk group most likely to be diagnosed with HIV (265), followed by MSM (244), and "not classified" (225).
- African Americans are over three times as likely to be diagnosed as Anglos (670 vs. 222). There are fewer Hispanics than Anglos diagnosed (158 vs. 222).
- There were about one-and-a-half times as many men diagnosed with HIV as women (640 males and 428 females).
- Harris County has the vast number of persons newly diagnosed (96%).

Risk Group by Sex

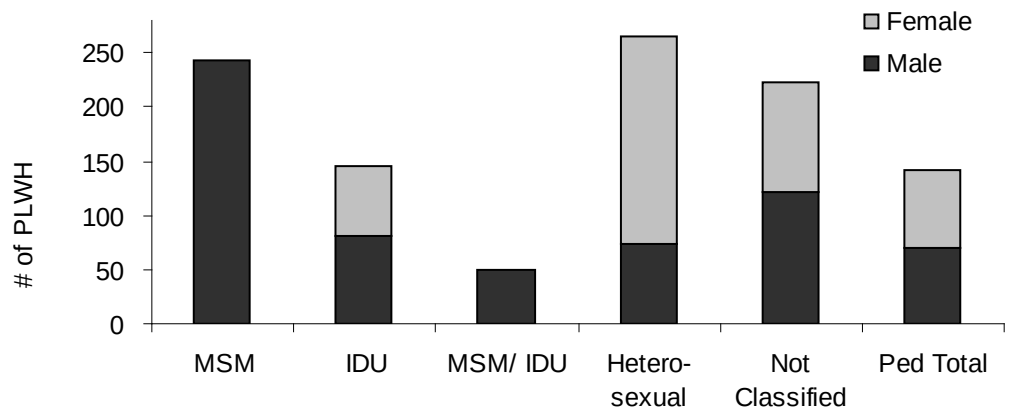
In comparing newly diagnosed PLWH to PLWA, there are more women. Figure 23 shows that, of the newly diagnosed HIV cases, 40% are female, representing 428 cases and 60% of the cases are male, representing 640 cases. This is in contrast to females representing under 20% of PLWA.

Among the males, at least 27% of the PLWH are MSM and MSM/IDU, and probably a large portion of the "not classified" contracted HIV infection through male-to-male sex. Still, among all PLWA, over half are MSM, indicating a decrease in MSM among PLWH.

As the profile of those living with HIV shifts there are more heterosexuals (265) diagnosed with HIV than MSM (244). Similar to PLWA, the vast majority of the 265 heterosexuals newly infected with HIV are females (72%). The IDUs are more closely divided among females (64 cases) and males (81 cases). IDUs represent about 14% and MSM/IDUs comprise 5% of those living with HIV.

The number of pediatric HIV cases stands out in this chart. Of the 141 pediatric cases, 122 (87%) measure the mothers HIV status and do not necessarily indicate a positive status of the infant, consequently the number of infants infected will be considerably smaller. Also the number of PLWH under "unclassified" risk factor account for 21% of all PLWH, a much higher percentage than represented among the PLWA. The large numbers of "unclassified" means that those tested do not provide their risk group. Surveillance may reduce this number in the future, but it is an indication that as HIV infection becomes more prevalent in communities of color that persons may be less aware of the risk factors or less likely to identify themselves with MSM or drug use behaviors that carry a stigma in their community.

Figure 23 PLWH through 1999 by Exposure Group and Gender



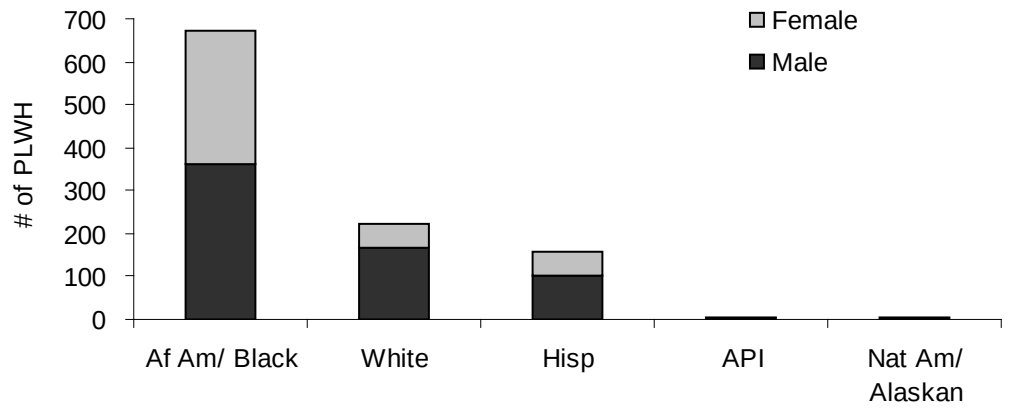
Race by Sex

Figure 24 indicates that the ethnic profile of recently diagnosed PLWH is dramatically different than the profile of PLWA. Among all people living with AIDS, Anglos are the largest group. Among PLWH diagnosed in 1999, African Americans represent more than 60% (670). Anglos living with HIV constitute the second largest population with about 21% of all those living with HIV, followed by 158 Hispanics (15%). Like Anglo males living with AIDS, the proportion of Anglo males diagnosed with HIV in 1999 is lower than their proportion in the general population (16% Anglos living with HIV versus 26% in the general population). Similarly, the proportion of Hispanic males living with HIV (9%) is less than Hispanic males in the general population

(13%).[8] In contrast, the 34% representation of African American males among PLWH is significantly greater than their 9% representation in the general population.

The majority of females living with HIV (73%) are African American. The proportion of African American females diagnosed with HIV (29%) is dramatically greater than their proportion in the general population (9%). In contrast, the proportion of Anglo females diagnosed with HIV in 1999 (5%) is substantially less than their percentage in the general population (27%). Hispanic females also have a much smaller proportion of all HIV infections in 1999 (5%) as compared to their representation in the general population (12%).

Figure 24 PLWH through 1999 by Ethnicity and Gender



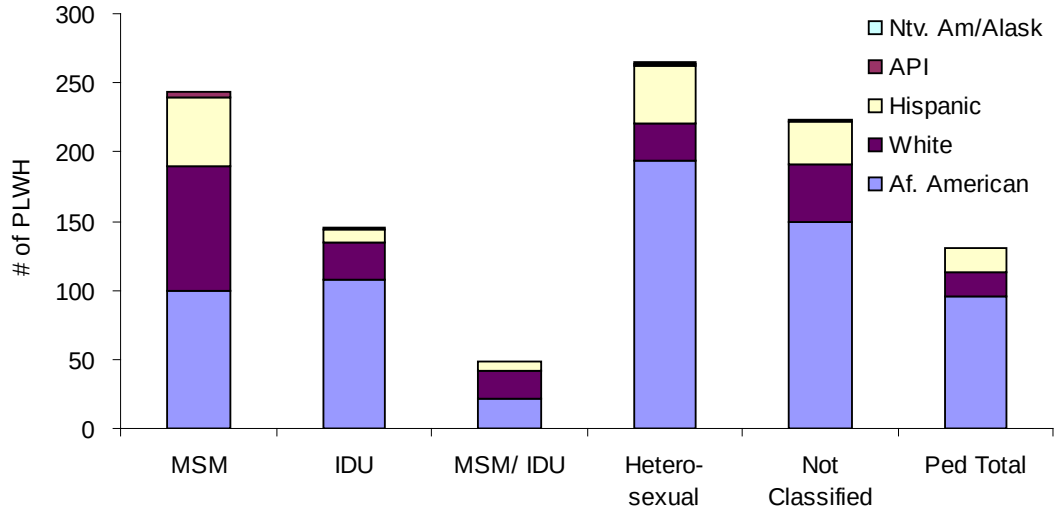
Risk Groups by Race

The profiles of the newly diagnosed PLWH by race and risk group show the substantial shift in the epidemic from Anglo MSM to African Americans and heterosexuals. African Americans constitute over 60% of the PLWH and Figure 25 indicates that:

- MSM living with HIV are slightly more likely to be African American (41%) than Anglo (37%) Hispanic (21%), or Asian Pacific Islander (1%).
- IDUs are also disproportionately more likely to be African American (75%) than Anglo (18%) or Hispanic (7%).
- Over 70% of heterosexual cases are African American (194) followed by Hispanics (42) and Anglos (27).

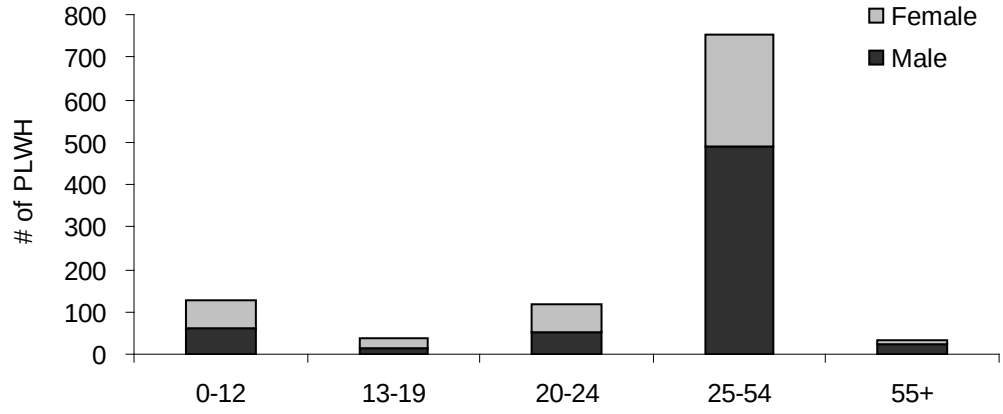
[8] General population figures are for 1997 in the Six County EMA as estimated by the Population Division of the U.S. Bureau of the Census, Washington, D.C.

Figure 25 PLWH in 1999 by Risk Group and Race



Like those living with AIDS, Figure 26 shows that the vast majority (70%) of those living with HIV are between 25 and 54 years of age. About 3% of the PLWH are over 55, 15% are youth between the ages of 13 and 24, and 12% are under the age of 12. There are 11 infants living with HIV, 115 between the ages of 2 and 12, and 38 adolescents (13-19).

Figure 26 PLWH through 1999 by Age Group and Gender



As shown in Attachment 1, 96% of the PLWH in 1999 come from Harris County. Fort Bend has about 2%, and all others have less than 1% of the PLWH.

New HIV Diagnosis Compared to New AIDS Diagnosis

The comparison of people diagnosed with HIV and people diagnosed with AIDS in 1999 reveal the current trend in the epidemic. The general finding from is that the there are over twice the number of persons diagnosed with HIV than diagnosed with AIDS in 1999, and the largest differences are among heterosexuals and "unclassified". These comparisons are displayed in Figure 27 through Figure 29:

Figure 27 compares risk groups recently diagnosed with HIV and AIDS. The figure clearly shows the movement in the epidemic from MSM to heterosexual and "not classified". Heterosexuals have over twice the number of new HIV infections as newly diagnosed AIDS. MSM continue to be the risk group with the largest number of new AIDS diagnoses, representing more than one-third (36%) of newly diagnosed AIDS cases. However, while there were more MSM diagnosed with HIV than with AIDS, MSM represent less than 25% of those newly diagnosed with HIV. The likely reason is that heterosexuals are newer to the epidemic, while MSM have been infected longer, and thus more likely to progress to AIDS.

HIV and AIDS diagnosis by ethnicity, shown in Figure 28, reinforces the fact that African American will have a greater proportion of PLWH than PLWA. As seen in the chart, Hispanics and Anglos have a similar profile, with a greater number of HIV cases being diagnosed than AIDS cases, but nowhere near the difference as African Americans. For Hispanics, this may indicate preventive practices are more effective among Hispanics than African Americans, or that Hispanics are still reluctant to be tested, and thus are being under-counted.

Figure 29 illustrates that women are more likely to be diagnosed for HIV (40%) than diagnosed with AIDS (23%), and this trend is reflected in the larger number of heterosexuals reported earlier. The vast majority of infected heterosexuals are African American (73%), and a majority of those are women (71%).

Figure 27 HIV Diagnosis and AIDS Diagnosis by Risk Group – 1999

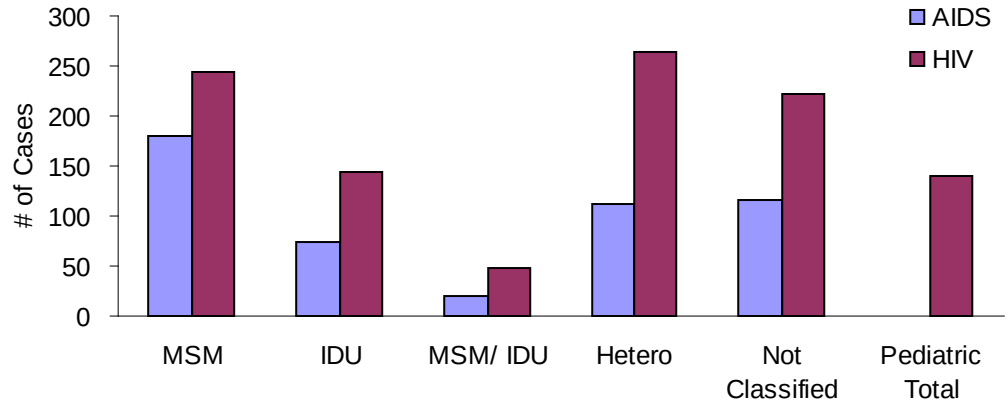


Figure 28 HIV Diagnosis and AIDS Diagnosis by Ethnicity – 1999

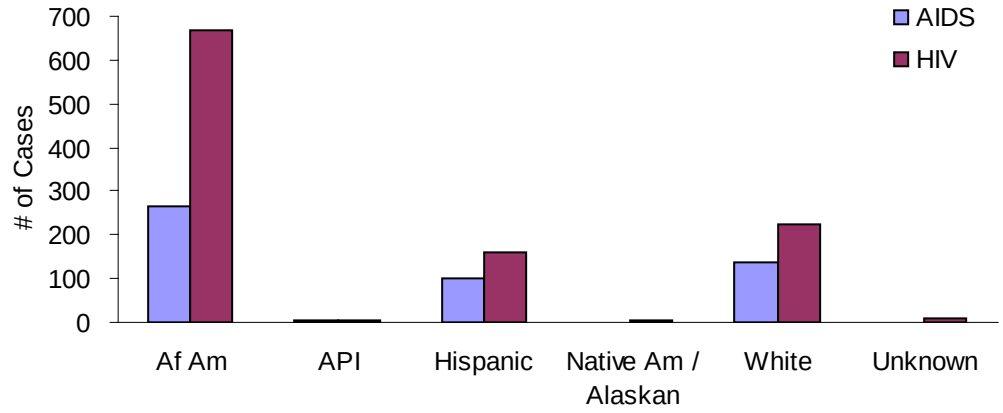
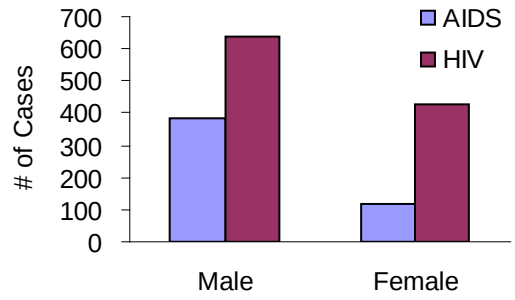


Figure 29 HIV Diagnosis and AIDS Diagnosis by Gender– 1999



HIV ESTIMATES

In the last epidemiological review, using data from 1997, PCH estimated that in 1999 there would be between 12,982 - 20,235 PLWH/A living in the Houston EMA. The lower estimate was based on a method used by Holmberg[9], updated for current demographic and migration trends. The higher figure was based on the average city clinics' HIV infection rates for the 1997 and 1998 multiplied by the interim estimate and the Texas State Data Center (TSDC) adjusted population estimates.

This epidemiological profile updates the past estimates based on the Holmberg estimate of at-risk populations. It also includes the CDC estimate provided to TDH as of December 1999.

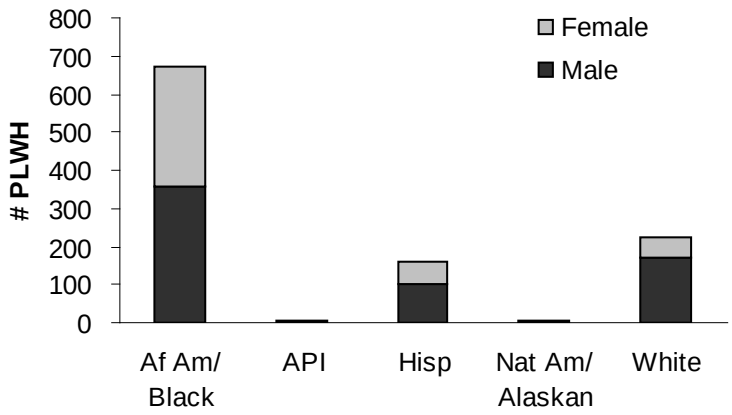
In making projections, the HIV data provides more accurate distributions among the populations who are becoming infected. Still, the data is used to project HIV infections and the warning that was written in 1999 is still valid: *There is no measure of HIV infections and any methods used here can only be as accurate as the assumptions made in calculating HIV.*

Typically when PCH has to make an estimate of HIV without supporting HIV data, a short-hand method used is that there are about twice the number of PLWH as PLWA. From the one year of HIV data, this short-hand means seems valid in Houston. In 1999, there were505 newly diagnosed cases of AIDS and there were 1068 cases of HIV reported. Using this short-hand, based on the 7,674 PLWA reported in the Houston EMA and HSDA counties, there would be an estimated 15,358 PLWH/A.

Not surprisingly, as shown in the figures above (Figure 27 - Figure 29), females, African Americans, and heterosexuals (many of whom are the same persons), have over twice as many HIV cases reported as new cases of AIDS diagnosed in 1999. Also, Figure 30, further illustrates the disproportionate rate of HIV among African American women as compared to other ethnic and gender groups. These figures indicate that these populations are increasing faster than males, Anglos, and MSM. Still, as reported earlier, the profile of the HIV epidemic is expected to change slowly.

[9] The Holmberg method is described in the American Journal of Public Health, May 1996 (Vol. 86, No. 5). See the Dallas EMA AIDS Epidemiology Report for a more complete description of how his methods were used and modified.

Figure 30 PLWH – Ethnicity by Gender



The CDC estimates for 1999, based on a statistical method called multiple regression (further explained in Attachment 5), are shown in Table 2 below. CDC estimates that there are 8,761 PLWH. With the reported PLWA, there would be about 16,435 persons living with HIV and AIDS.

Table 2 CDC Estimate of HIV - 1999

	Number	Percent
TOTAL HIV	8,761	100.0%
Gender		
Male	6,742	77.0%
Female	2,019	23.0%
Risk Group		
MSM	4,635	52.9%
IDU	1,202	13.7%
MSM/IDU	537	6.1%
Hetero	2,324	26.5%
Hemo/Trans	65	.7%
Race		
White	3,427	39.1%
Black	4,338	49.5%
Hispanic	951	10.9%
Asian	38	0.4%
Indian	9	0.1%
Age		
13-19	48	0.6%
20-29	1,803	20.6%
30-36	2,795	31.9%
37-44	2,649	30.2%
45+	1,467	16.7%

The results from the modified Holmberg method, using current census numbers, and providing the distribution of HIV cases based on the 1999 HIV report, is shown in Table 3. The number of people living with HIV is estimated to be 12,996. With the reported PLWA, there would be about 20,670 persons living with HIV and AIDS, which is about 4,000 PLWH/A more than the CDC estimate.

Table 3: HIV Rates – Houston EMA Area based on Holmberg updated with 1999 Census for MSA

HOUSTON EMA AREA: Total pop: 4,150,426	Estimated At-Risk for HIV	HIV Cases per 1000	% of at-risk population infected	HIV+ 2000
IDU	36,840	44	4.4%	1,628
MSM	54,058	185	18.5%	9,974
Heterosexuals	91,699	15	1.5%	1,394
Total	182,597			12,996

Table 4 extrapolates the modified Holmberg figures to different populations using the percentage of each population currently diagnosed with HIV in 1999

Table 4 Estimates Of HIV For Subpopulations for 2000

	Population estimate	Estimate HIV positive	% Population PLWH
IDU	36,840	1,628	100.0%
IDU male	20,594	910	55.9%
IDU female	16,246	718	44.1%
IDU African American	27,446	1,213	74.5%
IDU Hispanic	2,542	112	6.9%
IDU Anglo	6,594	291	17.9%
MSM	54,058	9,974	100.0%
MSM Anglo	1,947	3,680	36.9%
MSM African American	22,164	4,089	41.0%
MSM Hispanic	11,082	2,045	20.5%
Heterosexual	91,699	1,394	100.0%
Hetero male	66,482	1,011	72.5%
Hetero female	25,217	383	27.5%
Hetero African American	67,124	1,020	73.2%
Hetero Hispanic	14,488	220	15.8%
Hetero Anglo	9,353	142	10.2%

Using the above method of estimating HIV infection, about 77% of the new HIV infections will be MSM. Of those, more than 60% will be MSM of color. About a third will be Anglos, indicating a considerable decline from the over 50% rate of new AIDS cases noted in the early 1990s.

As predicted in 1999, there has been a notable shift in demographics of the MSM population. African Americans are much more at risk than other ethnic groups. Of particular concern is the growing number of African American women, both IDU and heterosexual – who are becoming HIV infected. While they represent less than 20% of the PLWA, they account for 40% of the HIV cases in 1999. Next to MSM, they display one of the highest HIV infection rates.

Projecting HIV until 2003 is difficult. In 1999 between 12,982 and 20,235 persons were estimated to be infected with HIV, including those with AIDS. Given the latest HIV information, the range seems low. While there continues to be no reliable HIV data collected, if it is assumed that HIV infections will follow the trend of newly diagnosed cases of AIDS (as was the case in 1999), then it is projected that there will be between 17,127 and 22,439 people living with HIV/AIDS in 2003.

STDs

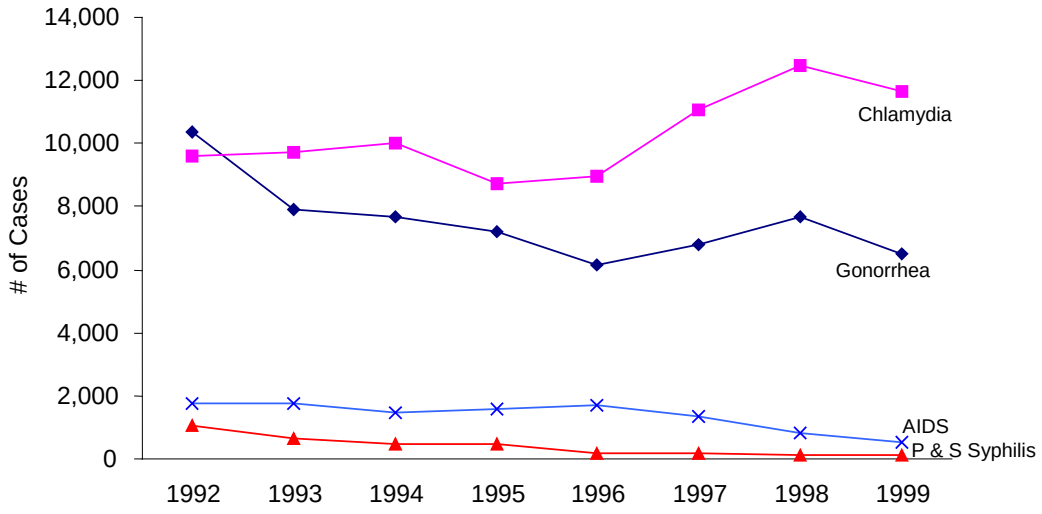
Gonorrhea and syphilis rates indicate the level of unprotected sexual contact, and, in theory, should provide an early warning system for increased HIV infection. It is also known that individuals who have a history of STDs are more vulnerable to HIV infection.

Empirically, the relationship between STDs and AIDS is less clear. Given the latency period of AIDS, at best, increases in STDs may indicate an increase in AIDS over several years in the future. Other factors such as treatment of HIV and other medical factors make establishing a clear relationship difficult.

Figure 31 plots the incidence of STDs from 1992 to 1999. There has been an overall decline in STDs from 1992 to 1996, and increase in 1997 - 1998 and a decrease from 1998 to 1999. Attachment 6 shows that Harris County accounts for 96.5% of those living with gonorrhea and the rates of other STDs. As the trend in HIV infections becomes available in the next few years, it will be useful to determine the correlation between the rates of Gonorrhea and Syphilis and HIV infections.

Chlamydia, while an indicator of sexual activity, is not necessarily an indicator of unprotected sex. Yet, chlamydia is known as the "silent epidemic" because 75% of women and 50% of men have no symptoms of disease. The increasing rates of chlamydia, as shown in Figure 31 are of concern as individuals with sexually transmitted diseases (STDs), both male and female, are believed to be at a three to five-fold increased risk of acquiring HIV if exposed to that virus. [10]

Figure 31 STDs and AIDS



[10] As reported during a satellite symposium in November 1997, presented by the Centers for Disease Control and Prevention in cooperation with the American Social Health Association and the National Association of Nurse Practitioners in Reproductive Health.

Given the lag between infection and AIDS diagnosis, the decline in newly diagnosed AIDS in 1996 and 1999 may reflect the 1992-1996 decrease in gonorrhea and syphilis. Given the new medication that delays the progression of HIV to AIDS, it is unlikely that there will be a continuing relationship between AIDS cases and STDs.

CONCLUSION

The February 1999 HIV/AIDS epidemiological report concluded that:

- The HIV/AIDS care system will have to build capacity to serve more people living with AIDS and an even higher number of people living with HIV.
- As mortality decreases, there will be a shift in services from acute care to prevention of acute disease.
- The AIDS epidemic will continue to be largely a MSM epidemic. The profile of infected MSM will shift slowly from Anglo to African American and Hispanic through 2003.
- African Americans are at greater risk than other populations of becoming infected, progressing to AIDS, and dying of AIDS. They enter the system later than other populations.
- From a service planning prospective, knowing the number and profile of persons living with HIV will be critical. To date there is little generalizable information available to make those estimates. Not only will the system have to serve substantially more persons living with AIDS over the next five years, the profile of services will change as the system begins to deal with the long-term side effects of medication.
- In addition to the increased number of PLWA, the system is likely to need to serve twice the number of people living with HIV as those with AIDS.

Two years later, these conclusions remain valid, and the estimates of HIV and AIDS made in 1999 (based on 1997 data) have proven to be largely correct. In 1999 two trends were slightly underestimated:

- The success of the medication in delaying or preventing the progression from HIV to AIDS has resulted in fewer PLWA.
- The number of newly infected individuals, particularly in the African American community is greater than estimated resulting in a higher estimation of PLWH.

The current estimates are shown below:

Cumulative AIDS Cases in Houston 10 County Health Services Delivery Area (HSDA) through 1999	18,645
Cumulative AIDS Cases in Houston 6 county Eligible Metropolitan Area (EMA) through 1999	18,538
People living with AIDS (PLWA) in Houston HSDA through 1999	7,674
PLWA in the Houston EMA through 1999	7,632
PLWH in the Houston EMA through 1999	8,761 – 12,996
Projected number living with AIDS in 2003 in Houston area	9,240
Projected number of HIV infected in 2000 in Houston area	15,358 -20,670
Projected number of HIV infected in 2003 in Houston area	17,127- 22,439
Source for Cumulative AIDS and PLWA: Texas Department of Health	

Using the continuum of care as a guide (see Attachment 7), the epidemiology of the epidemic suggests many actions to anticipate and enhance services to PLWH/A.

The first "track" in the continuum of care is public advocacy to the general population. This track has an outcome of continued public support for HIV/AIDS services. There is a need to inform the public that, due to the decreased mortality, the number of people living with HIV and AIDS is dramatically increasing. The types of services needed are changing as new medications delay or prevent the progression of HIV to AIDS. The communities of color are most at risk for infection, and their demands for services from Ryan White care supported providers will increase. Far from being over in the gay community, the majority of PLWA are gay and they will continue to need medication and care into the foreseeable future. The fact that demand for services is likely to increase means that continued support of the Ryan White Care Act, and other State and Federal care programs, will help assure the continued support of care to PLWH/A.

The second track in the continuum of care is outreach to the at-risk population, with an outcome of "knowledge of serostatus". Using the method of defining communities at risk described by Holmberg, there may be more than 180,000 persons at high risk for HIV in the Houston area. While the exact figures produced by Holmberg's methods may be questioned, he finds that gay men are over at ten times the risk of infection as heterosexuals and more than four times the risk of IDUs.

Epidemiological data showing that young gay men, particularly those of color are infected at a higher rate than other populations at risk, suggests the need for increased outreach to those communities and venues that serve them. For "out" gay men these venues tend to be known and fairly concentrated, thus allowing more focused outreach. For MSM who do not regularly visit gay venues, strategies that address them in their homes or in venues where they go have to be developed.

As the spread of HIV moves to communities where PLWH and AIDS face greater stigmatization than in the Anglo gay community, efforts will have to be made to encourage them to seek testing, and testing facilities should be placed in care sites that are easily accessible by communities of color.

African Americans appear to be accessing services much later in the continuum of care. While death caused by AIDS is decreasing for all populations, in 1998, the death rate for African Americans is over five times that of Anglos and Hispanics. Death rates for Anglos have fallen from 18.6 per 100,000 AIDS cases to 5.7 per 100,000 AIDS cases between 1992 and 1998. Hispanic death rates have fallen from 14.4 per 100,000 AIDS cases to 4.1 per 100,000 AIDS cases. African Americans have had a decline in death rate, but it continues to be much higher at 35.3 per 100,000 than other ethnic populations.

The higher death rate does not necessarily translate into inferior service from the AIDS care system. In a TDH "cohort" of those with AIDS who were in care, the fatality rate of African Americans is similar to other ethnic groups. This indicates that there is a need to bring African

Americans into the HIV/AIDS continuum of care before they manifest life threatening opportunistic infections.

Houston has always had a relatively low prevalence of AIDS among IDUs compared to other EMAs of their size. Still with 13% of the new infections among IDUs and 15% among all PLWA, continued outreach to the IDU community is important. Equally important is assuring that transmission routes such as infected needles, are minimized.

The third track is prevention, and it is for HIV negative persons. The desired outcome is maintaining a negative status for those at risk who are negative. The epidemiological report emphasizes the high risk of infection by gay men and among African Americans, including heterosexual women. While prevention is not typically supported by Ryan White Care Act funds, the epidemiological information does suggest the need to involve the more than 15,000 HIV infected individuals in a strategy that encourages them to engage in preventive behaviors with their sexual and need sharing partners.

The fourth track is early treatment for people living with HIV who have not progressed to AIDS. There is no way of knowing exactly how many persons will be HIV positive in the future. Using several methods of estimation, and given no dramatic change due to vaccines or medication, it is estimated that there will be 8,700 to 13,000 who know they are HIV positive but have not progressed to AIDS in 2001. The desired outcome is not progressing to AIDS. To achieve that outcome critical services include medication, assistance in adhering to drug regimens, and adequate outpatient including monitoring,

Success in reducing mortality in the past has meant a growing number of persons living with HIV. Medication has proven to be successful in delaying or preventing PLWH from progressing to AIDS. It is expected that this “track” of early treatment will grow from about 16,000 to roughly 20,000 PLWH by 2003. Using the CDC national estimate that about two-thirds of individuals know their status, the care system will have to serve about 13,000 PLWH. It is expected that about 50% will be African American, 39% will be Anglo, and 11% will be Hispanic, and 1% will be other ethnicities. Over half will be MSM, and over a quarter will be heterosexual.

Anglos make up the majority of the population in Houston (53%), and they represent about 39% of those diagnosed with HIV. Even though “under-represented” in the epidemic, the 39% percent of the people living with HIV translates into about 3,400 Anglos living with HIV in 2001.

The epidemiological data on the Hispanic population raises a question about their relatively low estimated prevalence of HIV. The 2000 Census shows that the proportion of Hispanics in Harris County jumped from 27% in 1990 to 37% in 2000. According to TDH, as of the end of January 2001, Hispanics account for 17% of all PLWH/A who have been tested and diagnosed. On one hand the good news could be that prevention and care has kept the prevalence of HIV relatively low. On the other hand, an alternative explanation is that many Hispanics fall outside the surveillance system, and there are a substantial number of Hispanics living with AIDS who do

not know their status. There is no data to verify either explanation, but the rapid growth of Hispanics migrating to the Houston area strongly suggest a need for increased outreach and prevention efforts among this rapidly growing segment of the Houston population.

As the demographics of PLWA shifts to the populations that have lived in poverty, Medicaid and SSI become major contributors to reimbursing health care. However, the growing number of PLWH who are not disabled yet with special needs presents new challenges to the care system.

There is an unexpectedly high increase in heterosexual women, particularly African Americans. Many of them have children, and are eligible for several State and Federal programs supporting families in addition to Ryan White Care supported services. Case managers should assure that eligible families are enrolled in the Children's Health Insurance Program (CHIP) and Temporary Assistance for Needy Families (TANF). Still, given the growing number of women, their low income, and lack of work history, Ryan White Care supported medical services should anticipate a growing demand by women. To assure they access services, wrap around services such as childcare and transportation will be critical.

Although the latest recommendations on drug therapy have suggested starting treatment later than initial diagnosis, early access to drugs will continue to be necessary. A combination of Texas Medication Assistance Program (ADAP), State programs, and Medicaid and Medicare has been used in the past to piece together effective access to medication. With decreasing eligibility under the disability act, the amount of drug reimbursement paid for by ADAP and local program will increase. Also the funds allocated to the Hospital District is likely to increase as the number of PLWH increases and coverage under other insurance decreases. One strategy to offset increased uninsured PLWH is to apply for a Medicaid waiver that allows person with HIV to be eligible for benefits.

The epidemiology indicates that newly infected persons are more likely to be members of communities of color that have lived in poverty prior to their HIV infection. To the degree that their infection increases their cost of living, it is expected that the demand will increase for direct emergency assistance, housing, dental care, and other wrap around services.

The last "track" on the continuum of care is AIDS treatment, with the desired outcomes of improved health status and quality of life of PLWA, or, in case of end stage infection, death with dignity.

There were about 8,000 PLWA in need of care at the end of 2000. Overall, the profile of PLWA is likely to continue to be about the same as it was in 1999, with a continued shift toward African Americans. In addition to all the services available to those infected with HIV, PLWA are eligible for selected services that meet the needs of disabled persons with limited mobility and greater medical needs, such as hospice care and homemaker care. In planning for their needs and unmet needs, this population is more likely to represent MSM and Anglos, and, with the exception of persons entering the care system with an AIDS diagnosis, they are likely to have had experience with the services provided. Secondary analysis of the recent chart review study and other client data might indicate what services they utilize most frequently.

Assuring that PLWH/A have full access to insurance and other entitlements is important so that the Ryan White Care Act can continue to fill the gaps in services and be the funding of last resort for PLWH/A who have no insurance. It is likely that there will be fewer persons qualifying for disability and more who will need to quality for other Federal and State programs that provide low cost or no-cost health care. This suggests a growing need for highly trained case managers that are familiar with Ryan White and non-Ryan White health care services for low-income persons.

The majority of PLWA are likely to meet the income guidelines to qualify for Ryan White supported services. Currently, given demographics, PLWA are more likely than PLWH to be eligible for Social Security Disability Insurance and Medicare, and for those who have not worked, Medicaid. In order to maintain insurance and co-pays there is likely to be a growing need for insurance reimbursement for PLWA.

For all PLWH/A the system will be challenged to ensure that they adhere to their medication regimen. As the number of PLWH/A grows and moves to persons with less history of adhering to medical regimens, it is expected that the need for medical case management and other programs to encourage compliance to medical regimens will grow substantially.

Regionally, it is expected that Harris County will continue to account for over 95% of the PLWH/A. Fort Bend will have under 200 cases and Montgomery will have over 100 cases.

In addition to the points raised at the start of this conclusion, the epidemiological data raises several questions and concerns in 2001. They include:

- With decreasing numbers of PLWH/A eligible for disability and related federal benefits and insurance, how will Ryan White Funds fill the gap to provide for needed services?

- How will the care system address the growing epidemic in the African American communities?

- Are the Hispanic communities effectively preventing HIV and, among those infected, progression to AIDS, or is there a “hidden” Hispanic community that is outside the care system?

- What types of wrap around services are necessary for women living with HIV/AIDS to assure they access care and use medication?

- There will be greater demand for drug therapy as the number of PLWH/A increases. Fewer PLWH/A are likely to receive at least some medication through Medicaid. How will the Texas Drug Medication Program (ADAP) meet the expected increase in demand?

Attachment 1 Trend Data 1992-1999 Houston EMA and HSDA

Attachment 2 Cumulative AIDS Cases Reported Through 1999

Attachment 3 PLWA Reported Through 1999

Attachment 4 PLWH Reported Through 1999

Attachment 5 CDC Method for Estimating HIV

Attachment 6 STD Rates Through 1999

Attachment 7 Continuum of Care

Attachment 1 Trend Data 1992-1999 Houston EMA and HSDA

Attachment 2 Cumulative AIDS Cases Reported Through 1999

Attachment 3 PLWA Reported Through 1999

Attachment 4 PLWH Reported Through 1999

ATTACHMENT 6

Attachment 5 CDC Method for Estimating HIV

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
and Prevention (CDC)

Memorandum

Date August 24, 1999

From Chief, Surveillance Branch, Division of HIV/AIDS Prevention, Surveillance and Epidemiology, National Center for HIV, STD and TB Prevention, Centers for Disease Control and Prevention

Subject Enclosures

To HIV/AIDS Surveillance Coordinators

Enclosed is a copy of the HIV prevalence data (number of persons living with diagnosed HIV infection as of 12/31/98) for your area that we are providing to HRSA's Division of Service Systems. Persons who have not been tested for HIV or who have only been tested anonymously are not included in these estimates. These data complement the AIDS incidence and prevalence data sent out on August 5. As mentioned in the August 5 mailing, these data are provided to you as a courtesy and you are under no obligation to use these tables in your State/local planning process. A brief explanation of the data provided follows.

I. Adult cases

For the 25 states that implemented HIV infection surveillance by 1994 the data enclosed represent the data reported to CDC, adjusted for reporting delay and for redistribution of risk. The redistribution of HIV risk is done in a manner analogous to the redistribution of AIDS risk, i.e. it is based on historical patterns of reclassification of cases initially reported without risk.

For states where HIV infection is not reportable and for states that implemented reporting relatively recently, we have provided estimates of the number of persons living with diagnosed HIV infection. These estimates are based on the observed ratios of HIV to AIDS in HIV reporting states (that implemented by 1994), and are the result of a multiple regression modeling procedure which took into account age group, race, sex and risk. We tested the model by applying it to AIDS prevalence in the HIV reporting states. We compared the estimates of HIV prevalence obtained through the modeling procedure to observed HIV prevalence. The model was found to predict observed prevalence of diagnosed HIV infection very well in those states. Nonetheless, it is important to remember that these numbers represent modeled estimates only and should not be considered to be actual counts. **Modeling procedures are not a substitute for conducting surveillance, but can provide general information that should be helpful to you in your planning process.** Again, you may choose to use your own estimates if you feel that you have information that better reflects your local situation.

For the EMAs that cross over two or more states, we were not able to break down the total number of cases according to the state of residence, as we did for AIDS cases. You can do

this yourself, however, by applying the distribution of state of residence observed among the AIDS cases in these EMAs to the HIV cases: for example, if 90% of an EMA's AIDS cases belong to state 1 and 10% to state 2, you would apply those percentages to the HIV cases.

II. Pediatric cases

We did not include pediatric cases in the modeling procedure because the numbers are too small once the different demographic variables are included. For states where HIV infection is not reportable, or was implemented in 1995 or later, we recommend estimating the number of children living with diagnosed HIV infection by multiplying the number of children living with AIDS by 1.6 for perinatal cases and by 0.2 for all other transmission categories. These numbers are based on the observed proportions of pediatric HIV and AIDS cases in the HIV reporting states that implemented by 1995.

If you have any questions about these data tables, feel free to call Pascale Wortley at 404-639-2050.

Patricia L. Fleming, PhD, MS

ATTACHMENT 6

Attachment 6 STD Rates Through 1999

ATTACHMENT 6

Attachment 7 Continuum of Care