

**DISTRICT OF COLUMBIA
HIV/AIDS EPIDEMIOLOGIC PROFILE
1999**

DC DEPARTMENT OF HEALTH

ADMINISTRATION FOR HIV/AIDS

DIVISION OF EPIDEMIOLOGY

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EXECUTIVE SUMMARY

As we enter the new millennium, the third decade of the HIV/AIDS pandemic progresses and we find ourselves constantly re-assessing our preventive as well as our support services initiatives. It is no longer enough to conceptualize and develop culturally competent responses to the HIV/AIDS challenge. We must maximize our HIV/AIDS surveillance initiatives in order to capture vital data that will allow our community in this fight to have realistic, relevant, and effective data. No longer can we afford to continue the creation of initiatives in an epidemiological vacuum. We must stay ahead of the curve of the epidemic.

The District of Columbia, Department of Health, through a federal cooperative agreement, participates in the Centers for Disease Control and Prevention (CDC) HIV/AIDS surveillance activities. Using established epidemiological methods, standardized data collection forms, and computer software developed by the CDC, the Administration for HIV/AIDS (AHA)'s Division of Epidemiology (DOE) monitors longitudinal and periodic trends in HIV/AIDS-related morbidity and mortality, assesses the need for health care services, and guides the public health response to the epidemic. Foremost, the DOE has the responsibility of ensuring the confidentiality and security of collected information and the priority of exceeding the CDC's surveillance program and seroprevalence survey requirements. AIDS surveillance data are the only AIDS-related, population-based data consistently available by epidemiologic variables such as gender, race/ethnicity, age, and mode of HIV exposure for all states/territories.

Residents of the District of Columbia comprise 0.24% of the population nationwide, but they represent a disproportionate 1.6% of the AIDS cases nationwide. In 1998, the rate of AIDS per 100,000 population was 186 for the District compared to 20 per 100,000 for the entire United States. This is indicative of the disproportionate impact of the epidemic in the District of Columbia.

This Epidemiologic Profile provides an accurate description of the populations affected by AIDS in the District of Columbia. Public health workers, planners, educators, health care providers, and community representatives for the District of Columbia and its surrounding metropolitan area will find this Epidemiological Profile helpful for developing, implementing, and evaluating prevention and health care services. However, AIDS case data do not necessarily represent the characteristics of persons with more recently acquired HIV infection. Since the District of Columbia does not have an HIV reporting system, only an estimate can be made of those currently infected with HIV.

As of December 31, 1998, 11,311 cumulative AIDS cases, 11,144 adult/adolescent and 167 pediatric, were reported among residents of the District of Columbia. Of the adult/adolescent cases, 17% are females and 83% are males, while 5,254 (47%) are living and 5,967 (53%) have deceased. African-Americans or Blacks comprised 74% of the District AIDS cases, Whites comprised 22%, Latinos or Hispanics comprised 3%, and Asian/Pacific Islanders and Native Americans comprised only 1% of the reported adult/adolescent cases.

Blacks represent the overwhelming majority of the cases and continue to be disproportionately affected by the HIV/AIDS epidemic in the District of Columbia. There were a total of 973 AIDS

cases reported in 1998 among D.C. residents. In D.C., the rate among Blacks (258) was more than twice the rate of Hispanics (96) and almost five times the rate of Whites (56). Among cases reported from 1995 to 1998, Blacks accounted for the majority (83%) of the reported cases.

Among male adult/adolescent AIDS cases reported from 1995 to 1998, the predominant modes of HIV transmission were men who have sex with men (MSM) (51%), injection/intravenous drug use (IDU) (29%), and heterosexual contact (10%), as compared to the previous interval of cases reported from 1990 to 1994 when MSM were 63%, IDU were 23%, and heterosexual contact represented 5%. Among the MSM cases reported from 1995 to 1998, more than 2/3rd of the cases were among Blacks (68%), approximately 1/4th were among Whites (26%), and 6% were among Hispanic MSMs. However, the proportion of cases attributed to male-to-male sexual contact has decreased substantially over time, while the proportion of cases attributed to IDU and heterosexual contact has increased considerably.

Cases among adult/adolescent women continue to increase faster than those among men. The majority of AIDS cases in females in the United States has been among women of color since the onset of the epidemic. Per CDC, the national AIDS case rate among females by race/ethnicity was 59 among Blacks, 22 among Hispanics, 5 among American Indian/Alaska Natives, 3 among Whites, and 2 among Asian/Pacific Islanders. In the District, Black women represent the overwhelming majority of AIDS cases among women (94%). Results from District surveys indicate that HIV seroprevalence was 6-7 times higher than the rate for childbearing women nationwide.

The number of newly reported D.C. resident AIDS cases remains higher among Black women than among White men; furthermore, the rate among Black women (150) was higher than the rate among White men (100). The rates among Black and Hispanic men were 387 and 162, respectively. Only 11 cases were reported in 1998 among White females and only 4 cases among Hispanic females, for a rate of 15 and 22, respectively. Among newly reported cases, injection drug use (48%) and heterosexual contact (40%) represented the predominant exposure modes among females.

AIDS has been the leading cause of death among Black women and men as well as White men between the ages of 25 to 44 in the District of Columbia. Together these three groups comprise 96% of the reported AIDS cases in the District. Nationally, HIV disease was the leading cause of death among Black women between ages 25 to 44 in 1996, and deaths from AIDS among minority women are declining less rapidly than among men and White women (*HRSA Care ACTION*, May 1999, pg. 1).

Fewer people are progressing to and being diagnosed with AIDS. For some, the occurrence of opportunistic infections is being prevented through treatment, i.e., prophylaxis and anti-retrovirals. However, per the HIV/AIDS Bureau, Health Resources and Services Administration, "Black and Hispanic women are least likely to receive therapy meeting federal guidelines."

Since the introduction and use of protease inhibitors in early 1996, there have been decreases not only in AIDS incidence, but also in mortality. With fewer people dying from AIDS, there has been an increase in the number of persons living with AIDS. There are no data, however, to suggest that there has been a decline in the number of persons newly infected with HIV.

Among those previously HIV infected, treatment-resistant virus has led to an increase in the number of persons being "re-infected" by mutated, divergent, and drug-resistant strains of the virus. Primary and secondary HIV prevention are vital. Lack of access to care and information has devastating effects, especially for Black women and Black MSM in the District of Columbia.

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Introduction:

Major changes in national AIDS trends have taken place due to altered HIV infection patterns. Expansion of the base of the epidemic continues to occur particularly among women, people of color, youth and adolescents. Heterosexual rates of infection continue to increase at alarming rates especially among Black women and among IDUs. The national trends in HIV transmission among adolescents and seniors raise particular concerns. The District of Columbia is probably no exception to these trends.

Regrettably, our jurisdiction has not been able to capture the data that 39 other states are using - HIV infection data. The District of Columbia is among the few jurisdictions left in the nation without an HIV infection reporting system. In the year 2000, HIV surveillance will be implemented in the District.

The occurrence of HIV/AIDS in the District of Columbia dates as far back as 1979. AIDS surveillance in the District began in July of 1983, when reporting was mandated under the Preventive Health Services Administration of the then Commission of Public Health. In 1987, active and passive surveillance strategies were implemented to collect data and conduct epidemiological investigations for the determination of AIDS incidence trends and to characterize risk behaviors.

Sources of report for AIDS cases in the District of Columbia increased through the years of the epidemic as reporting became more routine and AIDS cases abounded. In the beginning of the AIDS crisis, health care providers reported their cases. At the present time, most cases are identified through active surveillance, which means surveillance program-initiated efforts, because reporting by providers has dropped off. The major target sites and databases for active surveillance efforts are: public and private hospitals, clinics (community and hospital-based), physicians, laboratories, registries (communicable disease, M. tuberculosis or TB, STD, and cancer), death certificates, medical examiners offices, and special studies.

To adhere to the CDC guidelines for developing an epidemiological profile for the HIV Prevention Community Planning process, we have attempted to divide the cumulative AIDS data into three intervals combining years of report. The first interval, 1981-1989, is represented by the earliest years of reported cases. The second interval, 1990-1994, was the time during which the definition of AIDS was expanded (in 1993). The third interval, 1995-1998, was used to estimate incidence and to analyze data for the most recent years. During this interval, the data appear more stabilized than in the previous interval from 1990-1994.

The survey of childbearing women, which CDC ended in 1994, estimated HIV prevalence in the District of Columbia. These data were also used to estimate the number of recent perinatal infections. This epidemiologic profile summarizes the District's unlinked (double-blinded) seroprevalence surveys. The surveys occurred in more than five different sites and settings so that the survey data will represent a variety of clinical settings serving persons at increased risk of HIV infection. The clients of STD clinics, the drug treatment center, the facilities delivering

live-born infants, as well as screening sites for entrants to the job corps, and recruitment offices for applicants for U.S. military service are all groups of special public health importance. The data collected and analyzed are presented in tables and graphs.

Information on surrogate indicators of risk for HIV infection (STDs) is also presented. District of Columbia STD rates are high and D.C. ranks among the cities with the highest STD morbidities in the United States. Without HIV infection surveillance in the District, data for syphilis, chlamydia, and gonorrhea (GC) can show the future trend for HIV. Syphilis is not only mandated to be reported, it is aggressively tracked, and vigilantly surveilled. Syphilis is highly contagious and is an ulcerative STD, signifying increased risk for HIV transmissibility. Gonorrhea is mandated to be reported by law. GC and chlamydia infections are coinfections 45% of the time. Recently, GC rates (esophageal GC and rectal GC) have increased in White MSM in a study of national significance.

Implications from the expansion of the AIDS cases definition, findings from the Youth Risk Behavior Survey (YRBS) in the District of Columbia Public Schools, information on Years of Potential Life Lost (YPLL) attributed to AIDS are for the first time presented in the epidemiologic profile. There are data on the incarcerated, expanded sections on co-morbidity, adolescents/teen pregnancy, pediatrics, heterosexuals (e.g., male to female ratio), and geographic distribution.

This report on the epidemic not only assesses the distribution of infection/disease in relationship to time and geography, but also defines persons who are at risk for becoming infected with HIV for prevention purposes. As suggested by the CDC guidelines, an epidemiologic profile addresses four key questions:

1. What are the sociodemographic characteristics of the population?
2. What is the impact of HIV/AIDS on the population?
3. Who is at risk for becoming infected with HIV?
4. What is the geographic distribution of HIV infection?

Methodology:

Data Sources, Collection, and Organization

Some of the data used in this report come from secondary data sources such as sexually transmitted disease (STD) clinic reports, unlinked prevalence surveys, as well as census and population estimate data. AIDS surveillance data are the only HIV/AIDS related data consistently available nationwide. Hence, the majority of the data for this profile were collected from routine HIV/AIDS surveillance activities. Data were collected, compiled, organized and summarized by geographic area and political jurisdiction (Wards), gender, age, and race/ethnicity. Where possible, behavioral risk categories are presented in the form of figures

(epidemic curves, line graphs, pie charts, etc.) and tables. Most rates are reported as percentages. Where applicable, medians and ranges are presented for ease of interpretation and understanding.

STD clinic data are used because of the significance of STDs as markers of unprotected sex and other high-risk behavior. Those individuals at greatest risk for the sexual transmission of HIV are likely to be those at risk of acquiring other sexually transmitted diseases. Unlinked surveys are conducted using residual blood specimens collected for routine clinical purposes from eligible survey participants. The residual blood specimens are tested for HIV-1 antibodies by using HIV-1 or HIV-1/HIV-2 enzyme immunoassay (EIA) screening kits licensed by the FDA. Repeatedly reactive sera are validated with a FDA-licensed Western blot test.

For purposes of simplifying the presentation of data and describing trends, the cumulative AIDS cases were divided into three meaningful intervals by year of report. The first interval is from 1983 to 1989, the second interval is from 1990 to 1994 and the third interval is from 1995 to 1998. Over the nearly twenty years of the AIDS epidemic in D.C., there have been significant expansions of our knowledge base about HIV disease and its natural history. Similarly, the classification system for the collection of AIDS cases and longitudinal data has developed in stages. As trends appeared from the data as extensions of the vectors of infection, so also subepidemics and caveats emerged. The expansion of the AIDS case definition in 1993 to include laboratory test results of CD4+ counts less than 200 or 14% is the single most defining event in the AIDS surveillance calendar to date. The demarcation between the second and third intervals reflects this shift and adjustment. (See Appendix A)

Data Issues:

AIDS surveillance data have been the only HIV-related data consistently available on a population-wide basis in all states by race/ethnicity, gender, age, and exposure category. The extensive surveillance network in place since the early years of the epidemic has yielded a relatively complete and reliable database. However, the success of triple therapy medications and the advent of protease inhibitors have caused declines in morbidity and mortality, causing the AIDS trend data to be distorted. This does not necessarily signify significant changes in HIV trends or data; it is simply more difficult to garner cases of AIDS, or, even more broadly, HIV-related immunodeficiency. The criteria or case definition used for diagnosing an AIDS case has become less applicable as treatment relies more and more on laboratory findings of encroaching immunodeficiency and detecting viral load instead of outward signs and symptoms. For example, an individual can be asymptomatic and meet the CDC criteria for AIDS, and after treatment *seemingly* revert to a nonAIDS stage. However, once an individual meets the AIDS case definition, they will remain in that classification for surveillance purposes.

District resident AIDS cases continued at approximately the same level (about 1,000 cases reported each year) from the beginning of 1995 to the end of 1998, after a surge of reported cases in 1993 (1,500) and 1994 (1,362) attributable to the expansion of the case definition in 1993. Trends in the District, as well as in the nation, show that the impact of the new medications will cause a dramatic decrease in AIDS cases reported in 1999. Fewer HIV-infected people advance

to later stages of HIV disease and do not meet the AIDS-defining criteria. Up to 1998, AIDS trend data is still valid enough to show changes in the characteristics of HIV-infected persons. This is truer among some sub-populations (e.g., women, injection drug users, and heterosexuals) than among other emerging groups (i.e., adolescents and Hispanics). Thus, to better reflect the characteristics of the newest infections, the majority of the AIDS data in this report will be presented in terms of incident AIDS cases, namely, cases reported between 1995 and 1998. Some other limitations of the AIDS data, as well as its strengths, are discussed below.

According to CDC estimates 90% of the AIDS cases are reported to AIDS surveillance programs nationwide. Thus, AIDS cases tend to be representative of all persons with AIDS. However, it is essential to note that AIDS cases do not reflect the majority of HIV infections but rather the extent of severe immunosuppression and related illnesses caused by HIV.

Because of the long incubation period between HIV infection and the occurrence of AIDS-defining conditions, AIDS cases do not necessarily represent the characteristics of persons with more recently acquired infections or those recently tested. Nationally, there is a delay between the time an AIDS case is diagnosed and reported or actively ascertained/investigated by the surveillance program is found nationally. Although the peak level of HIV/AIDS cannot yet be accurately predicted from available data or models, reported cases may level off before actual cases do. Timeliness is thus a limitation of AIDS case data. Interpretation of trends of reported cases of HIV/AIDS in the future will necessitate careful evaluation of delays in and completeness of reporting, as well as changes in diagnostic practices and therapeutic regimens. However, trends can be identified through analyses of changes over time in the characteristics of persons with AIDS. For example, greater proportionate increases in AIDS cases among women, Blacks, and IDUs in recent years may suggest that greater percentages of new HIV infections are occurring among these subpopulations compared with earlier years.

Limitations of AIDS case data spur the need to utilize other sources to complement information obtained through AIDS surveillance. Data from seroprevalence surveys conducted in the District of Columbia among populations attending specific sentinel clinics (e.g., patients attending STD clinics, patients entering drug treatment programs, adolescents entering juvenile detention centers) reflect only prevalence (i.e., both new and old infections) in persons attending the sentinel clinics, and should not be generalized to the population at large.

Some community planning groups have attempted to use HIV counseling and testing data, as well as service provider data, to characterize persons more recently infected with HIV. However, these data were designed to count service units, and were neither intended to capture mutually exclusive patient information nor to meet the rigors of conducting surveillance. The data from each site represent only tests or services performed at that particular site and may contain duplicates of clients. Aggregate HIV service provider data represent the volume of service, medical and non-medical, rendered to HIV infected clients at certain publicly-funded programs and thus are not representative of the population at large. Recent HIV testing does not equate with recent HIV infection or transmission.

Data Limitations and Caveats:

Analysis of AIDS cases by year of diagnosis is affected by routine delays in reporting (time between AIDS diagnosis and report to the health department). Although 50% of the District of Columbia's AIDS cases are reported to AIDS Surveillance within 3 months of diagnosis, with 82% being reported within one year, not all cases diagnosed in 1998 have yet been reported.

The actual 'work' of AIDS surveillance can translate into trends and have a mass effect on the data. An alteration in the case definition, technology, facility solvency, service provision, and/or treatment can change the indications, means, and influx of surveillance work. The expansion of the adult/adolescent AIDS surveillance case definition to include invasive cervical cancer, recurrent pneumonia, pulmonary TB, and laboratory findings of a CD4+ count less than 200 or 14% (the supreme example) was implemented on January 1, 1993. As expected, there were substantial increases in the number of AIDS cases diagnosed and reported in 1993, many retroactively. HIV-infected persons with opportunistic infections or conditions diagnosed before 1993 that did not previously meet the AIDS case definition were suddenly 'reportable' once these conditions were added to the case definition. The CDC estimated the early reporting effects of the new case definition to be greater than the long-term reporting effects because prevalent or retroactive as well as incident cases of immunosuppression were reported immediately following implementation of the expanded case definition. After 1994, as expected, the number of reported cases was much smaller than the surge surrounding the implementation of the expanded case criteria.

Caution should be taken when interpreting trends, since many groups will appear to have a declining incidence when post-1993 data are presented. Trends after 1993 reflect the true trend of the epidemic, as stabilization was reached from the immediate surging effects of the 1993 case definition. This report will present trends up to 1998, some cases diagnosed in 1998 are still being collected as of the writing of this report. Trends after 1998 will be dramatically distorted by the declines in AIDS morbidity as a result of the success of the new AIDS medications. As the interval between HIV infection and onset of AIDS becomes longer, the use of protease inhibitors will enable proximal life spans. As HIV-infected individuals will be reservoirs of infection for longer periods of time, secondary prevention education will need to be stepped up.

Considerations:

1. It is important to note that almost all data have strengths and limitations and hence have to be treated in the light of their purpose and characteristics.
2. Small numbers and/or small changes or differences should be interpreted with caution.
3. Understand the specifics of data presentation.
4. It is important to create awareness among primary health care providers and other data generators of their important role as primary data contributors.
5. Always remember what the numbers represent (i.e., number of cases, rates, and percents).

All AIDS cases presented in this epidemiologic profile are based upon AIDS cases reported through December 31, 1998 among persons whose residence was the District of Columbia at the time of initial AIDS diagnosis.

In the District of Columbia, policies and procedures established by the CDC for the assurance of confidentiality and security of highly personal information are strictly enforced. The Administration for HIV/AIDS (AHA) has implemented a policy that requires all employees to sign legally-binding statements of confidentiality annually and to receive security training to further protect the public against breaches of confidentiality and security. Additionally, all CDC-funded jurisdictions must meet the requirements and security standards set forth in the CDC-issued guidelines for the protection of HIV/AIDS surveillance confidential information and data.

Only aggregated AIDS Surveillance data are released so there is nothing to suggest the identity of an individual, even inferentially. Cell sizes less than five (5) are not presented for three-way cross-tabulations of data. Data may either be suppressed or combined with other categories. Aggregation of data (i.e., combining subgroups such as Asian/Pacific Islander and American Indian/Alaskan Natives) is not done to undermine the importance of any one group, but rather so that all the data may be provided and still ensure confidentiality of persons reported with AIDS. HIV seroprevalence data, since they are derived from double-blinded surveys with unlinked instruments, are presented without suppression of small cells. Bureau of STD Control data are presented according to their data release policy.

Question 1: What are the Sociodemographic Characteristics of the Population of the District of Columbia?

1.1 Sociodemographic Characteristics:

The District of Columbia has a land area of 63 square miles with an estimated 1998 population of 523,124. The District lost about 80,000 residents from 1990-1997, and births declined by 28% from 1991-1996. Over half (53%) of the residents of the District of Columbia are female. The median age in 1997 was 35; 22% of the population are 19 or younger. The elderly account for 3% of the total population. Blacks are the largest ethnic group comprising 63% in 1998, followed by Whites at 28%, Hispanics at 7%, and other races/ethnicities at about 3%. While the overall Black population trend is gradually decreasing (from 65% in 1990 down to 63% in 1998), the Hispanic population is gradually increasing (from 5% in 1990 to 7% in 1998). Also, the White population has shown a slight increase. The category for race/ethnicity with the smallest population, classified as 'Other' in this report, includes American Indians, Asian/Pacific Islanders, and other minorities and has remained constant. Blacks represent a majority in six out of the eight geographically-defined Wards in the District of Columbia. The population distribution among these Wards varies from 72,118 in Ward 6 to 79,641 in Ward 1 (1990 Census). Whites comprise a majority of the resident population in Wards 2 and 3, with Ward 3 having the greatest majority of Whites (83%). The distribution of Hispanics varies from about 20% in Ward 1 to about 2% in Ward 8.

1.2 Proportion of the Region's Population Who are Unemployed and Living Below the Poverty Level by Ward and Race/Ethnicity:

The rate of unemployment is the lowest in Ward 3 (2.8) and highest in Ward 8 (15.5). Ward 5 also has a higher rate of unemployment (10.7). Ward 8 has the highest proportion of residents (39%) without a high school diploma and, conversely, Ward 3 has the highest proportion of residents (70%) with four or more years of college. With regard to poverty levels, Ward 8 has the highest proportion of households in poverty (26%) and Ward 3 has the lowest proportion of households in poverty (2.8%). Wards 1, 5, and 7 also have fairly high levels of households in poverty as well. The overall poverty level for the District of Columbia is 15%.

Those with higher levels of education live in Wards with a lower proportion of households in poverty. This impacts the health status of individuals in general. Research shows that low socioeconomic status in particular is associated with increased morbidity and premature mortality. In addition, unemployment and poverty are also correlated with decreased access to medical and preventive health services that result in increased risk for all types of diseases and medical conditions. However, "some investigators have concluded that factors other than poverty and occupational status account for the observed differences in rates of gonorrhea and chlamydial infection and that non-behavioral factors, such as geographic segregation, may promote a higher prevalence of these STDs in certain social networks." (The Hidden Epidemic, pg. 38)

Table 1. Percent Distribution of Population by Race/Ethnicity, Washington, D.C., 1990 Census and 1995-1998 Estimates

RACE/ ETHNICITY	CENSUS	POPULATION ESTIMATE			
	1990 (N=606,900)	1995 (N=554,256)	1996 (N=554,678)	1997 (N=528,964)	1998 (N=523,124)
Black	65%	64%	63%	63%	63%
White	27%	28%	27%	28%	28%
Hispanic	5%	7%	7%	7%	7%
Other	2%	3%	3%	3%	3%
TOTAL	100%	100%	100%	100%	100%

SOURCE: DOH/AHA/DOE, 1999

Table 2. Percent Distribution of Population by Ward and Race/Ethnicity, Washington, D.C., 1990 Census

RACE/ ETHNICITY	POPULATION BY WARD								TOTAL
	1 n=79,641	2 n=78,743	3 n=77,774	4 n=78,425	5 n=75,054	6 n=72,118	7 n=72,924	8 n=72,221	
Black	55%	35%	6%	84%	89%	71%	97%	90%	65%
White	25%	53%	83%	11%	8%	26%	2%	7%	27%
Hispanic	18%	7%	7%	5%	2%	2%	1%	1%	5%
Other	3%	5%	4%	1%	1%	1%	1%	1%	2%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

SOURCE: DOH/AHA/DOE, 1999

Table 3. Educational Attainment and Socio-Economic Indicators by Ward, Washington, D.C., 1990 Census

WARD	EDUCATIONAL ATTAINMENT Among persons 25+ (1990 Census)		SOCIO-ECONOMIC INDICATORS	
	% with 4+ Years College	% No high school Diploma	Unemployment rate (1994)	% Households in Poverty
1	36	32	7.6	17
2	52	19	6.8	16
3	70	6	2.8	6
4	25	36	7.9	9
5	19	34	10.7	17
6	32	29	9.5	15
7	12	36	9.5	18
8	8	39	15.5	26
AVERAGE	32	29	8.8	15

SOURCE: DOH/AHA/DOE, 1999

Summary:

As of 1998, the District of Columbia population was estimated at 523,124, of which 63% were Black, 28% were White, 7% were of Hispanic origin, and 2% were among other race/ethnicities. Over recent years, the Black population has been gradually decreasing, while the White and Hispanic populations have been increasing. Blacks represented the majority of the population in six of eight Wards, while Whites were the majority in Wards 2 and 3. Unemployment and households living under poverty were typical in most Wards over-represented by Blacks. Residents in these Wards are at a disadvantage educationally and economically, which are the most important markers for underlying cultural and socioeconomic factors that affect personal behavior and health.

Question 2: What is the Impact of HIV/AIDS on the Population?

2.1 Distribution of AIDS Cases:

As of December 31, 1998, 11,311 cumulative AIDS cases were reported among residents of the District of Columbia. There were 11,144 AIDS cases among adults/adolescents and 167 AIDS cases among pediatrics (age 12 and under at the time of their initial diagnosis). Out of the adult/adolescent cases, 5,254 (47%) were alive, 5,967 were deceased, 83% were males, and 17% were females. Blacks accounted for 74% of the reported cases, Whites accounted for 22% of the cases, Hispanics 3%, and other race/ethnicities accounted for 1% of the cases.

Residents in the District of Columbia comprise 0.24% of the population nationwide, but they represent a disproportionate 1.6% of the nationally reported cases in 1998. One in every 47 residents of the District of Columbia has suffered from advanced HIV disease or AIDS.

As stated previously, the cumulative AIDS cases were divided into three time intervals, 1983 to 1989, 1990 to 1994, and 1995 to 1998. The characteristics of the reported D.C. cases by time period are markedly different and distinguishable. The first interval, from 1983 to 1989, represents 20% of the total cumulative reported cases. In this time interval, males and females comprised 92% and 8% of the cases, respectively. Among males, men who have sex with men (MSM) comprised the majority (82%) of the reported cases, followed by cases attributed to injection drug use (IDU) (8%), and men who have sex with men and inject drugs (MSM/IDU) (7%). Among females, the two major exposure modes were among cases attributed to IDU and heterosexual contact accounting for 58% and 26% of the reported cases, respectively.

The second interval, 1990 to 1994, comprises 47% of the cumulative reported cases. Males accounted for 84% and females for 16% of the reported cases. The predominant exposure modes among males were MSM (63%), followed by IDU (23%) and MSM/IDU (7%). Among females, cases attributed to IDU accounted for 66% of the reported cases followed by cases attributed to heterosexual contact accounting for 31%.

The most recent cases, reported from 1995 to 1998, represent 31% of the cumulative reported cases. Males and females comprised 74% and 26% of the reported AIDS cases. Among males, MSMs comprised about half (51%) of the reported cases, followed by IDU (29%) and heterosexual contact (10%). The two major exposure modes among females were IDU (48%) and heterosexual contact (40%).

Despite the unequal distribution of reported cases among intervals, unknown transmission exposures or risks not identified were minimal in the earlier time periods both among males and females. However, during the period 1995 to 1998, the number of reported cases with risk not identified more than doubled among females, and increased more than five times among males.

Table 4. Proportional Distribution of Adult/Adolescent AIDS Cases by Intervals of Years of Report, Gender, and Exposure Category, Washington, D.C., 1979-1998

EXPOSURE CATEGORY	GENDER					
	Male			Female		
	1979-89	1990-94	1995-98	1983-89	1990-94	1995-98
	(n=1,818)	(n=4,301)	(n=3,147)	(n=113)	(n=741)	(n=1,024)
Men who have sex with men(MSM)	82%	63%	51%	N/A	N/A	N/A
Injecting drug users (IDU)	8%	23%	29%	58%	66%	48%
MSM who are IDU	7%	7%	4%	N/A	N/A	N/A
Heterosexual contact	1%	5%	10%	26%	31%	40%
Other	1%	1%	1%	12%	2%	2%
Risk not identified	1%	1%	5%	4%	1%	10%
Subtotal	100%	100%	100%	100%	100%	100%
TOTAL (N=11,144)	16%	39%	28%	1%	7%	9%

SOURCE: DOH/AHA/DOE, 1999

Epidemic Curves of Total AIDS Cases by Year of Diagnosis and Report:

The epidemic curve for AIDS cases among residents of the District of Columbia illustrates the number of AIDS cases diagnosed and reported each year. Trends and the natural history of the disease are seen more clearly when looking at AIDS cases by the year of AIDS diagnosis, the year a person with HIV infection was initially diagnosed with AIDS by a physician, than by the year of AIDS case report. However, analysis by year of diagnosis is affected by reporting delays (the time between earliest diagnosis with AIDS and report to the health department), especially among cases diagnosed in the most recent years. Fifty percent (50%) of the District of Columbia's AIDS cases are reported to AIDS Surveillance within 3 months of diagnosis and 82% are reported within one year. Thus, not all cases diagnosed in 1998, a few from 1997, and previous years have yet been reported.

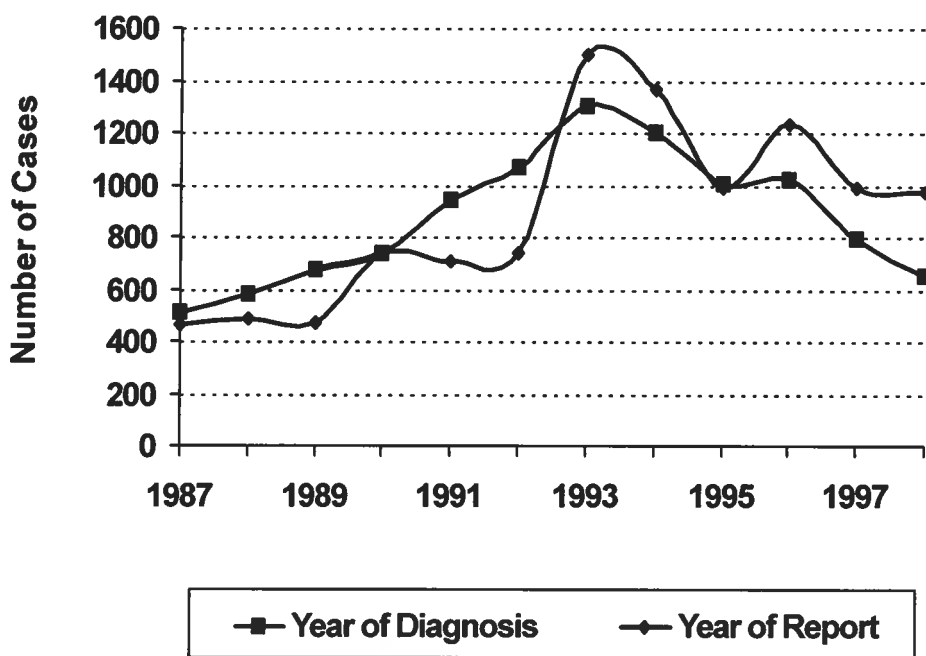
Trends can also be seen by year of report, the year an AIDS case was reported to AIDS surveillance after diagnosis. Cases reported in any given year are not necessarily diagnosed in the same year of report. To minimize the effects of reporting delays, data throughout this report will be presented by year of report. Caution should be taken, however, when interpreting increases or decreases throughout some years due to the immediate effects of the changes in the AIDS cases definition, particularly in 1993.

Also, tables and charts throughout this report lack adjustments to the data required to estimate when an AIDS opportunistic infection will develop in persons who were reported based on CD4+ count criteria from the 1993 case definition expansion. Furthermore, caution should be taken when interpreting trends since many groups will appear to have a declining incidence when post-1993 data are presented. As stated earlier, trends after 1993 are better represented by post-1994 data, or as more data has been collected further away from the distorting effects of the 1993 case definition.

In each of the two epidemic curves, AIDS cases increased substantially in 1993 as a result of the expansion of the AIDS case definition (Figure 1). The expansion of the new case definition caused a 100% increase on AIDS cases in 1993, with a 9% and 27% decrease thereafter in 1994 and 1995, respectively. In 1996, AIDS cases increased by 25% relative to 1995, mainly as a result of a backlog of unreported cases at some facilities. Cases of AIDS in the District of Columbia, as a result of the diminishing effects of the new case definition, have remained stable during 1997 (985) and 1998 (973).

Due to the changes in the AIDS case definition and the current success of anti-retroviral drugs enhancing the quality of life of HIV+ patients, caution is advised when interpreting trend data. Trends by year of diagnosis are less affected by changes in case definition and provide a smoother trend than data by year of report. It must be clearly understood that both the year of report and the year of diagnosis (Table 5) produce reasonable and valid epidemic curves to examine trend data.

Figure 1. Adult/adolescent AIDS Cases by Year of Diagnosis and Report, Washington, D.C.: 1987-1998



SOURCE: DOH/AHA/DOE, 1999

Table 5. Adult/Adolescent AIDS Cases by Gender and Year: Diagnosed (reported through 3/15/99) 1979-1998 and Reported through 12/31/98, Washington, D.C.

YEAR	GENDER					
	MALE		FEMALE		TOTAL	
	Diagnosed	Reported	Diagnosed	Reported	Diagnosed	Reported
1979	1		0		1	0
1980	1		0		1	0
1981	0		1		1	0
1982	12		0		12	0
1983	39	20	1	1	40	21
1984	104	84	5	3	109	87
1985	212	165	5	3	217	168
1986	306	222	23	11	329	233
1987	477	443	35	22	512	465
1988	532	448	52	36	584	484
1989	623	436	55	37	678	473
1990	655	667	81	67	736	734
1991	807	618	136	89	943	707
1992	909	654	160	85	1,069	739
1993	1,078	1,254	225	246	1,303	1,500
1994	966	1,108	232	254	1,198	1,362
1995	774	770	229	215	1,003	985
1996	783	972	238	256	1,021	1,228
1997	563	717	231	268	794	985
1998	467	688	183	285	650	973
TOTAL*	9,309	9,266	1,892	1,878	11,201	11,144

SOURCE: DOH/AHA/DOE, 1999

*NOTE: Totals for diagnosed and reported cases differ due to reporting delays.

AIDS Cases and Annual Rates per 100,000 Population by Race/Ethnicity, Gender, and Age:

There were a total of 973 AIDS cases reported in 1998 among D.C. residents, which corresponds to a rate of 186 per 100,000 population. The 1998 rate for the United States was 20 per 100,000. In D.C., the rate among Blacks (258) was more than twice the rate of Hispanics (96) and almost five times the rate of Whites (56).

The rate among Black adult/adolescent males was 387, compared to 150 among Black adult/adolescent females. The rates among White and Hispanic adult/adolescent males were 100 and 162, respectively. Only 11 cases were reported in 1998 among White women and less than 5 cases among Hispanic women, for a rate of 15 and 22, respectively.

Table 6. Adult/Adolescent Male AIDS Cases and Rates/100,000 Population by Year of Report and Race/Ethnicity, Washington, D.C., 1995-1998

RACE/ ETHNICITY	YEAR OF REPORT							
	1995		1996		1997		1998	
	#	Rates	#	Rates	#	Rates	#	Rates
White	156	210	163	223	105	146	71	100
Black	584	359	762	477	572	376	582	387
Hispanic/Other	30	105	47	167	40	144	35	128
TOTAL	770		972		717		688	

SOURCE: DOH/AHA/DOE, 1999

Table 7. Adult/Adolescent Female AIDS Cases and Rates/100,000 Population by Year of Report and Race/Ethnicity, Washington, D.C., 1995-1998

RACE/ ETHNICITY	YEAR OF REPORT							
	1995		1996		1997		1998	
	#	Rates	#	Rates	#	Rates	#	Rates
White	9	11	9	12	6	8	11	15
Black	203	105	238	123	260	144	269	150
Hispanic/Other	3	11	9	33	2	7	5	19
TOTAL	215		256		268		285	

SOURCE: DOH/AHA/DOE, 1999

AIDS Cases by Gender and Exposure Category Reported from 1995-1998

During the period of 1995 to 1998, 4,171 adult/adolescent AIDS cases were reported in the District of Columbia. Of these 75% were males and 25% were females. Among adult/adolescent males, MSM exposure mode accounted for half (51%) of the cases, followed by IDU (29%), heterosexual contact (10%), MSM/IDU (5%), and other and unknown transmission modes (6%). Among adult/adolescent females, IDU (48%) and heterosexual contact (40%) were the predominant HIV exposure categories, followed by other transmission modes (12%).

Of the 3,147 adult/adolescent male AIDS cases reported between 1995 and 1998, AIDS cases among Black MSM accounted overall for 34% (1,083), the single largest group. Black heterosexual IDUs accounted for 28% (887), followed by White MSM 13% (418), Black heterosexuals with no other risk identified 9% (268), and Black men who have sex with men and inject drugs (MSM/IDU) 4% (115).

Table 8. Male Adult/Adolescent AIDS Cases by Race/Ethnicity and Exposure Category, Washington, D.C., Reported 1995-1998

EXPOSURE CATEGORY	RACE/ETHNICITY			
	White	Black	Hispanic/Other	TOTAL
	# (%)	# (%)	# (%)	# (%)
Men who have sex with men(MSM)	418 (84)	1,083 (43)	98 (64)	1,599 (51)
Injection Drug Use (IDU)	23 (5)	887 (35)	10 (7)	920 (29)
MSM/IDU	21 (4)	115 (5)	5 (3)	141 (4)
Heterosexual Contact	16 (3)	268 (11)	21 (14)	305 (10)
Other	7 (1)	10 (0)	*1 (1)	18 (1)
Risk not identified	10 (2)	137 (5)	17 (11)	164 (5)
Subtotal	495 (100)	2,500 (100)	152(100)	3,147 (100)
TOTAL (N= 3,147)	495 (16)	2,500 (79)	152 (5)	3,147 (100)

SOURCE: DOH/AHA/DOE, 1999

*Not disclosed due to small cell size

Table 9. Female Adult/Adolescent AIDS Cases by Race/Ethnicity and Exposure Category, Washington, D.C., Reported 1995-1998

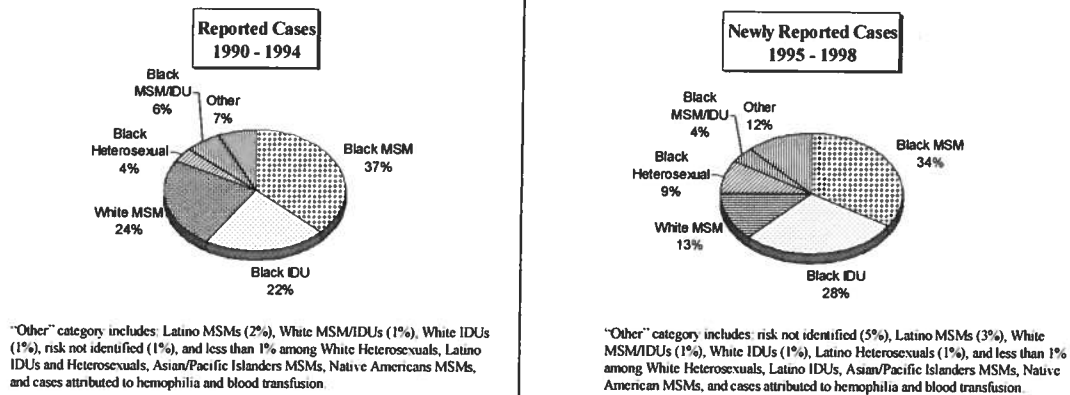
EXPOSURE CATEGORY	RACE/ETHNICITY			
	White	Black	Hispanic/Other	TOTAL
	# (%)	# (%)	# (%)	# (%)
Injection Drug Use (IDU)	19 (54)	474 (49)	*1 (5)	494 (48)
Heterosexual Contact	10 (29)	387 (40)	15 (79)	412 (40)
Other	0 (0)	16 (2)	*0 (0)	16 (2)
Risk not identified	6 (17)	93 (10)	3 (16)	102 (10)
Subtotal	35 (100)	970(100)	19(100)	1,024(100)
TOTAL (N= 1,024)	35 (3)	970 (95)	19 (2)	1,024(100)

SOURCE: DOH/AHA/DOE, 1999

*Not disclosed due to small cell size

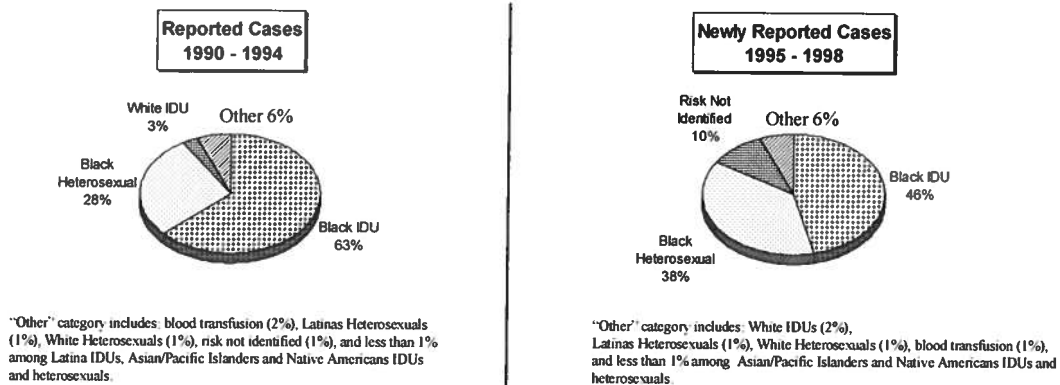
Heterosexual Black men (IDUs and non-IDUs) showed the greatest relative increases when comparing their share of newly reported cases with cases reported from 1990 to 1994. Heterosexual Black men with no other risk identified accounted for 9% of the newly reported cases compared to 4% of cases reported between 1990 and 1994. Heterosexual Black male IDUs accounted for 28% of the newly reported AIDS cases compared to 22% of the 1990-1994 interval cases. On the other hand, reported cases among MSMs declined during the period 1995 to 1998 when compared to the period 1990 to 1994, more among Whites than among Blacks. Black MSMs accounted for 34% and 37% of the newly reported and earlier reported respectively; whereas, White MSMs accounted for 13% of the newly reported cases and 24% of the cases reported between 1990 and 1994 among adult/adolescent males (Figure 2).

Figure 2. District of Columbia male adult/adolescent AIDS cases by race/ethnicity and exposure category, cases reported as of December 31, 1998



Among adult/adolescent females, of the 1,024 reported cases during the period 1995-1998, cases among Black females attributed to IDU accounted for 46% (474) of the cases, and cases among Black females attributed to heterosexual contact with no other risk identified accounted for 38% (387) of the reported cases. The proportion of Black heterosexual females was larger among newly (38%) reported cases than among cases reported between 1990 and 1994 (28%).

Figure 3. District of Columbia female adult/adolescent AIDS cases by race/ethnicity and exposure category, cases reported as of December 31, 1998



Conversely, the proportion of Black IDU females was smaller among newly (46%) reported cases than among previously reported cases between 1990 and 1994 (63%). Black adult/adolescent females accounted for the majority (95%) of the recently reported and cumulative (total of both new and old) AIDS cases among adult/adolescent females. (Figure 3)

Table 10. AIDS Cases by Year of Report, Exposure Category, and Gender, Washington, D.C., 1995-1998

EXPOSURE CATEGORY	YEAR OF REPORT			
	1995	1996	1997	1998
	# (%)	# (%)	# (%)	# (%)
MALE				
Men who have sex with men (MSM)	454 (59)	522 (54)	329 (46)	294 (43)
Injecting drug use (IDU)	202 (26)	278 (29)	218 (30)	222 (32)
MSM/IDU	39 (5)	40 (4)	30 (4)	32 (5)
Heterosexual contact	55 (7)	103 (11)	86 (12)	61 (9)
Other	7 (1)	7 (1)	2 (0)	2 (0)
Risk not identified	13 (2)	22 (2)	52 (7)	77 (11)
Subtotal	770(100)	972(100)	717(100)	688(100)
FEMALE				
IDU	109 (51)	122 (48)	138 (52)	125 (44)
Heterosexual contact	91 (42)	126 (49)	91 (34)	104 (37)
Other	7 (3)	2 (1)	5 (2)	2 (1)
Risk not identified	8 (4)	6 (2)	34 (13)	54 (19)
Subtotal	215(100)	256(100)	268(100)	285(100)
TOTAL	985	1,228	985	973

SOURCE: DOH/AHA/DOE, 1999

2.2 HIV/AIDS-Related Deaths:

HIV/AIDS related Deaths by Demographic Characteristics by Year of Report 1996 -1997

Comparison of mortality data during the years of 1996 and 1997, the most recent years with the majority of deaths reported, is as follows:

- Deaths declined in 1997 by 33% relative to 1996. In 1996, 638 HIV/AIDS deaths were reported, compared to 426 in 1997
- In 1996, Blacks (79%) accounted for the majority of deaths, followed by Whites (19%), Hispanics (1%), and other race/ethnicities (<1%). In 1997, deaths among Blacks (82%) increased slightly due to a slight decline among Whites (16%). In 1997, no changes were observed among Hispanics (1%) and persons of other race/ethnicities (<1%)
- Analysis of AIDS death data by age group indicated the highest occurrence among those 35-44 (47% of deaths in 1996 compared to 42% in 1997)
- In both years, most deaths occurred in the age groups of 25 to 54, accounting for 92% of the deaths in 1996 and 87% in 1997.

Table 11. AIDS Deaths by Demographic Characteristics and Year Death Reported, Washington, D.C., 1996 and 1997

Characteristics	YEAR DEATH REPORTED	
	1996	1997
	# (%)	# (%)
GENDER		
Male	514 (81)	323 (76)
Female	124 (19)	103 (24)
TOTAL	638(100)	426(100)
RACE/ETHNICITY		
White	124 (19)	67 (16)
Black	506 (79)	350 (82)
Hispanic	5 (1)	6 (1)
Other	3 (1)	3 (1)
TOTAL	638(100)	426(100)
AGE GROUP		
<15	6 (1)	10 (2)
15-24	8 (1)	10 (2)
25-34	145 (23)	89 (21)
35-44	302 (47)	177 (42)
45-54	137 (22)	105 (25)
55-64	30 (5)	29 (7)
>64	10 (2)	6 (1)
TOTAL	638(100)	426(100)

SOURCE: DOH/AHA/DOE, 1999

Years of Potential Life Lost (YPLL)

Years of Potential Life Lost (YPLL) is a measure of the impact of premature mortality on a population. Sometimes the crude death rate is used to compare the mortality experience of population groups. However, the crude death rate does not take into consideration the different age groups of the population being compared. YPLL is a measure designed by epidemiologists to account for the fact that mortality is higher for older people compared to younger people. As a measure of premature mortality, YPLL is a summary of how many years of life a person dying at a given age would lose as a result of not living until a pre-set age. In the District of Columbia, table shows that on average District residents dying from HIV disease lose 21,195 years of life annually as a result of premature death. This represents the largest number of years lost as a result of any other single cause of death.

2.3 What is the Impact of HIV-related Deaths on District of Columbia Residents?

According to figures from the District of Columbia State Center for Health Statistics, a total of 6,538 D.C. residents died in 1996. Out of this number, 561 or about 8.6% died from AIDS-related complications. However, there are age and gender differences in the impact of AIDS mortality. For the total population, AIDS deaths constitute 8.6% of total deaths. The contribution of AIDS to total deaths is 9.1% among Blacks and 6.5% among Whites. As is expected, AIDS deaths have differential impact on different age groups. AIDS deaths occur at the most productive years. In 1996, AIDS deaths constituted about one-half (40.9% among Blacks and 49.2% among Whites) of total deaths, and was the number one killer of both Black and White residents between the ages of 25-44 years.

These crude measures fail to convey the full impact of AIDS in the District of Columbia. It is important to estimate the impact of AIDS deaths on mortality differentials between population groups in the District. It is also imperative to examine the loss of productive life due to AIDS. Blacks experience most from the mortality impact of AIDS. In 1996, 12.4% of deaths among Blacks was from AIDS, compared to 5.1% of deaths among Whites. In the years 1992-1996, the age-adjusted rate from AIDS among Blacks was 111.5 (rates are per 100,000 population and are age-adjusted to the 1940 U.S. standard million population). AIDS is the third leading cause, next to malignant neoplasms and heart diseases. To fully comprehend the mortality effect of AIDS on premature mortality, it is instructive to consider how much the leading causes of death contribute to premature mortality in the District. Figures 6, and 7 show premature deaths from six leading causes of death as a proportion of total observed deaths for Black and White residents. For the years 1992-1996, HIV is the leading cause of premature mortality among Whites, and is almost tied with, but is eclipsed by, deaths due to violence (from intentional and unintentional injuries) as the leading cause among Blacks.

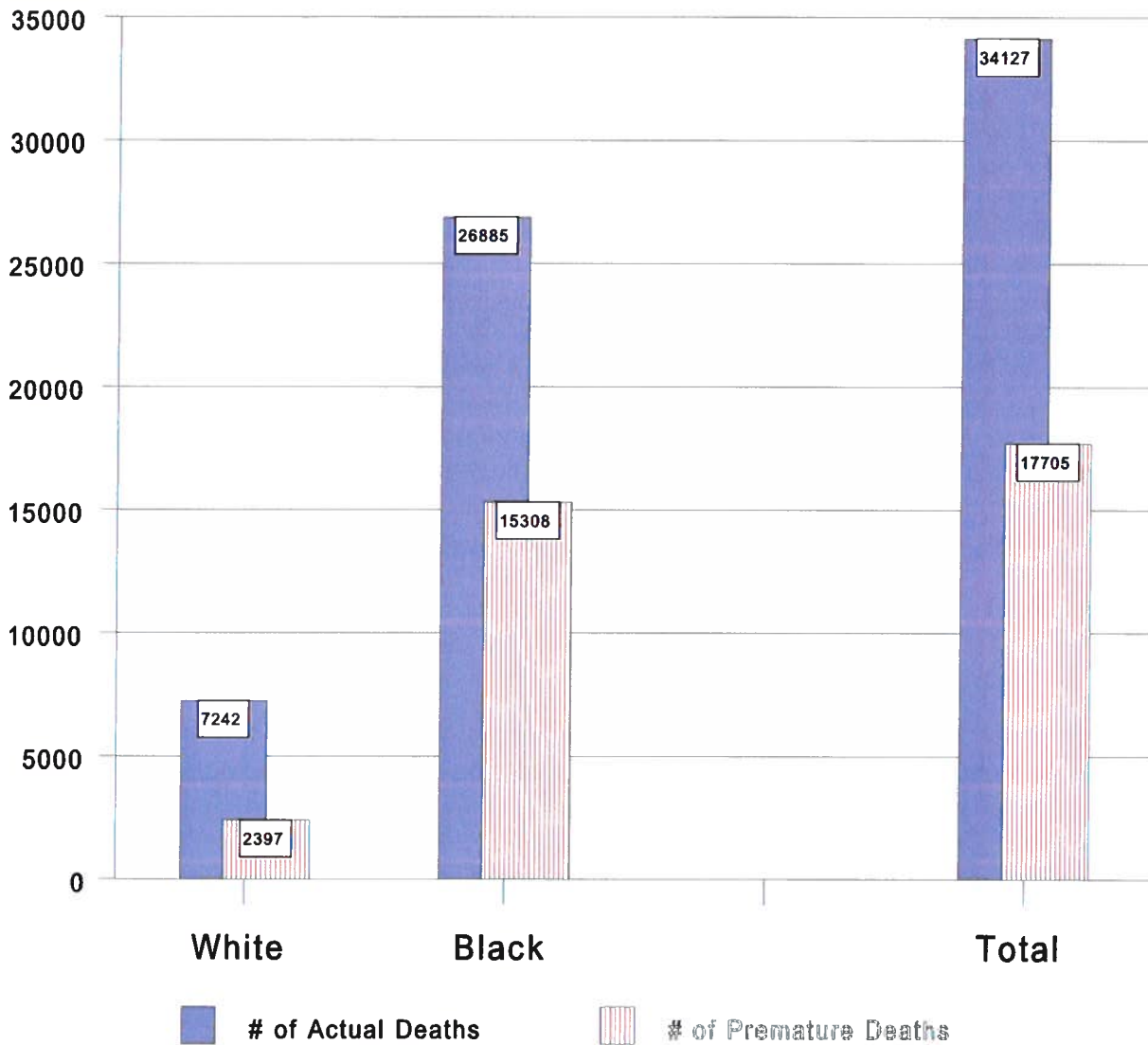
The concept of Years of Potential Life Lost (YPLL) is useful in capturing the premature mortality due to HIV/AIDS. Table 15 and figure 8 to present the average annual YPLL due to leading causes of death in the District. HIV diseases is the leading contributor to YPLL in the District of Columbia. On the average, D.C. residents lose about 21,195 years of potential life as a result of HIV disease annually. This represents the highest YPLL due to any cause of death among Whites and the second highest YPLL among Blacks, after intentional injuries.

Table 12. Deaths and Years of Potential Life Lost (YPLL) due to HIV/AIDS by Age Group, D.C., 1996-97

AGE GROUP	POPULATION		AIDS DEATHS		MIDPOINT OF AGE GROUP	YEARS TO 65	YPLL Washington, D.C.	
	1996	1997	1996	1997			1996	1997
0-- 4	34,242	33,232	5	10	2.5	62.5	312.5	625
5--14	60,124	59,420	1	0	10	55	55	0
15--24	61,505	57,544	8	10	15	45	360	450
25--34	110,100	104,869	145	89	30	35	5,075	3,115
35--44	89,051	87,568	302	177	40	25	7,550	4,425
45--54	66,962	67,431	137	105	50	15	2,055	1,575
55--64	45,778	45,525	30	29	60	5	150	145
65--74	41,434	39,658	10	5				
75--84	25,221	24,953	0	1				
85+	8,796	8,764	0	0				
TOTAL	543,213	528,964	638	426			Total: 15,557.5	Total: 10,335
							YPLL rate=33.3	YPLL rate=22.7

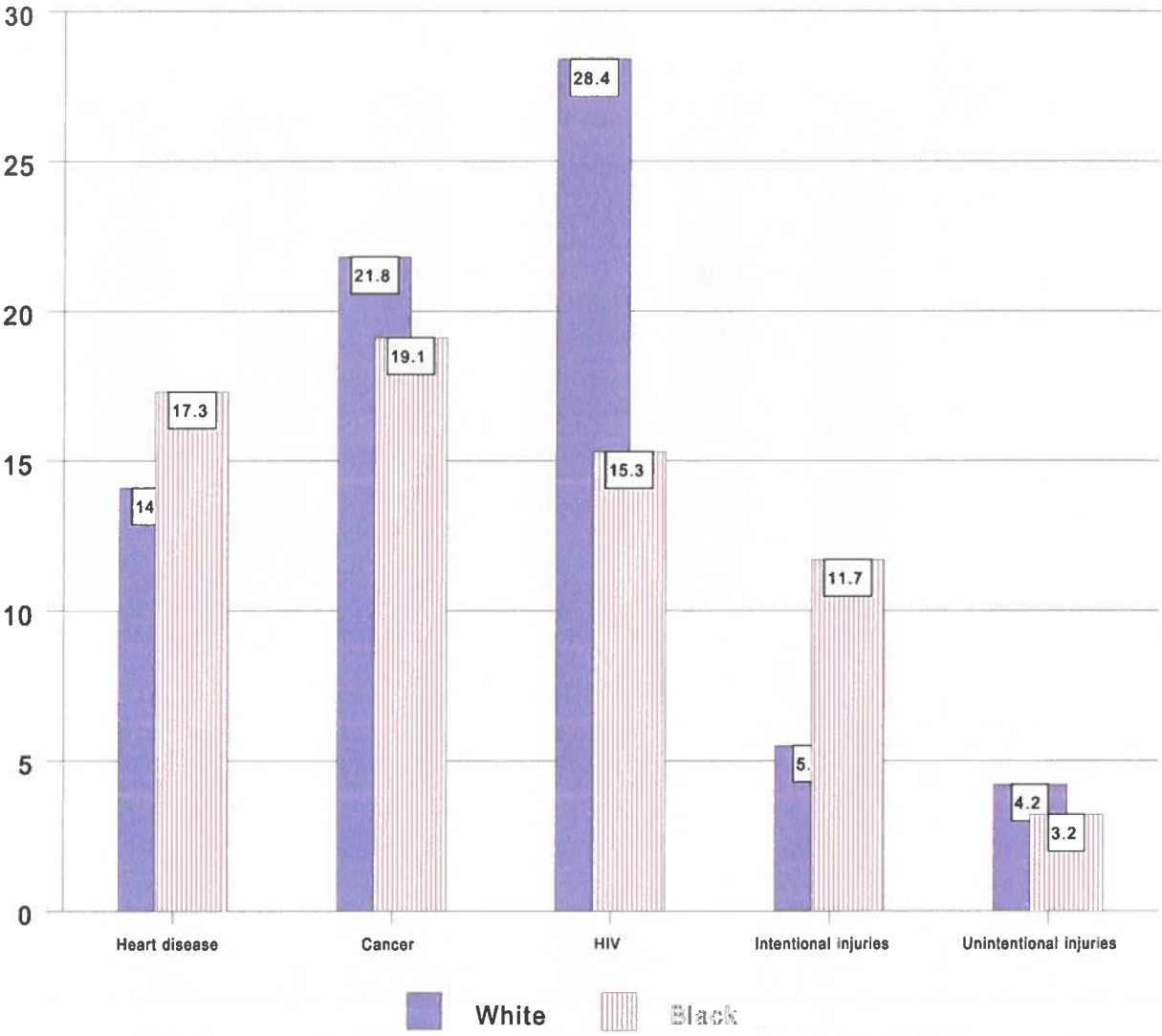
SOURCE: DOH/AHA/DOE, 1999 with data from State Center for Health Statistics

Figure 4. Observed vs. Premature Deaths, District of Columbia, 1992-1996



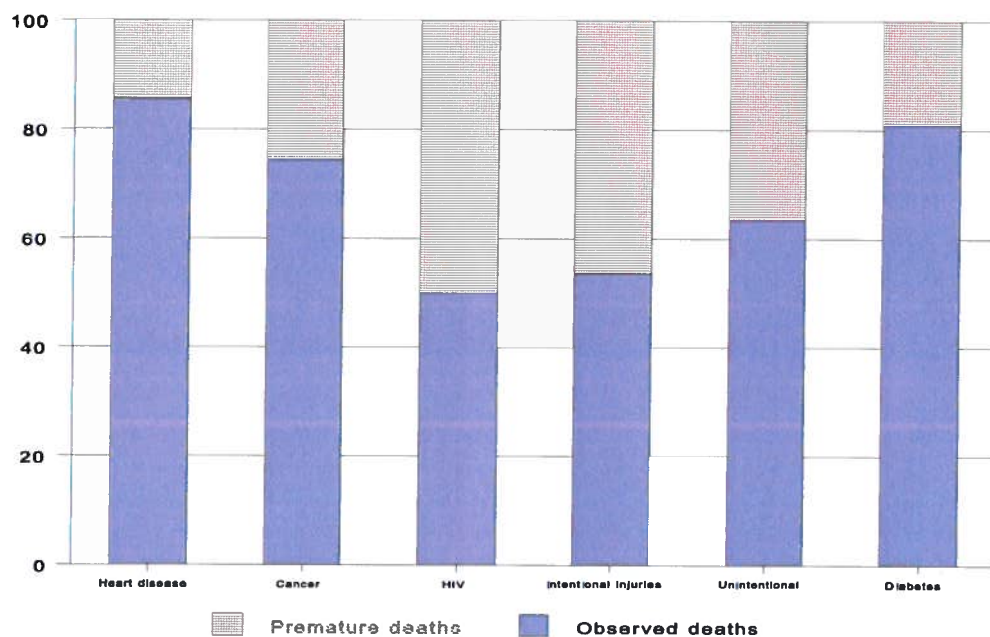
SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996;" District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

Figure 5. The Top Five Leading Causes of Premature Death (percent of premature deaths) by Selected Race, District of Columbia, 1992-1996



SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996;" District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

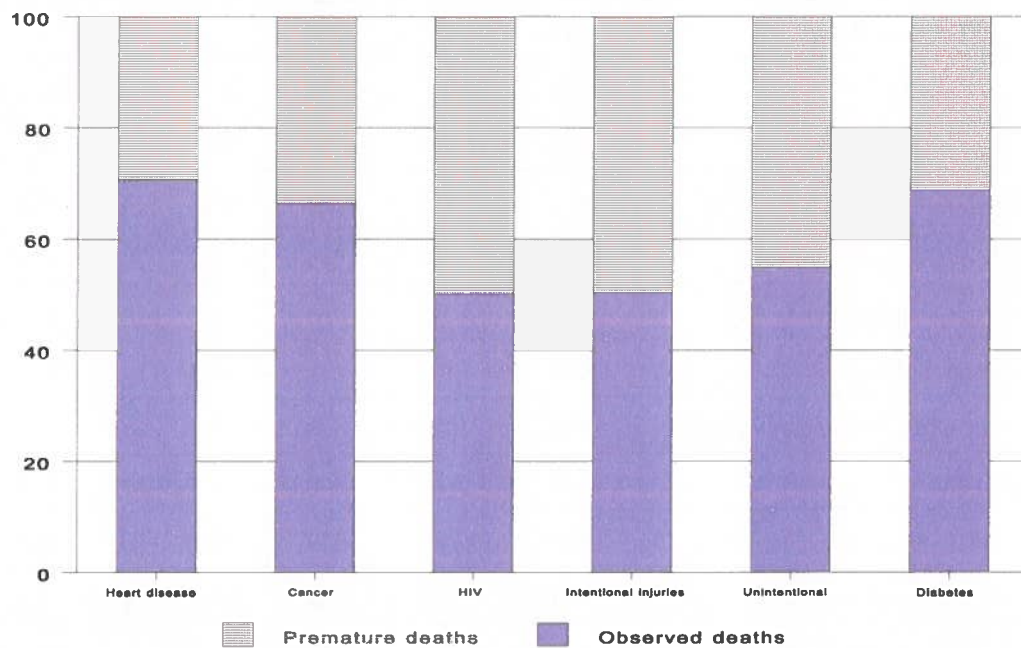
Figure 6. Premature Deaths in Whites as a Proportion of Observed Deaths, District of Columbia, 1992-1996



SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996;" District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

NOTE: The top portion of the bar shows premature deaths; the bottom portion shows observed deaths.

Figure 7. Premature Deaths in Blacks as a Proportion of Observed Deaths, District of Columbia, 1992-1996



SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996;" District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

NOTE: The top portion of the bar shows premature deaths; the bottom portion shows observed deaths.

Table 13.

LEADING CAUSES OF DEATH: DISTRICT OF COLUMBIA, 1992 - 1996									
<i>(All rates are per 100,000 population; AADR are adjusted to the US 1940 standard million population)</i>									
CAUSES OF DEATH <i>(ICD-9)</i>	NUMBER			RATES					
	TOTAL	WHITE	BLACK	TOTAL		WHITE		BLACK	
				<i>CDR</i>	<i>AA DR</i>	<i>CDR</i>	<i>AA DR</i>	<i>CDR</i>	<i>AA DR</i>
Unintentional injuries	780	175	605	26.7	23.0	19.5	14.6	29.9	27.2
Intentional injuries	1,989	154	1,835	68.1	75.2	17.2	14.3	90.7	108.1
Alcohol & drug abuse	278	30	257	9.8	8.7	3.3	2.8	12.7	11.7
Heart diseases	8,400	2,006	6,394	287.8	158.3	223.8	85.8	316.2	190.2
Malignant neoplasms	7,290	1,528	5,762	249.7	159.5	170.3	94.5	284.9	187.6
Human immunodeficiency virus	3,044	681	2,363	104.3	94.1	76.0	62.1	116.9	111.5
Cerebrovascular diseases	1,728	448	1,280	59.2	30.8	50.0	15.1	63.3	37.6
Pneumonia and influenza	1,065	302	763	36.5	18.2	33.7	10.3	37.7	21.6
Diabetes Mellitus	949	137	812	32.5	19.2	15.3	6.9	40.2	24.7
Chronic Obstr. Pulmonary disease	820	293	527	28.1	15.2	32.7	14.2	26.1	15.4
Septicemia	716	116	600	24.5	14.0	12.9	5.2	29.7	18.0
Chronic liver disease	607	88	519	20.8	17.8	9.8	8.1	25.7	22.4
Certain perinatal conditions	516	31	488	17.7	18.9	3.5	6.2	24.1	21.8
Nephritis & nephrotic syndrome	478	66	412	16.4	9.5	7.4	3.0	20.1	12.6
Hypertension w/o renal disease	373	51	322	12.8	6.8	5.7	2.1	15.9	8.9
Other diseases of the arteries	258	72	186	8.8	4.4	8.0	3.1	9.2	5.0
Alzheimer's disease	178	72	106	6.1	2.1	8.0	2.2	5.2	2.0
Congenital anomalies	125	28	97	4.3	4.3	3.1	4.3	4.8	4.3
All other causes	4,523	965	3,558	155.0	96.3	107.6	47.7	176.0	118.1
ALL CAUSES OF DEATH	34,117	7,243	26,886	1,169.	1,169.	807.8	402.5	1,329.	948.6

CDR = Crude Death Rate; AADR = Age-Adjusted Death Rate

SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996," District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

Table 14.

LEADING CAUSES OF DEATH: DISTRICT OF COLUMBIA BY WARD OF RESIDENCE									
CAUSES OF DEATH	DC	WARDS - Percent							
<i>(ICD-9)</i>		1	2	3	4	5	6	7	8
Unintentional injuries	2.3 (793)	2.4	2.3	1.8	1.9	2.2	3.0	2.6	2.9
Intentional injuries	5.8 (2,008)	5.2	3.6	0.9	3.3	6.1	8.0	7.5	10.6
Alcohol & drug abuse	0.8 (287)	0.9	0.9	0.2	0.6	0.8	1.1	0.7	1.0
Heart diseases	24.7 (8,544)	23.0	24.7	30.7	27.3	25.0	21.4	23.5	20.0
Malignant neoplasms	21.3 (7,362)	19.1	19.5	22.5	25.2	21.8	20.3	22.0	19.4
HIV Human Immunodeficiency Virus	8.8 (3,057)	14.1	14.0	3.4	6.4	7.7	10.9	6.9	8.5
Cerebrovascular diseases	5.1 (1,771)	4.2	4.9	8.9	5.3	5.3	4.6	4.3	4.9
Pneumonia and influenza	3.2 (1,091)	3.3	3.6	4.5	3.2	3.1	2.7	2.7	2.7
Diabetes Mellitus	2.8 (953)	2.3	2.1	1.8	2.7	3.3	3.2	3.6	2.7
Chronic Obstr Pulmonary disease	2.4 (826)	2.4	2.0	4.4	2.5	2.2	1.8	1.9	2.3
Septicemia	2.1 (730)	2.3	1.8	1.4	2.1	2.3	2.3	2.4	2.1
Chronic liver disease	1.8 (612)	2.1	2.0	0.8	1.4	1.5	1.9	1.7	1.9
Certain perinatal conditions	1.5 (526)	1.3	0.9	0.4	1.0	1.5	1.6	2.2	3.4
Nephritis & nephrotic syndrome	1.4 (479)	1.4	1.4	1.0	1.3	1.3	1.1	1.3	1.7
Hypertension w/o renal disease	1.1 (380)	0.9	1.0	1.2	1.4	1.3	1.0	1.3	0.8
Other diseases of the arteries	0.7 (259)	0.9	0.8	1.2	0.7	0.7	0.3	0.7	0.4
Alzheimer's disease	0.5 (186)	0.4	0.6	1.3	0.7	0.4	0.5	0.5	0.5
Congenital anomalies	0.4 (131)	0.5	0.3	0.4	0.4	0.2	0.2	0.5	0.8
All other causes	13.4 (4,631)	13.3	13.6	13.2	12.5	13.2	14.1	13.6	13.3
All Causes	100 (34,626)	100 (3,038)	100 (2,937)	100 (2,750)	100 (4,246)	100 (3,244)	100 (3,244)	100 (3,751)	100 (2,578)

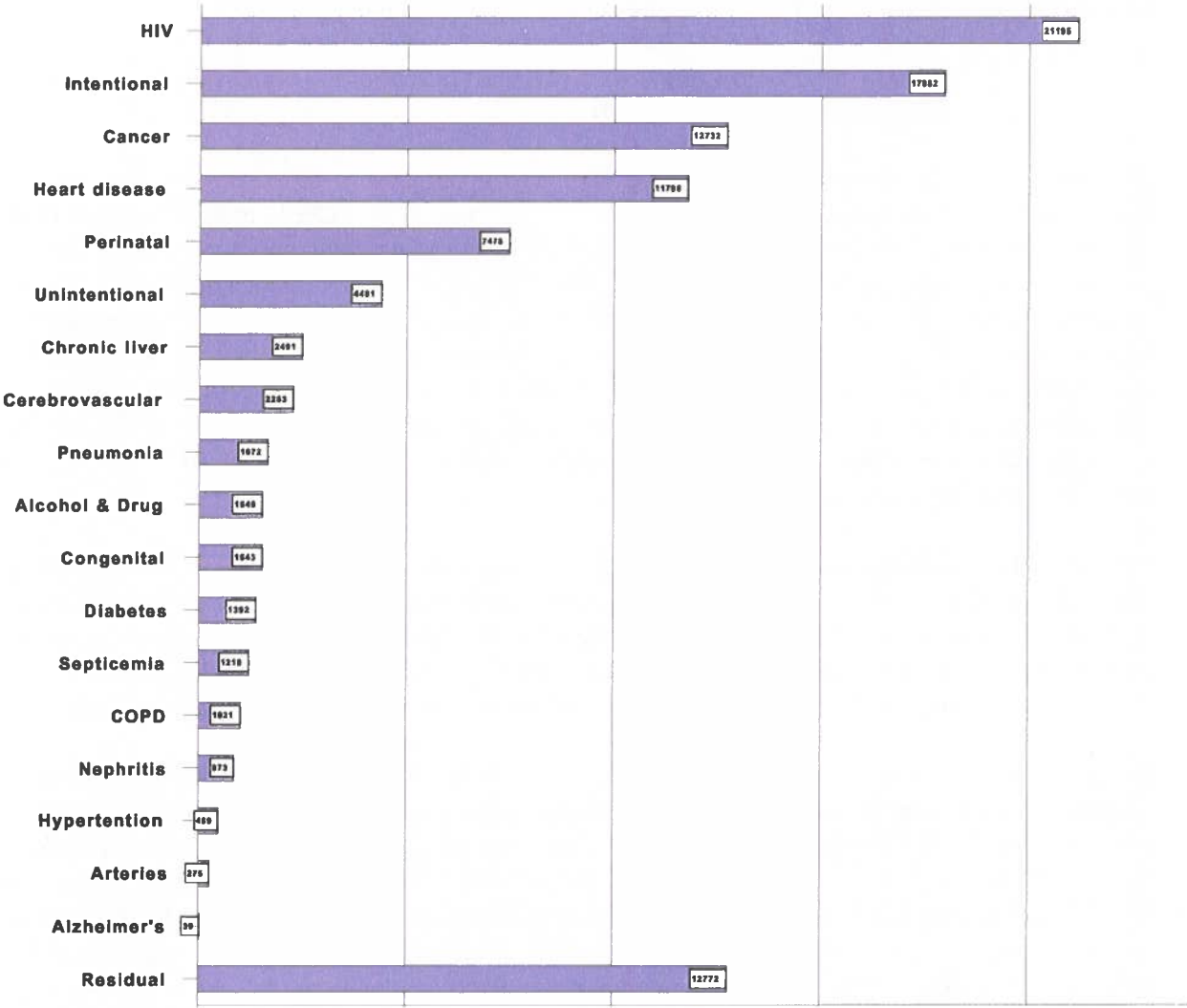
SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996;" District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

Table 15.

YEARS OF POTENTIAL LIFE LOST (YPLL): DISTRICT OF COLUMBIA, 1992 - 1996 (Crude rates are per 100,000 population)								
CAUSES OF DEATH	Number	Crude Rates per 100,000						
(ICD-9)	Average Annual YPLL	TOTAL			MALE		FEMALE	
		TOTAL	WHITE	BLACK	WHITE	BLACK	WHITE	BLACK
Unintentional injuries	4,401	810.4	477.4	975.6	920.2	1,306.1	195.1	483.9
Intentional injuries	17,982	3,604.4	507.6	5,262.1	946.0	6,642.0	164.8	824.9
Alcohol & drug abuse	1,540	240.4	59.1	336.1	107.4	476.9	37.5	166.4
Heart diseases	11,796	1,860.4	667.5	2,408.8	1,073.5	3,018.3	324.6	1,595.8
Malignant neoplasms	12,732	2,014.5	1,046.5	2,445.0	1,164.8	2,640.2	1,135.5	1,918.7
Human immunodeficiency virus	21,195	3,263.6	1,992.5	3,946.6	4,727.3	6,561.0	178.8	1,549.8
Cerebrovascular diseases	2,283	360.4	86.6	485.2	126.8	541.5	65.1	396.2
Pneumonia and influenza	1,672	269.0	92.0	344.6	158.8	469.2	70.4	244.1
Diabetes Mellitus	1,392	221.2	54.1	296.9	48.0	322.0	54.3	217.0
Chronic Obstr. Pulmonary disease	1,021	174.8	83.6	207.5	93.9	225.0	63.6	144.0
Septicemia	1,218	195.8	47.3	259.6	62.5	337.7	35.7	175.4
Chronic liver disease	2,491	400.6	166.6	516.7	303.5	756.0	91.9	293.9
Certain perinatal conditions	7,478	1,367.5	448.7	1,574.1	580.4	2,082.4	835.8	1,753.6
Nephritis & nephritis Syndrome	873	135.2	24.4	187.0	22.5	224.6	26.0	139.1
Hypertension w/o renal disease	489	74.3	15.3	101.1	21.6	108.5	18.7	81.9
Other diseases of the arteries	275	41.4	25.7	49.1	49.5	79.0	9.3	19.9
Alzheimer's disease	39	5.4	3.6	6.4	5.0	6.7	1.6	6.4
Congenital anomalies	1,543	284.0	274.5	287.9	402.7	337.1	454.4	337.0
All other causes	12,772	2,127.4	775.7	2,692.5	1,242.0	3,443.7	614.2	1,965.7
All Causes of Death	103,192	17,456.5	6,848.8	22,390.8	12,056.6	29,637.6	4,377.3	12,313.6

SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996;" District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

Figure 8. Average Annual Years of Potential Life Lost (YPLL) due to Top Leading Causes of Death, District of Columbia, 1992-1996



SOURCE: "How Healthy is the District of Columbia? An Analysis of Ten Years of Mortality, Morbidity, and Health Risk Behavior 1986-1996," District of Columbia Department of Health, Occasional Report, Vol. 1, No. 1, April 1998.

2.4 What is the Impact of HIV Infection on the District of Columbia ?

Crude estimates of HIV prevalence (number of persons living with HIV) among adults/adolescents (persons older than 12 years) can be calculated for the District of Columbia based on two methods recommended by CDC: (1) Estimates based on extrapolation of 1994 survey of childbearing women data; and (2) Estimates based on extrapolation of CDC national estimates.

I. Estimate of HIV Prevalence in the District based on Extrapolation from the Survey of Childbearing Women (SCBW):

The Survey of Childbearing Women (SCBW) was a population-based survey that provided data representative of all women giving birth to live infants. The SCBW measured HIV infection in women delivering live-born infants indirectly, through testing their newborns' blood leftover from the metabolic screening program. In the District of Columbia, surveys of childbearing women were conducted from 1989 to 1994. In 1995, due to the controversy surrounding the favorable clinical trial outcome of interrupted vertical HIV transmission from mother to child through the administration of the drug Zidovudine (ZDV), the CDC suspended the federally-funded survey of childbearing women in the District and in the rest of the nation. Thus, 1994 was the last year HIV infection data was collected among childbearing women in the District of Columbia and HIV seroprevalence data was generalizable.

HIV infection estimates can be based on extrapolating, i.e., inferring values to an unobserved group from an already observed group, the population-based data of the SCBW. HIV infection among childbearing women can be extrapolated to the general population of women, and then subsequently extrapolated to the general population of men. AIDS prevalence data are used to estimate ratios of childbearing women to women of all ages, as well as ratios of women to men, by race/ethnicity.

Rates of seropositivity (number of HIV positives divided by number of individuals tested) among women of childbearing age were approximately the same throughout the period 1989 to 1994, ranging from 1.2% in 1989 to 1.5% in 1994. In terms of proportions, the share of adult/adolescent female AIDS cases have increased substantially during the period 1993-1998. Simultaneously, AIDS cases among adult/adolescent males have substantially declined. Possible seropositivity rate increases over the years since 1994 may be small in terms of percentages to significantly have an effect on estimates of HIV prevalence, or make the derived rates invalid. These seropositivity rates, in conjunction with AIDS prevalence data, are used to derive crude estimates of HIV infection by race/ethnicity for the District of Columbia as shown in table below.

Table 16. Total Estimated HIV Prevalence among Residents of the District of Columbia by Race/Ethnicity, Extrapolated from the Survey of Childbearing Women

RACE/ ETHNICITY	ESTIMATED HIV INFECTED PERSONS
Black	9,400
White	2,900
Hispanic	1,500
Other	100
TOTAL	13,900

SOURCE: DOH/AHA/DOE, 1999

Methodological Computation

1. Estimate of HIV Seroprevalence among Blacks Using Data from the 1994 Survey of Childbearing Women:

1.1 Calculations among Black Childbearing Women

AGE GROUP	1997 DC POPULATION	1994 %HIV+CBW	No. of HIV+ WOMEN
15-19	7,681	0.99	76
20-24	7,102	1.46	104
25-29	14,885	1.86	277
30-34	13,659	1.62	221
35-39	14,824	1.00	148
40-44	14,413	1.87	270
		AVERAGE = 1.47%	TOTAL = 1,096

1.2 Adjust for Black women older or younger than the childbearing age range

Estimate of HIV among women aged 15-44	/	Proportion of all women with AIDS aged 15-44 (diagnosed after 1993)	=	Estimate of HIV prevalence among women of all ages
1,096		80%		1,370

1.3 Adjust for decrease fertility in Black women diagnosed with AIDS opportunistic Infections (OIs)

No. of women diagnosed with AIDS OIs and alive as of 3/15/99	/	Adjustment for delayed reporting	/	Adjustment for Under reporting	=	Estimate of number of women with AIDS OIs
656		0.8		0.8		1,025

1.4 Add estimate of number of living HIV-infected Black women who have already been diagnosed with AIDS OIs (from step 3) to the estimate obtained in step 2

Estimate of HIV prevalence among women (from step 2)	+	Estimate of number of women with AIDS OIs (from step 3)	=	Total estimated prevalence of HIV among women
1,370		1,025		2,395

1.5 Estimate HIV seroprevalence among Black men, District of Columbia

Estimated prevalence among women	X	Male-to-female AIDS case ratio (diagnosed after 1993)	=	Estimated prevalence among men
1,370		2.9		3,924

- 1.6 Add estimate of number of living HIV-infected Black men who have already been diagnosed with AIDS OIs (using same methods used to calculate number of HIV-infected women with AIDS OIs, step 3) to the estimate obtained in step 5

No. of men diagnosed with AIDS OIs and alive as of 3/15/99	/	Adjustment for delayed reporting	/	Adjustment for under reporting	=	Estimated prevalence among men
1,940		0.8		0.8		3,031

Estimate of HIV prevalence among men (from step 5)	+	Estimate of number of men with AIDS OIs	=	Total estimated prevalence of HIV among men
3,924		3,031		6,955

- 1.7 Estimated HIV seroprevalence among Blacks based on SCBW (rounded to the nearest hundred), District of Columbia

Estimated prevalence among women	+	Estimated prevalence among men	=	Total estimated prevalence among Blacks
2,395		6,955		9,350

2. Estimate of HIV Seroprevalence among Whites Using Data from the 1994 Survey of Childbearing Women:

- 2.1 Estimate of HIV seroprevalence among White women of childbearing age, using data from the 1994 survey:

Age Group	1997 population estimate	%HIV+ CBW	No. of HIV women
15-44	42,489	0.20	85

- 2.2 Adjust for White women older or younger than the childbearing age range

Estimate of HIV among women aged 15-44 years	/	Proportion of all women with AIDS aged 15-44 (diagnosed after 1993)	=	Estimate of HIV prevalence among women of all ages
85		77%		111

- 2.3 Adjust for decrease fertility in White women diagnosed with AIDS opportunistic infections (OIs)

No. of women diagnosed with AIDS OIs and alive as of 3/15/99	/	Adjustment for delayed reporting	/	Adjustment for under reporting	=	Estimate of number of women with AIDS OIs
26		0.8		0.8		41

2.4 Add estimate of number of living HIV-infected White women who have already been diagnosed with AIDS OIs (from step 3) to the estimate obtained in step 2

Estimate of HIV prevalence among women (from step 2)	+	Estimate of number of women with AIDS OIs (from step 3)	=	Total estimated prevalence of HIV among women
111		41		151

2.5 Estimate of HIV seroprevalence among White men in the District of Columbia

Estimated prevalence among White women	X	Male-to-female AIDS case ratio (diagnosed after 1993)	=	Estimated prevalence among men
111		16.8		1,860

2.6 Add estimate of number of living HIV-infected White men who have already been diagnosed with AIDS OIs (using same methods used to calculate number of HIV-infected women with AIDS OIs, step 3) to the estimate obtained in step 5

No. of men diagnosed with AIDS OIs and alive as of 3/15/99	/	Adjustment for delayed reporting	/	Adjustment for under reporting	=	Estimate of number of men with AIDS OIs
554		0.8		0.8		866

Estimate of HIV prevalence among men (from step 5)	+	Estimate of number of men AIDS OIs	=	Total estimated prevalence of HIV among men
1,860		866		2,726

2.6.1 Estimated HIV seroprevalence among Whites based on SCBW (rounded to the nearest hundred), District of Columbia

Estimate prevalence among women	+	Estimate of prevalence among men	=	Total estimated prevalence among Whites
151		2,726		2,877

3. Estimate of HIV Seroprevalence among Hispanics Using Data from the 1994 Survey of Childbearing Women:

3.1 Estimate of HIV seroprevalence among Hispanic women of childbearing age, using data from the 1994 survey:

Age Group	1997 population estimate	%HIV+ CBW	No. of HIV women
15-44	9,709	1.00	97

3.2 Adjust for Hispanic women older or younger than the childbearing age range

Estimate of HIV among women aged 15-44 years	/	Proportion of all women with AIDS aged 15-44 (diagnosed after 1993)	=	Estimate of HIV prevalence among women of all ages
97		79%		123

3.3 Adjust for decrease fertility in Hispanic women diagnosed with AIDS opportunistic infections (OIs)

No. of women diagnosed with AIDS OIs and alive as of 3/15/99	/	Adjustment for delayed reporting	/	Adjustment for under reporting	=	Estimate of number of women with AIDS OIs
9		0.8		0.6		19

3.4 Add estimate of number of living HIV-infected Hispanic women who have already been diagnosed with AIDS OIs (from step 3) to the estimate obtained in step 2

Estimate of HIV prevalence among women (from step 2)	+	Estimate of number of women with AIDS OIs (from step 3)	=	Total estimated prevalence of HIV among women
123		19		142

3.5 Estimate HIV seroprevalence among Hispanic men, District of Columbia

Estimated prevalence among women	X	Male-to-female AIDS case ratio (diagnosed after 1993)	=	Estimated prevalence among men
123		9.5		1,165

3.6 Add estimate of number of living HIV-infected Hispanic men who have already been diagnosed with AIDS OIs (using same methods used to calculate number of HIV-infected women with AIDS OIs step 3) to the estimate obtained in step 5

No. of men diagnosed with AIDS OIs and alive as of 3/15/99	/	Adjustment for delayed reporting	/	Adjustment for under reporting	=	Estimate of number of men with AIDS OIs
108		0.8		0.6		225

Estimate of HIV prevalence among men (from step 5)	+	Estimate of number of men with AIDS OIs	=	Total estimated prevalence of HIV among men
1,165		225		1,390

3.7 Estimated HIV seroprevalence among Hispanics based on SCBW (rounded to the nearest hundreds), District of Columbia

Estimated prevalence among women	+	Estimated prevalence among men	=	Total estimated prevalence
142		1,390		1,531

4. Estimate of HIV Seroprevalence among Asian/Pacific Islanders and Native Americans Using Data from the 1994 Survey of Childbearing Women: 104 (after adjustment to correct for accuracy due to low numbers)

II. Estimate of HIV Prevalence in the District Based on National Estimates of HIV Infection

Between July 1997 and June 1998, 52,215 AIDS cases were reported in the United States (50 states and the District of Columbia). Of this, 943 AIDS cases, or 1.8%, were reported from the District of Columbia (HIV/AIDS Surveillance Report, Mid-Year Edition Vol.10, No.1). Using the latest revised national estimate of 650,000 to 950,000 persons infected with HIV, published July 10, 1996 by the CDC in the Journal of the American Medical Association, the following HIV prevalence in the District of Columbia can be calculated:

Proportion of U.S. AIDS cases reported in D.C. Between July 1997- June 1998	x	National estimate of U.S. seroprevalence	=	Total estimated HIV prevalence In the District of Columbia
1.8%		(650,000 – 950,000)		(11,700 – 17,100)

2.5 Summary of Current HIV Prevalence Estimates:

In summary, these two methods yield the following crude estimates of HIV prevalence in the District of Columbia:

Table 17.

Extrapolation from:	HIV Prevalence Estimates:
A. D.C. Survey of Childbearing Women, 1994	13,900
B. National HIV Prevalence Estimate for D.C.	11,700 – 17,100

It seems reasonable to conclude from these estimates that HIV prevalence in the District of Columbia is approximately between 12,000 and 17,000 persons. This estimate range includes persons diagnosed with AIDS, but does not include persons who have died.

Question 3: Who is at Risk for Becoming Infected with HIV?

The persons most likely to become infected with HIV are those who engage in high-risk behaviors in communities with a high prevalence of HIV infection. Risk behaviors, for all intents and purposes, are acts that involve having unprotected sex, having multiple sex partners, and using/abusing intravenous drugs. Those acts that involve or result from the use/abuse of non-intravenous drugs, such as crack/cocaine and inhalants, or abuse of alcohol are also risk behaviors. Generally, when an individual's judgement is impaired and coherence is affected they are at risk. Risk for HIV infection is determined by the frequency with which these behaviors are practiced, combined with the HIV prevalence in the community where it is practiced.

In the past, AIDS case data was the only HIV-related data available to all jurisdictions in a relatively complete, reliable, and consistent form. However, with the advent of treatments (i.e., protease inhibitors) and the success of the anti-retroviral medications, fewer cases of AIDS are being diagnosed and subsequently reported. In the United States, more than 30 states already implement HIV surveillance. In the District of Columbia, AIDS case surveillance data continue to be the only available and representative data to track the characteristics of the epidemic in the population.

AIDS data tend to reflect changes that have occurred a long time ago. Ideally, prevention efforts should be targeted to those persons at highest risk for becoming HIV infected based not only on historical data, but also on emerging trend data for persons recently infected. Because data on HIV incidence and data on persons currently HIV infected are not available in Washington, D.C., data on AIDS incidence are the next closest source. Though hardly comprehensive, the District's few targeted high risk population seroprevalence surveys can be combined with AIDS surveillance data to surmise an indirect idea of who is currently HIV infected and, therefore, at risk for becoming infected with HIV. The proportions of newly reported AIDS cases associated with major modes of exposure and demographic groups are examined for changes over time. These are more important than the exact number of AIDS cases by exposure category, age, race/ethnicity, and gender for spotting and evaluating current and emerging trends.

3.1 AIDS Cases among Men Who Have Sex with Men

Male-to-male sexual contact was the most frequently reported exposure mode among persons with AIDS in the District of Columbia. As of December 31, 1998, 52% (5,809) of the cumulative reported cases among adults/adolescents were attributed to male-to-male sexual contact or men who have sex with men (MSM). Of these cases among MSM, the majority (58%) were Black, with 37% White, 4% Hispanic, and less than 1% other race/ethnicities. Among the more recent cases reported (1995-1998), the MSM exposure category accounted for 1,599 (38%) of the 4,171 adult/adolescent cases. Of the 1,599 AIDS cases attributed to male-to-male sexual contact and reported between 1995 and 1998:

- More than two-thirds of the cases were among Blacks (68%), more than one-quarter were among Whites (26%), 6% were among Hispanics, and less than 1% of the cases were among other race/ethnicities;
- Nearly one-half (47%) of the cases were between the ages of 30 to 39, followed by about one-quarter (26%) between the ages of 40 to 49, more than one-tenth between the ages of 25 to 29 (12%) and 50 years of age or over (12%), and only 3% of the cases were between the ages of 20 to 24. (Table 18)

- Black MSMs were reported with AIDS at an earlier age than Whites; of the reported cases under age 40, 66% were among Blacks, compared to 55% among Whites.

Table 18. Adult/Adolescent AIDS Cases among Men who have Sex with Men by Race/Ethnicity and Age Group at Initial Diagnosis, Washington, D.C., Reported 1995-1998

AGE GROUP	RACE/ETHNICITY				
	White	Black	Hispanic	Other	TOTAL
	# (%)	# (%)	# (%)	# (%)	# (%)
13-19	0 (0)	6 (1)	0 (0)	0 (0)	6 (0)
20-24	6 (1)	38 (4)	* (2)	0 (0)	46 (3)
25-29	36 (9)	144 (13)	16 (18)	0 (0)	196 (12)
30-39	188 (45)	517 (48)	36 (40)	9 (100)	742 (47)
40-49	131 (31)	259 (24)	26 (29)	0 (0)	416 (26)
50+	57 (14)	119 (11)	9 (10)	0 (0)	185 (12)
Subtotal	418 (100)	1,083 (100)	89 (100)	9 (100)	1,599 (100)
TOTAL	418 (26)	1,083 (68)	89 (6)	9 (0)	1,599 (100)

SOURCE: DOH/AHA/DOE, 1999

*NOTE: Due to small cell size, number not shown.

Current AIDS and seroprevalence data suggest that cases among MSMs appear to be declining. The proportion of cases attributed to male-to-male sexual contact declined among cases reported between 1995 and 1998 (28%), when compared to cases reported between 1990 and 1994 (47%). This decline is observed more among Whites than among Blacks and Hispanics. Among Whites, reported AIDS cases declined substantially from 1,025 (38%) during the years 1990-1994, to 418 (26%) during the period 1995-1998. Among Black MSMs, despite a decline in the number of AIDS cases reported between the period 1995-1998 (1,083) relative to 1990-1994 (1,581), the proportion of AIDS cases increased to 68% during the period 1995-1998 from 58% during the years 1990-1994. Hispanic MSMs were statistically unchanged among cases reported from 1995 to 1998 (89) when compared to cases reported from 1990 to 1994 (94).

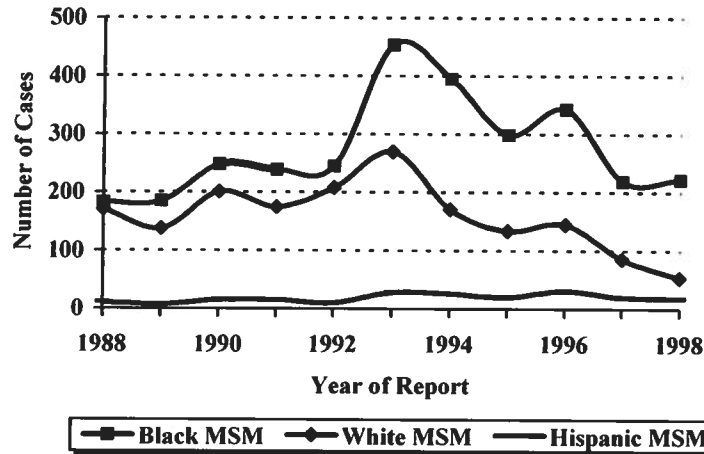
Table 19. AIDS Cases among Men Who Have Sex with Men (MSM) by Year of Report and Race/Ethnicity, Washington, D.C., 1981-1998

RACE/ETHNICITY	YEAR OF REPORT			
	1981-1989	1990-1994	1995-1998	TOTAL
	# (%)	# (%)	# (%)	# (%)
White	729 (49)	1,025 (38)	418 (26)	2,172 (37)
Black	715 (48)	1,581 (58)	1,083 (68)	3,379 (58)
Hispanic	48 (3)	94 (4)	89 (6)	231 (4)
Other	* (0)	15 (1)	9 (1)	27 (0)
TOTAL	1,495(100)	2,715(100)	1,599(100)	5,809(100)

SOURCE: DOH/AHA/DOE, 1999

*NOTE: Due to small cell size, number not shown.

Figure 9. AIDS Cases among Men Who Have Sex With Men (MSM) by Race/Ethnicity and Year of Report, Washington, D.C., 1988-1998



SOURCE: DOH/AHA/DOE, 1999, data as of 12/31/98

3.1.1 HIV Seroprevalence among Men Who Have Sex with Men Attending a STD Clinic by Race/Ethnicity, Washington, D.C., 1995-1998:

Between 1995 and 1998, 1,200 specimens collected in the STD clinic were tested for HIV-1 among male clients reporting having sex with men. The overall seroprevalence was 15%. Seroprevalence among Whites reporting MSM ranges from 5% in 1995 to 11% in 1998; the mean seroprevalence for the 4 years is 7.4%. Among Blacks, seroprevalence ranged from 24% in 1995 to 24% in 1998; the mean seroprevalence was 22%. The mean seroprevalence among Hispanics was 15%. Among Others, the mean seroprevalence was 7.3%. While seroprevalence among all races was erratic over the 4 years, it appears that the trend among Whites is in an upward direction, with the 1998 seroprevalence being twice that of 1995. Among Hispanics, the seroprevalence in 1998 increased by 75% over that of 1995. The numbers are so low for those of other race/ethnicity that they belie any meaningful interpretation.

In general, there were only a few clients tested in 1996; because, one of the STD sentinel clinics was not in operation in 1996. Therefore, caution is advised in the interpretation of this data. Seroprevalence is consistently high among Black males who reported having sex with men. High HIV prevalence in Black men is of concern and consequently requires priority prevention, intervention, and social programs in the District to communicate, contain, and alleviate this problem.

Table 20.

HIV Seroprevalence among MSM Attending an STD Clinic by Year and Race/Ethnicity, Washington, D.C., 1995-1998				
RACE/ ETHNICITY	YEAR			
	1995	1996	1997	1998
	# HIV+ / # tested (%)	# HIV+ / # tested (%)	# HIV+ / # tested (%)	# HIV+ / # tested (%)
White	6 / 113 (5)	1 / 2 (50)	6 / 154 (4)	23 / 215 (11)
Black	12 / 90 (24)	11 / 38 (29)	30 / 184 (16)	65 / 271 (24)
Hispanic	4 / 16 (25)	0 / 1 (0)	3 / 26 (12)	7 / 49 (14)
Other	1 / 13 (8)	0 / 0 (0)	1 / 15 (7)	1 / 13 (8)
TOTAL	33 / 232 (14)	12 / 41 (29)	40 / 379 (11)	96 / 548 (18)

SOURCE: DOH/AHA/DOE, 1999

3.2 AIDS Cases among Injecting Drug Users:

As of December 31, 1998, 28% (3,113) of the cumulative cases among adults/adolescents were attributed to injection drug use (IDU). The proportion of cases attributed to IDU was higher among new cases (34%) reported between 1995 and 1998.

Further characteristics describing the newly reported adult/adolescent AIDS cases (1,414) attributed to injection drug use are as follow:

- Sixty-five percent (65%) were among male and 35% were among female IDUs;
- Among IDU men, Blacks comprised the vast majority (96%) of the newly reported cases;
- Among Black IDU men, of the newly reported cases 52% were between the ages of 40 to 49, 30% were between the ages of 30 to 39; 12% were over the age of 49, 5% were between the ages of 20 to 29, and 1% were between the ages of 13 and 19;
- Among IDU women, Blacks comprised almost all (96%) of the newly reported cases;
- Among Black IDU women, of the newly reported cases 44% were between the ages of 30 to 39, 40% were between the ages of 40 to 49, 8% were between the ages of 25 to 29, 7% were over the age of 49, and 1% were between the ages of 13 and 24;
- The median ages at diagnosis were 42 among Black male IDUs and 38 among Black female IDUs.

Table 21.
Adult/Adolescent AIDS Cases Among Injection Drug Users (IDU) by Gender, Race/Ethnicity, and Age Group, Washington, D.C., 1995-1998

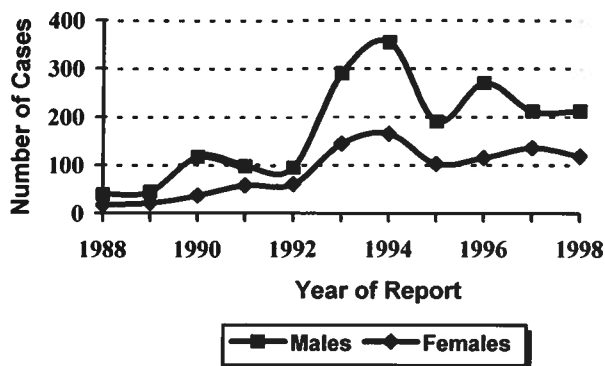
<i>Characteristics</i>	<i># (%)</i>
GENDER	
Male	920 (65)
Female	494 (35)
RACE/ETHNICITY	
White	42 (3)
Black	1,361 (96)
Hispanic/Other	11 (1)
AGE GROUP	
20 - 24	15 (1)
25 - 29	71 (5)
30 - 39	491 (35)
40 - 49	673 (48)
50 - 59	140 (10)
60+	24 (2)
TOTAL	1,414 (100)

SOURCE: DOH/AHA/DOE, 1999

Throughout the epidemic, AIDS cases have increased faster among male IDUs than among female IDUs. After a two-fold increase in reported cases in 1993 (463) and a subsequent 17% increase in 1994 (542) due to the new case definition, reported cases decreased by 43% in 1995 (311) among both males and females. Despite a 29% increase in the number of reported cases in 1996 (400), cases reported in 1997 (356) and 1998 (347) seemed to have stabilized. In addition, the proportion of cases reported among male and female IDUs between 1995 and 1998 (males 65%, females 35%) were approximately the same as the proportion of cases reported between 1990 and 1994 (males 67%, females 33%).

Trends among Black adult/adolescent males and females, who together comprised 95% of the reported AIDS cases attributed to injection drug use, can be seen in Figure 10.

Figure 10. Black Injection Drug Using (IDU) Adult/Adolescent AIDS Cases By Gender and Year of Report, Washington, D.C., 1988 - 1998



SOURCE: DOH/AHA/DOE, 1999, data as of 12/31/98

HIV Seroprevalence among Drug Treatment Center Clients by Gender, Race/Ethnicity, and Age Groups for 1997 and 1998:

Between 1997 and 1998, 1,432 drug treatment center clients were tested for HIV. The overall seroprevalence was 12%. In 1997, of the 638 tested for HIV, 70% were males and 30% were females. Seroprevalence among the males was 11%, while among females it was 15%. Whites, Hispanics, and Others accounted for 3%, or 1% each, of those tested; Blacks accounted for 97%. Seroprevalence among Blacks was 10% (63) and among Whites was 13% (1). The actual number of clients of White, Hispanic, and Other race/ethnicity was so small that seroprevalence might have been overestimated. Seroprevalence by age group ranged from 11% for the 15-19 year olds to 13% for those in the age group 45+. The most affected age groups, however, included those 30-44 years of age accounting for 72% of those tested, with a combined seroprevalence of 10%.

In 1998, 794 drug treatment center clients were tested for HIV. While males accounted for 67%, females were 33%. Whites accounted for 1% of those tested, whereas Blacks accounted for 98%, Hispanics for 1%, and Others for <1%. Seroprevalence among Whites was 20% and among Blacks was 12%. The numbers for Hispanic and Other category were so small that seroprevalence is probably overestimated at even 100% (2 HIV+/2 tested). In 1998, seroprevalence by age group ranged from 9% in the 20-24 age group to 17% among the 45+ age group. The most affected were those in the age group of 30-44, accounting for 72% of those tested out of those presenting for drug treatment with a seropositivity rate of 11%.

Table 22.
HIV Seroprevalence among Drug Treatment Center Clients by Year, Gender, Race/Ethnicity, and Age Group, Washington, D.C., 1997 and 1998

Characteristics	1997		1998	
	#HIV+ / # tested	(%)	#HIV+ / # tested	(%)
GENDER				
Male	47 / 440	(11)	60 / 533	(11)
Female	29 / 198	(15)	35 / 261	(13)
TOTAL	76 / 638	(12)	95 / 794	(12)
RACE/ETHNICITY				
White	1 / 8	(13)	2 / 10	(20)
Black	63 / 617	(10)	90 / 775	(12)
Hispanic	1 / 4	(25)	0 / 5	(0)
Other	3 / 9	(33)	2 / 2	(100)
TOTAL	68 / 638	(11)	94 / 792	(12)
AGE GROUP				
15 – 19	1 / 9	(11)	0 / 4	(0)
20 – 24	2 / 23	(9)	2 / 23	(9)
25 – 29	6 / 54	(11)	5 / 57	(9)
30 – 34	13 / 160	(8)	18 / 159	(11)
35 – 39	20 / 174	(11)	21 / 219	(10)
40 – 44	14 / 125	(11)	25 / 193	(13)
45+	12 / 92	(13)	24 / 139	(17)
TOTAL	68 / 637	(11)	95 / 794	(12)

SOURCE: DOH/AHA/DOE, 1999

3.2.1 HIV Seroprevalence among Injecting Drug Users by Gender and Race/Ethnicity from 1995-1998:

Between 1995-1998, 997 STD clinic clients were tested for HIV infection. The overall seropositivity was 13.7%. Among those tested, 98% were male and 2% were female. Among the males, Whites accounted for 46%, Blacks accounted for 40%, Hispanics accounted for 9%, and Others accounted for 4% of those tested over the four years. White and Black males have increases in the absolute numbers of clients tested and seroprevalence in 1997 and 1998. Seropositivity among White males ranged from 5% in 1995 to 11% in 1998, with the mean seroprevalence of 7%. Among Black males, the range was from 20% in 1995 to 27% in 1998, with the mean seroprevalence of 22%. Among Hispanic males, the range was 25% in 1995 to 15% in 1998, with the mean seroprevalence of 17%. The mean seroprevalence among the Other group was 8%; however, the annual numbers were so small that caution is advised when interpreting the data. Likewise, the numbers among females in general are so small here that any analysis and conclusions drawn may be at best misleading.

Table 23.

HIV Seroprevalence among STD Clients Reporting Injection Drug Use by Year, Gender, and Race/Ethnicity, Washington, D.C., 1995-1998

RACE/ ETHNICITY	YEAR			
	1995 # tested (%HIV+)	1996 # tested (%HIV+)	1997 # tested (%HIV+)	1998 # tested (%HIV+)
MALE				
White	111 (5)	0 (0)	149 (4)	201 (11)
Black	89 (20)	22 (18)	150 (19)	134 (27)
Hispanic	16 (25)	0 (0)	23 (13)	46 (15)
Other	13 (8)	0 (0)	15 (7)	12 (8)
Subtotal	229	22	337	393
FEMALE				
White	0 (0)	0 (0)	2 (0)	0 (0)
Black	4 (0)	4 (25)	2 (0)	0 (0)
Hispanic	0 (0)	0 (0)	3 (0)	1 (0)
Other	0 (0)	0 (0)	0 (0)	0 (0)
Subtotal	4	4	7	1
TOTAL	223	26	344	394

SOURCE: DOH/AHA/DOE, 1999

3.3 AIDS Cases Among Men Who Have Sex With Men and Inject Drugs:

As of December 31, 1998, 5% (581) of the cumulative reported AIDS cases were attributed to the exposure category of men who have sex with men and inject drugs (MSM/IDU). Among the newly reported cases between 1995 and 1998, only 5% (141) of the cases among males were attributed to the exposure category of MSM/IDU. Cases reported among MSM/IDU have remained stable (4%-6%) throughout the epidemic. Blacks (82%) comprised the majority of the newly reported cases among MSM/IDU, followed by Whites (15%) and Hispanics (4%).

3.4 Persons at High Risk for HIV Infection through Heterosexual Contact:

Heterosexual contact is considered the HIV-exposure mode for persons whose only reported risk is heterosexual contact with a partner who is either HIV-infected or known to be at high risk for HIV infection. Persons considered to be high-risk partners are bisexual men; injection drug users; and recipients of clotting-factor concentrates, HIV-contaminated blood transfusion or tissues. AIDS Cases among persons who report both heterosexual contact and receipt of transfusions as potential HIV exposure modes are hierarchically classified as heterosexually acquired for purposes of analysis.

Persons infected through heterosexual contact accounted for a growing proportion of AIDS cases in recent years. Persons with AIDS who were infected through heterosexual contact accounted for 11% (1,197) of the cumulative adult/adolescent AIDS cases reported through December 31, 1998, and 17% (717) of the new adult/adolescent cases reported between 1995 and 1998. The number of reported cases attributed to heterosexual transmission increased by 60% during the period between 1995 and 1998 (717), when compared to the period between 1990 and 1994 (447).

Back in 1986, the male to female ratio of heterosexual contact cases in the United States was 1:3. In part, the predominance of women in the heterosexual contact category at that time was probably due to a larger pool of infected men, but the relative efficiencies of male-to-female transmission might also have some relevance. Even in recent years, when the HIV epidemic has increasingly spread and manifested in the heterosexual community, the same analysis makes sense. Ten years later, in 1995, the ratio of male-to-female AIDS cases in the District is 1:6, or one male heterosexual contact case for every six female heterosexual contact cases. The actual pool of male sex partners for the heterosexual females will also include males with other risk factors such as bisexual males or heterosexual males whom also inject drugs. The relative risk for heterosexual females is high and getting higher.

Characteristics of AIDS cases attributed to heterosexual contact and reported between 1995 and 1998 are as follow:

- Between 1995 and 1998, 717 AIDS cases attributed to heterosexual contact were reported, of which 42% were males and 58% were females.
- Blacks represented the majority (91%) of the reported cases, while Whites and Hispanics each accounted for 4% of the reported cases.
- The 25 to 49 age group accounted for over three-quarters (77%) of the cases attributed to heterosexual contact; over one-tenth (13%) of the cases were 50 years or older, 8% were between 20-24, and 2% of the reported cases were 13-19 years of age.
- One-third (33%) of the reported cases among females were under 30 years of age, compared to one-fifth (20%) among males who were under 30 years of age. In addition, the median age at diagnosis for heterosexual males and females was 38 and 34, respectively, among newly reported cases, suggesting that females may be getting infected at an earlier age than males;
- Almost two-thirds (67%) of the cases attributed to heterosexual contact were exposed via sexual relations with HIV/AIDS infected individual(s). Cases attributed to heterosexual contact via sexual relations with IDU accounted for 31%.

Table 24. Adult/Adolescent AIDS Cases among Heterosexuals with No Other Identified Risk by Gender, Race/Ethnicity, and Age at Diagnosis, Washington, D.C., Reported 1995-1998

Characteristics	GENDER		
	Male	Female	TOTAL
	# (%)	# (%)	# (%)
RACE/ETHNICITY			
White	16 (5)	10 (2)	26 (4)
Black	268 (88)	387 (94)	655 (91)
Hispanic/Other	21 (7)	15 (3)	36 (5)
Subtotal	305 (100)	412 (100)	717 (100)
AGE GROUP			
13-19	* (1)	15 (4)	17 (2)
20-24	17 (6)	43 (10)	60 (8)
25-29	41 (13)	77 (19)	118 (17)
30-39	112 (37)	150 (36)	262 (37)
40-49	81 (27)	87 (21)	168 (23)
50-59	37 (12)	25 (6)	62 (9)
60+	15 (5)	15 (4)	30 (4)
Subtotal	305 (100)	412 (100)	717 (100)
EXPOSURE CATEGORY			
Sex with HIV/AIDS	202 (66)	278 (68)	480 (67)
Sex with an IDU	102 (33)	122 (30)	224 (31)
Sex with bisexual male	0 (0)	10 (3)	10 (1)
Sex with other	* (0)	* (0)	* (0)
Subtotal	305 (100)	412 (100)	717 (100)
TOTAL	305 (43)	412 (57)	717 (100)

SOURCE: DOH/AHA/DOE, 1999

*NOTE: Due to small cell size, number not shown.

Table 25.: Adult/Adolescent AIDS Cases Attributed to Heterosexual Contact by Year of Report, Gender, Race/Ethnicity, and Age Group, Washington, D.C., 1981-1998

Characteristics	YEAR OF REPORT			
	1981-1989	1990-1994	1995-1998	TOTAL
	# (%)	# (%)	# (%)	# (%)
GENDER				
Male	14 (33)	210 (48)	305 (43)	529 (44)
Female	29 (67)	227 (52)	412 (57)	668 (56)
Subtotal	43(100)	437(100)	717(100)	1,197(100)
RACE/ETHNICITY				
White	6 (14)	24 (5)	26 (4)	56 (5)
Black	36 (84)	399 (91)	655 (91)	1,090 (90)
Hispanic/Other	* (2)	14 (3)	36 (5)	51 (4)
Subtotal	43(100)	437(100)	717(100)	1,197(100)
AGE GROUP				
13-19	* (2)	9 (2)	17 (2)	27 (2)
20-24	8 (19)	34 (8)	60 (8)	102 (9)
25-29	8 (19)	68 (16)	118 (17)	194 (16)
30-39	14 (33)	171 (39)	262 (37)	447 (37)
40-49	* (9)	94 (22)	168 (23)	266 (22)
50-59	6 (14)	37 (8)	62 (9)	105 (9)
60+	* (5)	24 (5)	30 (4)	56 (5)
Subtotal	43(100)	437(100)	717(100)	1,197(100)
TOTAL	43 (4)	437 (37)	717 (60)	1,197(100)

SOURCE: DOH/AHA/DOE, 1999

*NOTE: Due to small cell size, number not shown.

3.4.1 HIV Seroprevalence among Clients Reporting Only Heterosexual Risk by Gender and Race/Ethnicity from 1995-1998:

HIV seroprevalence among STD clinic clients may provide an early warning of the heterosexual spread of HIV infection, since those at greatest risk of heterosexual transmission are likely to be those who are acquiring other STDs. However, HIV seroprevalence data among heterosexually active persons who report no male-to-male sexual contact or injecting drug use should be interpreted with caution. The risk data were based on voluntary self-report and abstracted from the STD clinic chart.

During the 1995 and 1998 interval, 8,462 STD clients who self-reported being heterosexual were tested for HIV. Overall seroprevalence was 6%. Among the tested, 76% were male and 24% were female. Seroprevalence among males was 7%, while that among females was 5%. The racial/ethnic distribution of the males was 90% Black, 8% White, 2% Hispanic, and 1% Other. Seroprevalence among White males ranged from 5% in 1995 to 10% in 1998, with a mean seroprevalence of 7%. The range for seroprevalence among Black males was 5% in 1995 to 8% in 1998, with a mean seroprevalence of 6%. Among Hispanic males, seroprevalence ranged from 17% in 1995 to 14% in 1998, with a mean seroprevalence of 13%. Seroprevalence for males in the Other category ranged from 8% in 1995 to 7% in 1998, with a mean seroprevalence of 7%. Among the males, the distribution of seroprevalence over the years seems to be erratic for most of the racial/ethnic groups.

Among females, seroprevalence for Whites ranged from '0' in 1995 to 17% in 1998, with a mean seroprevalence of 5%. Black females had a seroprevalence in 1995 and 1998 of 6%, but the mean seroprevalence across the recent years was 5%. Interestingly, Hispanic female STD clients had a range in seroprevalence from '0' in 1995 to 20% in 1998, with a mean seroprevalence of 9%.

Caution is advised when interpreting these data. It is important to be cautious of the small number of clients that were tested in 1996. For some of the groups, the number of clients tested was so small that it is difficult to interpret the true year to year trend. In general, Blacks are not only disproportionately affected by HIV/AIDS, but also appear increasingly so, with rising numbers in the most recent year.

Table 31.

HIV Seroprevalence among STD Clients Reporting Heterosexual Contact by Year, Gender, and Race/Ethnicity, Washington, D.C., 1995-1998

RACE/ ETHNICITY	YEAR			
	1995	1996	1997	1998
	# tested (%HIV+)	# tested (%HIV+)	# tested (%HIV+)	# tested (%HIV+)
MALE				
White	114 (5)	6 (0)	155 (4)	218 (10)
Black	1,484 (5)	1,238 (4)	1,032 (8)	2,056 (8)
Hispanic	24 (17)	2 (0)	29 (10)	59 (14)
Other	13 (8)	1 (0)	15 (7)	14 (7)
Subtotal	1,635 (6)	1,247 (3)	1,231 (8)	2,347 (8)
FEMALE				
White	3 (0)	3 (0)	9 (0)	6 (17)
Black	503 (6)	371 (5)	346 (4)	761 (6)
Hispanic	2 (0)	1 (0)	9 (0)	10 (20)
Other	0 (0)	1 (0)	0 (0)	4 (0)
Subtotal	508 (6)	376 (5)	364 (3)	781 (7)
TOTAL	2,143 (6)	1,623 (4)	1,595 (7)	3,128 (8)

SOURCE: DOH/AHA/DOE, 1999

3.5 Sexually Transmitted Diseases

The direct linkages of sexually transmitted diseases (STDs) to the transmission of HIV have become recognized increasingly as more worldwide studies have been done. Both "ulcerative" STDs, such as chancroid, syphilis and genital herpes, and "inflammatory" STDs, such as gonorrhea, chlamydia, and trichomoniasis, increase the risk of HIV infection. It has also been found that the early detection and treatment of STDs can interrupt the sexual transmission of HIV. Numerous studies support the concept that STDs increase both the infectivity of and the susceptibility to HIV (The Hidden Epidemic, p 6.). This is critical because persons with STDs represent a group of sexually active persons who have recently had unprotected intercourse with other persons who have STDs, some of whom may also be infected with HIV.

In the District of Columbia, the STD rates are high. D.C. ranks among the cities in the United States with the highest STD morbidity. Per the *Sexually Transmitted Diseases Surveillance Report 1997* published by the federal Department of Health and Human Services (DHHS) and the CDC, the District's rate for early syphilis (primary and secondary) is 21.5/100,000 and the national rate is 3.2/100,000, in other words, the District's syphilis rate is seven times the national rate. Almost four times the national rate, the District's rate for gonorrhea is 838.9/100,000 and the national rate is 229.1/100,000. Furthermore, the District's rate for chlamydia is 565/100,000 and the national rate is 340/100,000, just less than twice the national rate. The rate of syphilis and gonorrhea among females, especially among females in the 10-19 age group, continues to be of particular concern. For prevention planning purposes, communities with high STD rates are at increased risk for the introduction, acquisition, and spread of HIV infection.

Primary and Secondary Syphilis Cases and Rates/100,000 by Gender, Race/ Ethnicity, 1995-1998:

From 1995 to 1998, 427 primary and secondary syphilis cases were reported among District residents. Infection by syphilis is systemic a few hours after exposure, although clinical and serologic evidence of the disease is lacking for a time. Syphilis mimics a lot of other conditions and illnesses and has severe and chronic complications, occurring in stages.

While the cases among males were 54%, females accounted for 46%. The rates presented are unadjusted. The annual incidence of syphilis among males ranged from 23/100,000 in 1995 to 17/100,000 in 1998. Among females, annual incidence in 1995 was 15/100,000 and in 1998 was 11/100,000. Almost all the syphilis cases in the District were among Blacks, accounting for 94% and 96% of the male and female cases, respectively. All other race/ethnicities had such low numbers that it is difficult to decipher true and emerging trends. There seems to be a downward trend among males of all races, with the exception of 1997 when there was a slight increase in cases. Conversely, among Black females there was an upward trend through 1997, followed by a decrease in 1998. There also has been an increase in congenital syphilis cases during 1997.

The distribution of the recent syphilis cases by age ranged from 10%, in persons under 20 years, to 38% and 26%, in those 30-39 years and over 40 years, respectively. Overall, those most affected and with higher prevalence were aged 25 years or more, accounting for 78% of the District syphilis cases.

Table 26. Primary and Secondary Syphilis Cases and Rates /100,000 by Year, Gender, and Race/Ethnicity, Washington, D.C., 1995-1998

RACE/ ETHNICITY	YEAR							
	1995		1996		1997		1998	
	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
MALE								
White	0	0.0	1	1.4	1	1.4	1	1.4
Black	61	37.5	56	35.1	58	38.1	44	29.3
Hispanic	0	0.0	0	0.0	0	0.0	1	4.9
Other	4	47.2	2	24.0	0	0.0	1	12.8
Subtotal	65	25.0	59	23.1	59	23.8	47	19.1
FEMALE								
White	0	0.0	0	0.0	1	1.3	0	0.0
Black	46	23.8	56	29.5	56	31.0	33	18.5
Hispanic	1	5.5	0	0.0	0	0.0	0	0.0
Other	1	11.8	1	10.2	1	10.7	1	10.9
Subtotal	48	16.3	57	19.7	58	20.7	34	12.2
TOTAL	113		116		117		81	

SOURCE: Bureau of STD Control, Washington, D.C., 1999

Table 28. Primary and Secondary Syphilis Cases by Gender, Race/Ethnicity, and Age Group, Washington, D.C., Reported 1995-1998

Characteristics	# (%)
RACE/ETHNICITY	
MALE	
White	3 (1)
Black	219 (95)
Hispanic	1 (0)
Other	7 (3)
Subtotal	230 (100)
FEMALE	
White	1 (1)
Black	191 (97)
Hispanic	1 (1)
Other	4 (2)
Subtotal	197 (100)
AGE GROUP	
<20	42 (10)
20 - 24	52 (12)
25 - 29	64 (15)
30 - 39	160 (38)
40+	109 (26)
TOTAL	427 (100)

SOURCE: Bureau of STD Control, Washington, D.C., 1999

Gonorrhea Cases and Percentages by Gender, Race/Ethnicity, and Age Group from 1995-1998:

There were 19,126 gonorrhea cases reported in the District of Columbia from 1995-1998. Of these cases, 59% were male and 41% were female. Whites accounted for 1%, Blacks accounted for 73%, Hispanics accounted for less than 1%, and the category of "Other/Unknown" accounted for 27%. While gonorrhea cases have declined by 27% since 1993, the number of reported cases in fact rose slightly (by 150) from 1996 to 1997. This yearly fluctuation in the number of gonorrhea cases demonstrates the need for continued aggressive effort to not only track and treat, but also prevent gonorrheal infection in the District. There is a bias and data limitation to these numbers of Gonorrhea cases by race/ethnicity. There is incomplete reporting from private providers, accounting for the unrealistically low numbers for Whites. Whites have more access to private providers than probably any other racial/ethnic group.

There has been a major shift in the rate of infection between genders per the District's Bureau of STD Control. Although trend data show that the number of women diagnosed with gonorrhea has declined, comparison of the ratio of women to men with gonorrhea is more revealing. In 1989, for every female diagnosed with gonorrhea, there were 2.8 males. In 1997, there were only 1.4 males. The numbers for females age 10-19 are even more dramatic. Adolescents and young adults are increasingly infected and substantially impacted by gonorrhea when compared to other age groups.

Table 29. Gonorrhea Cases and Percentages by Year, Gender, and Race/Ethnicity, and Age Group, Washington, D.C., 1995-1998

Characteristics	YEAR			
	1995	1996	1997	1998
	# (%)	# (%)	# (%)	# (%)
GENDER				
Male	3,441 (61)	2,581 (59)	2,638 (58)	2,604 (58)
Female	2,214 (39)	1,826 (41)	1,919 (42)	1,904 (42)
TOTAL	5,655 (100)	4,407 (100)	4,557 (100)	4,508 (100)
RACE/ETHNICITY				
White	25 (0)	35 (0)	38 (1)	17 (0)
Black	5,544 (98)	2,888 (66)	2,812 (62)	2,655 (59)
Hispanic	4 (0)	6 (0)	13 (0)	9 (0)
Other/Unknown	82 (2)	1,478 (34)	1,694 (37)	1,827 (41)
TOTAL	5,655 (100)	4,407 (100)	4,557 (100)	4,508 (100)
AGE GROUP				
0-9	20 (0)	23 (1)	15 (0)	23 (1)
10-14	118 (2)	107 (2)	97 (2)	93 (2)
15-19	1,557 (28)	1,184 (27)	1,228 (27)	1,188 (26)
20-24	1,318 (23)	1,019 (27)	1,098 (24)	1,142 (25)
25-29	874 (16)	726 (17)	714 (16)	745 (17)
30-34	691 (12)	503 (11)	502 (11)	454 (10)
35-44	673 (12)	573 (13)	570 (13)	572 (13)
45+	263 (5)	195 (4)	248 (5)	230 (5)
Unknown	141 (3)	77 (2)	85 (2)	60 (1)
TOTAL	5,655 (100)	4,407 (100)	4,557 (100)	4,508 (100)

SOURCE: Bureau of STD Control, Washington, D.C., 1999

Table 30.

Distribution of AIDS, Primary and Secondary Syphilis, Chlamydia, Gonorrhea, TB, and TB/AIDS by Ward, Washington, D.C., by years of report 1979-1998, 1995-1998, and 1984-1998.

DISEASE	WARD											
	1	2	3	4	5	6	7	8	Homeless	Inmates	Unknown	TOTAL
AIDS 1979-98	1,965	1,845	418	1,018	1,344	1,616	886	908	451	480	279	11,210
AIDS 1995-98	500	420	66	305	444	468	354	346	231	254	90	3,478
Syphilis* 1995-98	43	50	4	27	59	53	71	72	N/A	N/A	48	427
Chlamydia 1995-98	427	383	46	298	484	554	571	830	N/A	N/A	6,548	10,141
Gonorrhea 1995-98	1,300	1,049	178	794	1,705	1,809	2,024	2,276	N/A	N/A	7,764	18,899
TB 1995-98	94	58	24	50	57	55	36	24	37	15	8	458
TB/AIDS 1984-98	96	70	7	51	64	77	33	39	25	39	5	506

* Primary & Secondary

SOURCES: DOH/AHA/DOE, Bureau of STD Control, Bureau of TB Control, Washington, D.C., 1999

Chlamydia Cases and Percentages by Gender, Race/Ethnicity, and Age Group from 1995-1998:

Between 1995 and 1998, 10,141 chlamydia cases were reported in District residents. Of these cases, 86% were among females and 13% were among males (a ratio of 7 females to 1 male). Chlamydia is a major source of pelvic inflammatory disease (PID) and infertility in females. Private providers reported most chlamydia morbidity (99%) while the remaining 1% was reported by public facilities. Of all the cases, Blacks accounted for 51%, Whites 1%, Hispanics less than 1%, and Other or race/ethnicity unknown category 48%. For the entire period from 1995 to 1998, other/unknown race/ethnicity values, ranging from 2% to 68%, cannot be interpreted since there must have been a data deficiency/collection issue. By age, 43% of cases were in persons 13-19, 41% among those 20-29, and 8% among those 30-39 years of age. It is important to note that the overall increase in the number of cases of chlamydia may not only be due to the increase in the spread of the infection, but also the increase in the amount of testing due to the Chlamydia Demonstration Project that was initiated in 1994 in federal DHHS Region III (i.e., Baltimore, Delaware, District of Columbia, Maryland, Pennsylvania, Philadelphia, Virginia, and West Virginia).

Table 31.
Chlamydia Cases and Percentages by Year, Gender, and Race/Ethnicity, and Age Group, Washington, D.C., 1995-1998

Characteristics	YEAR			
	1995 # (%)	1996 # (%)	1997 # (%)	1998 # (%)
GENDER				
Male	215 (13)	217 (11)	425 (14)	510 (15)
Female	1,445 (87)	1,701 (85)	2,642 (86)	2,902 (85)
Unknown	0 (0)	80 (4)	0 (0)	4 (0)
TOTAL	1,660 (100)	1,998 (100)	3,067 (100)	3,416 (100)
RACE/ETHNICITY				
White	0 (0)	1 (0)	18 (1)	36 (1)
Black	1,541 (98)	1,490 (75)	1,108 (36)	1,038 (30)
Hispanic	0 (0)	0 (0)	8 (0)	8 (0)
Other/Unknown	119 (2)	507 (25)	1,933 (63)	2,334 (68)
TOTAL	1,660 (100)	1,998 (100)	3,067 (100)	3,416 (100)
AGE GROUP				
0-12	7 (0)	16 (1)	43 (1)	41 (1)
13-19	609 (37)	869 (43)	1,343 (44)	1,535 (45)
20-29	679 (41)	804 (40)	1,211 (39)	1,426 (42)
30-39	127 (8)	155 (8)	233 (8)	274 (8)
40-49	27 (2)	37 (2)	63 (2)	52 (2)
50+	10 (1)	15 (1)	28 (1)	40 (1)
Unknown	201 (12)	102 (5)	146 (5)	48 (1)
TOTAL	1,660 (100)	1,998 (100)	3,067 (100)	3,416 (100)

SOURCE: Bureau of STD Control, Washington, D.C., 1999

3.6 AIDS among Adult/Adolescent Women:

Since 1993, AIDS cases reported among women have grown at a faster rate than among men. Adult/adolescent women with AIDS in the District of Columbia account for 17% (1,878) of the cumulative cases reported through December 31, 1998, and 25% (1,024) of the newly reported cases between 1995 and 1998. AIDS cases among Black women in the District have been rising. The number of reported cases among women 13-19 rose by 33% from 1996 to 1998; among women 19-24, cases rose by 37%; and among women 25 and older, cases rose by 42%. Representing the overwhelming majority (94%) of women reported with AIDS in the District, Black women have surpassed the number of reported cases among White men since 1994. Injection drug (46%) use and heterosexual contact (38%) represent the predominant exposure modes among newly reported cases in Black women. Women tend to be younger than men at time of AIDS diagnosis. Among new cases, the proportion of women (19%) diagnosed between the ages of 20 to 29 was larger than the proportion of men (11%), which suggest that the likelihood of women getting infected with HIV during their teen years is higher than among men. The median age at diagnosis among new cases among women and men was 36 and 39, respectively.

3.6.1 HIV Seroprevalence among Childbearing Women by Year of Delivery and Race/Ethnicity from 1992-1994:

Between 1992 and 1994, 21,184 childbearing women were tested for HIV. Among those tested, 13% were White, 85% were Black and 3% were among other race/ethnicities. Seroprevalence among Black childbearing women was 4 and a half times higher than among White or other race/ethnicities. Black childbearing women registered a seroprevalence rate of 1.4%, compared to 0.3% among White and other race/ethnicities.

Table 32.
HIV Seroprevalence among Child-bearing Women by Year of Delivery and Race/Ethnicity, Washington, D.C. 1992-1994

RACE/ ETHNICITY	YEAR OF DELIVERY		
	1992	1993	1994
	# tested (%HIV+)	# tested (%HIV+)	# tested (%HIV+)
White	700 (0.3)	992 (0.3)	952 (0.2)
Black	4,718 (1.3)	6,897 (1.4)	6,335 (1.5)
Other	168 (0.0)	201 (1.0)	221 (0.0)
TOTAL	5,586 (1.1)	8,090 (1.2)	7,508 (1.3)

SOURCE: DOH/AHA/DOE, 1999

It is imperative that all pregnant women receive HIV counseling and testing. HIV screening should be incorporated into providers' standard pregnancy protocols. Timely identification of all HIV-seropositive pregnant women is paramount for intervention and prevention of vertical transmission.

3.6.2 HIV Seroprevalence among Childbearing Women and Estimated Number of Perinatal Infections by Year of Delivery:

Unlinked surveys are necessary to provide unbiased, accurate data on the current status and direction of the HIV epidemic in specific populations and also to provide reliable information for prevention planning and the allocation of resources. In the District of Columbia, seroprevalence surveys among women of childbearing age were conducted between 1989 and 1994 in collaboration with the CDC. Results from the District surveys indicate that HIV seroprevalence was 6-7 times higher than the rate for childbearing women nationwide.

It was this study that provided the percentage of seropositive childbearing women (SCBW) in the District as a basis for estimating the number of perinatal infections by year of delivery. Although we are lacking the most current percentage, we decided to use the mean percentage of the study conducted in the five years between 1990 and 1994 as shown on Table 33. The trend in those years was on a gradual decline with a constant percent-seroprevalence specifically after 1991. So the assumption here is that the same pattern would prevail in Washington, D.C. in the most recent years. The CDC *HIV/AIDS Surveillance Report* (Vol. 9, No. 2) stated, "Perinatally-acquired AIDS incidence continued a pattern of marked decline, principally reflecting successful strategies to promote voluntary prenatal HIV testing and reduce transmission rates through the administration of zidovudine perinatally." Therefore, we used the following formula to estimate HIV positive infants for 1995, 1996, and 1997:

Estimate of HIV positive infants in a given year = the number of live births for that year multiplied by the percentage of HIV positive childbearing women in that year, multiplied by the approximate percentage of infants that actually (without ZDV treatment) become infected which is 25%.

As an example, to estimate the HIV+ infants in 1990: $11806 * 1.2 \% (0.012) * 25\% (0.25) = 35.418$ (36).

Table 33.
HIV Seroprevalence among Child-Bearing Women (CBW) and Estimated HIV Infection to Infants through Perinatal Transmission by Year, Washington, D.C., 1990-1997

YEAR	Live Births	% HIV+ among CBW	Expected # of HIV+ Mothers	Estimated # of Perinatal Infections
1990	11,806	1.2	142	36
1991	11,650	1.3	151	38
1992	10,939	1.2	131	33
1993	10,614	1.2	127	32
1994	9,911	1.2	119	30
1995	8,993	1.2	108	27
1996	8,377	1.2	101	25
1997	7,916	1.2	95	24

SOURCE: DOH/AHA/DOE, 1999

The determination of factors contributing to perinatal transmission relies upon investigations into the following: lack of access to care, lack of prenatal care, lack of maternal testing, lack of utilization of prevention methods, lack of appropriate counseling regarding therapy, lack of insurance/reimbursement/entitlements, and availability of support services.

3.7 AIDS Cases Among Children:

In 1994, the U.S. Public Health Service Task Force recommended that all HIV-infected pregnant women and their newborns receive zidovudine (ZDV, AZT). Current evidence suggests that most maternal-infant HIV transmission occurs late in pregnancy or during labor and delivery. There has been a significant improvement in the prevention of HIV transmission from mothers to their infants due to the administration of ZDV during pregnancy, during labor/delivery, and during the neonatal period (first month of life). There is an approximate two-thirds risk reduction from 25% (without ZDV intervention) to 8.3% HIV transmission after treatment. Despite treatment, pediatric HIV infection remains a fatal disease whose prevention is of paramount importance.

In 1989, the District became a site for the CDC-funded Pediatric Spectrum of Disease (PSD) project that studies and tracks the health of children born to HIV-infected mothers. In 1995 and 1996, respectively, 85% and 93% of the mother-infant pairs enrolled in the three-site study received at least some portion of the recommended ZDV regimen, but only 32% and 52%, respectively, received the full treatment. Delivery of the full recommended ZDV treatment to all HIV-infected pregnant women and their infants would improve the success of the only intervention known to interrupt transmission.

Between 1981 and 1998, 167 pediatric AIDS cases were reported, 85% were under age 5 and 15% were age 5-12 at the time of initial diagnosis with AIDS. More than half (81) are still alive. The majority of the reported cases were among Blacks accounting for 96%, while cases among Whites and Hispanics accounted for 2% each. Across all race/ethnic groups, the predominant exposure mode was attributed to maternal risk behavior (i.e., IDU, heterosexual sex with bisexual male, etc.) or perinatal transmission (95%). Among Blacks, 96%, of the reported cases were attributed to perinatal transmission, transfusion risk 3%, and unidentified risk accounted for 1% of the reported cases. Of the total cumulative pediatric AIDS cases among Blacks in the District, 11% of pediatric cases were reported in the first decade (1980's) of the epidemic, while 89% were reported during the second decade (1990's), indicating a 800% increase.

Table 34.
Pediatric AIDS Cases by Race/Ethnicity, Year of Diagnosis, and Exposure Category,
Washington, D.C., 1979-1988 and 1989-1998

EXPOSURE CATEGORY	RACE/ETHNICITY							
	White		Black		Hispanic		TOTAL	
	1979-88	1989-98	1979-88	1989-98	1979-88	1989-98	1979-88	1989-98
# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	
Maternal Risk	1 (100)	0 (0)	13 (76)	141 (99)	0 (0)	4 (100)	14 (78)	145 (97)
Transfusion	0 (0)	2 (100)	4 (23)	0 (0)	0 (0)	0 (0)	4 (22)	2 (1)
Other/Undetermined	0 (0)	0 (0)	0 (0)	2 (1)	0 (0)	0 (0)	0 (0)	2 (1)
Subtotal	1 (100)	2 (100)	17(100)	143(100)	0 (0)	4 (100)	18 (100)	149(100)
TOTAL	1 (6)	2 (1)	17 (94)	143 (96)	0 (0)	4 (3)	18 (100)	149(100)

SOURCE: DOH/AHA/DOE, 1999

3.8 AIDS Cases among Adolescents and Adults Under Age 25 Years:

As of December 31, 1998, there were only 47 AIDS cases reported among adolescents ages 13 through 19; 79% (37) are still alive. Of the total teen cases, the majority, 28 (60%), were among females and 19 (40%) were among males. Blacks comprised the majority (94%) of the reported cases, while cases reported among Whites and Hispanics were 2% each. Heterosexual contact is the main HIV exposure category among teens, accounting for 56% (27). Among females, AIDS cases attributed to IDU and heterosexual contact accounted for 86% (24), with less than 5 cases were reported among other transmission categories. Among males, cases attributed to male-to-male sexual contact accounted for 11 (58%), while less than 5 cases were reported among other transmission modes.

The number of AIDS cases reported from 1995 to 1998 among 13-19 year olds was nearly two times higher than from 1979 to 1994. Among teen males, AIDS cases attributed to male-to-male sexual contact also increased. Similarly, an increasing trend in AIDS cases attributed to heterosexual contact was observed among female teens. These data suggest that there is a higher risk for female than male teens through heterosexual contact.

The Department of Adolescent and Young Adult Medicine at Children's Hospital estimates that nearly **one (1) in every 45 teens** in the District are thought to be infected with HIV. In 1997, per the District's Bureau of STD Control, a total of 2,831 cases of STDs were diagnosed in District children under twenty years of age. The highest percentage occurred among 15-19 year olds. This age group also experienced the highest percentage of gonorrhea cases (27%). During 1997, there were 7,916 live births to District residents, of that number 1,233 were births to teen mothers.

In 1997, the District of Columbia Public Schools conducted the Youth Risk Behavior Survey (YRBS). The YRBS monitors six categories of behavior among students in grades 9-12. Included among the six categories is sexual behavior. Overall, 79% of the District teens surveyed stated that they had had sexual intercourse. This reflected a 7% increase over the 1995 survey results (72%). Among teenage boys, the proportion was 86%, compared to teenage girls at 73%. In addition, 1997 data showed that 27% of teens had experienced sexual intercourse for the first time before the age of thirteen, which was an increase over the 1995 result of 22%. Moreover, the teen pregnancy rate (96.8 births per 1,000 young girls ages 15 to 19) continues to be the highest among states in the country. In 1997, sixteen percent (16%) of the District resident births were to teens. Furthermore, 20% of the teenage males surveyed for the 1997 YRBS reported that they had gotten someone pregnant one or more times. Among the low birthweight births of District residents in 1997, 14% were to teens.

Thirty-three percent (33%) of high school students in the District had their first drink of alcohol other than a few sips before age thirteen. Of 9th through 12th graders, 71% had at least one drink of alcohol on one or more days during their life. Eighteen percent (18%) of District high school students had 5 or more drinks in a row (within a couple of hours) on one or more of the past 30 days, 23% of males and 14% of females. Before the age of 13, 13% of District high school students had tried marijuana for the first time; 52% used marijuana one or more times during their life. Early and majority drug and alcohol use among D.C. high school students combined with early and unprotected intercourse indicate that District youth are at health risk in general and for HIV infection. Also, these behavioral patterns established during youth may continue through adulthood.

Among the 20 to 24 age group, 397 AIDS cases had been reported as of December 31, 1998. Of these, 73% were male and 27% were female. Among males, the predominant mode of transmission was to male-to-male sexual contact (69%), followed by heterosexual contact (11%), IDU (8%), and MSM/IDU (6%). Among females, heterosexual contact accounted for two-thirds (66%) of the cases, while IDU accounted for nearly one-quarter (23%). Blacks comprised the majority (83%) of the cumulative reported cases, followed by Whites (12%), Hispanics (4%), and other race/ethnicities (1%).

Table 35.
AIDS Cases among Adolescents/Adults Under Age 25 Years by Age Group, Year of Diagnosis, Gender, and Exposure Category, Washington, D.C., 1979-1998

EXPOSURE CATEGORY	AGE IN YEARS						
	13 - 19			20 - 24			13 - 24
	1979-89 # (%)	1990-94 # (%)	1995-98 # (%)	1979-89 # (%)	1990-94 # (%)	1995-98 # (%)	TOTAL # (%)
MALE							
Males Who Have Sex with Males (MSM)	1(100)	4 (67)	6 (50)	66 (80)	87 (74)	47 (53)	211 (69)
Injecting Drug Users (IDU)	0 (0)	1 (17)	0 (0)	3 (4)	12 (10)	8 (9)	24 (8)
MSM/IDU	0 (0)	0 (0)	0 (0)	8 (10)	8 (7)	3 (3)	19 (6)
Heterosexual Contact	0 (0)	1 (17)	2 (17)	4 (5)	9 (8)	17 (19)	33 (11)
Other/Unknown	0 (0)	0 (0)	4 (33)	2 (2)	2 (2)	13 (15)	21 (7)
Subtotal	1(100)	6(100)	12(100)	83(100)	118(100)	88(100)	308(100)
FEMALE							
IDU	0 (0)	1 (11)	0 (0)	4 (50)	14 (35)	7 (12)	26 (20)
Heterosexual Contact	1(100)	8 (89)	15 (83)	4 (50)	25 (63)	43 (72)	96 (73)
Other/Unknown	0 (0)	0 (0)	3 (17)	0 (0)	1 (3)	10 (17)	14 (11)
Subtotal	1(100)	9(100)	18(100)	8(100)	40(100)	60(100)	136(100)
TOTAL	2	15	30	91	158	148	444

SOURCE: DOH/AHA/DOE, 1999

3.8.1 HIV Seroprevalence among Job Corps Entrants by Gender and Race/Ethnicity Aged 16-24, 1988-1997:

Between 1988 and 1997, 5,516 District of Columbia residents aged 16 through 24 entered Job Corps and were tested for HIV infection. Job Corps is a federal Department of Labor program for socially and economically disadvantaged out-of-school youth. Of the entrants, 3,314 were males and 2,202 were females, accounting for 60% and 40%, respectively. As seen in Table 36 below almost all (94%) of entrants were Black, or a total of 5,201. Whites accounted for 1%, Hispanics accounted for 3%, and Others accounted for 2%. Fifty-nine (59) entrants tested positive for HIV; therefore, the overall seroprevalence was 1.1%. The seroprevalence among 5,201 Black entrants was 1.13%, the only race/ethnicity category with positive results. Specifically, of the 3,117 Black males tested, 34 were HIV positive and of the 2,084 Black females tested, 25 were HIV positive, with seroprevalence of 1.09% and 1.20%, respectively. Since there were no positive results among the 75 White, 141 Hispanic, and 99 Other entrants tested, the seroprevalence was 0.0%.

Table 36.**HIV Seroprevalence among Job Corps Entrants Aged 16-24 by Race/Ethnicity and Gender, Washington, D.C., 1988-1997**

GENDER	RACE/ETHNICITY				
	White # tested (%HIV+)	Black # tested (%HIV+)	Hispanic # tested (%HIV+)	Other # tested (%HIV+)	TOTAL # tested (%HIV+)
Male	43 (0.0)	3,117 (1.1)	86 (0.0)	68 (0.0)	3,314 (1.0)
Female	32 (0.0)	2,084 (1.2)	55 (0.0)	31 (0.0)	2,202 (1.1)
TOTAL	75 (0.0)	5,201 (1.1)	141 (0.0)	99 (0.0)	5,516 (1.1)

SOURCE: U.S. Department of Labor, 1999

3.8.2 HIV Seroprevalence among Civilian Applicants for Military Service Aged 17-19 and 20-24 by Gender and Year of Report:

Between 1985 and 1998, 7,628 District of Columbia resident civilian military applicants aged 17-19 and 20-24 were tested for HIV. Among the 17-19, the proportion of males was 76% while that of females was 24%. Among the 20-24, 76% were males and 23% were females. Seroprevalence among the 17-19 males was 0.49% and among females of same age group was 0.31%. Among the 20-24 year olds seroprevalence among the males was 1.1%, while among females it was 0.24%.

Table 37.**HIV Prevalence among Civilian Military Applicants by Age Group and Gender, Washington, D.C., 1985-1998**

GENDER	AGE GROUP				TOTAL # tested (%HIV+)
	17 - 19 # tested (%HIV+)	20 - 24 # tested (%HIV+)	25 - 29 # tested (%HIV+)	30+ # tested (%HIV+)	
Male	3,081 (0.5)	2,719 (1.1)	1,303 (2.1)	909 (2.0)	8,012 (1.1)
Female	982 (0.3)	846 (0.2)	349 (0.6)	251 (0.0)	2,428 (0.3)
TOTAL	4,063	3,565	1,652	1,160	10,440

SOURCE: U.S. Department of Defense, 1999

3.8.3 HIV Seroprevalence among Military Applicants by Gender and Race/Ethnicity, 1985-1998:

Between 1985 and 1998, 2428 female civilian military applicants were tested for HIV. Among those tested, Whites accounted for 9%, Blacks accounted for 87.6%, Hispanics accounted for 1.2%, and Others accounted for 0.9%. The Over all seroprevalence was 0.29%. While seroprevalence among Blacks was 0.33%, none of those tested among Whites, Hispanics, and Others tested positive.

Table 38.**HIV Prevalence among Civilian Military Applicants by Race/Ethnicity and Gender, Washington, D.C. 1985-1998**

GENDER	RACE/ETHNICITY				
	White # tested (%HIV+)	Black # tested (%HIV+)	Hispanic # tested (%HIV+)	Other # tested (%HIV+)	TOTAL # tested (%HIV+)
Male	948 (0.4)	6,788 (0.3)	91 (0.0)	59 (0.0)	8,012 (1.1)
Female	220 (0.0)	2,126 (0.3)	28 (0.0)	22 (0.0)	2,428 (0.3)
TOTAL	1,168	8,914	119 (0.0)	81 (0.0)	10,440

SOURCE: U.S. Department of Defense, 1999

Question 4: What is the Geographic Distribution of HIV Infection?

It is widely accepted that the HIV epidemic is better characterized as a composite of multiple subepidemics of varying magnitude with different starting points and slopes, rather than a single homogenous epidemic. This is responsible for the uneven distribution of HIV infection and therefore risk factors for HIV acquisition, both geographically and within populations. Thus, the identification of who are the subpopulations at higher risk for infection and where is HIV transmission currently occurring is of critical value for effective targeting of prevention efforts. However, only limited data are available for the purpose above.

As of December 31, 1998, 11,144 cumulative AIDS cases were reported. While 89% of the cumulative cases were classified by political jurisdiction, namely Ward, at time of AIDS diagnosis, 11% were listed as homeless, prison inmates, and/or unknown residence.

4.1 AIDS Cases among the Incarcerated:

Data on the incarcerated, parolees, or ex-offenders are limited and generally not available. According to AIDS Surveillance data as of December 31, 1998, a total of 474 persons were initially diagnosed with AIDS while in prison or jail. The incarcerated have a disproportionate amount of disease and illness: TB, Hepatitis, STDs, HIV/AIDS, substance abuse, and mental illness. To obtain a clear gauge of their health status, prospective changes in behavior, and accurate counts of infection rates, active surveillance systems must be arranged. Although the District of Columbia has both highly affluent and extremely impoverished areas, the vast majority of incarcerated persons come from our poor communities throughout the city. The heaviest concentration of incarcerated persons come from communities east of the Anacostia River, a predominately Black, historically underserved, and geographically-isolated area. The D.C. Department of Corrections includes five prisons, one jail, and five halfway houses. The District's Youth Services Administration operates a juvenile detention facility, which is located in Laurel, Maryland.

The HIV seroprevalence for the District's incarcerated population is estimated at 10%, based on a 1992 survey at the D.C. Jail/Central Detention Facility Intake. A survey conducted by the Metropolitan Washington Council of Governments (COG) indicates that 3,964 inmates were booked at the Lorton Correctional Complex prisons during 1997 and that 14,000 inmates were booked at the DC Jail/Central Detention facility in 1997. The Department of Corrections reported that in 1997 a total of 535 inmates were being treated for HIV/AIDS.

4.2 AIDS Cases by Ward:

Table 39.

Distribution of Adult/Adolescent AIDS Cases by Ward and Grouped by Period of Report 1981-1998 and 1995-1998, Washington, D.C.

PERIOD	WARD											
	1	2	3	4	5	6	7	8	Homeless	Inmates	Unknown	TOTAL
1981-1998	1,956	1,836	418	1,012	1,336	1,601	877	902	447	474	285	11,144
1995-1998	632	536	93	362	520	557	420	405	259	278	109	4,171

SOURCE: DOH/AHA/DOE, 1999

Table 40.: Adult/Adolescent AIDS Cases by Race/Ethnicity, Exposure Category, and Ward, Washington, D.C., Reported 1995–1998

	WARD											
	1	2	3	4	5	6	7	8	Homeless	Inmates	Unknown	TOTAL
GENDER												
Male	495	442	78	277	368	450	259	243	211	242	82	3,147
Female	137	94	15	85	152	107	161	162	48	36	27	1,024
RACE/ETHNICITY												
White	134	158	53	23	31	82	11	6	12	2	18	530
Black	435	344	30	325	481	465	407	394	230	271	88	3,470
Hispanic	60	30	8	13	6	9	0	5	17	5	2	155
Other	3	4	2	1	2	1	2	0	0	0	1	16
EXPOSURE CATEGORY												
MSM	312	313	61	141	176	257	100	100	56	35	48	1,599
IDU	151	107	7	113	195	154	178	164	103	203	39	1,414
MSM/IDU	28	18	3	7	17	18	17	9	13	10	1	141
Hetero.	92	76	12	70	100	89	95	98	48	24	13	717
Other	49	22	10	31	32	39	30	34	39	6	8	300
TOTAL	632	536	93	362	520	557	420	405	259	278	109	4,171

SOURCE: DOH/AHA/DOE, 1999

4.3 AIDS, STDs, and TB/AIDS Cases by Ward:

AIDS prevalence varies among the eight Wards, from 4% in Ward 3 to 20% in Ward 1. The mean AIDS prevalence was 13% across all the Wards and nonWard categories. In particular, Wards 1, 2, 5, and 6 have AIDS rates higher than the mean. Of the cumulative AIDS case total in the District, the homeless and those residents with no fixed address account for 4%, prison inmates also account for 4%, and those with unknown residence account for 3%.

Looking at the AIDS data reported during the most recent years (1995-1998), 84% were distributed among the Ward residents, while 17% were among the nonWard categories. During this period there was also a broad range of AIDS case prevalence among the Wards, from 2% in Ward 3 to 17% in Ward 1. The respective mean prevalence for the years 1995 through 1998 was 13%, using the adjusted Census population estimates. When comparing the cumulative case total with the cases reported during the most recent period, the homeless and prison categories have both increased from 4% to 7% each, while the unknown category has stayed the same at 3%. There is also consistency among Wards 1, 2, 5, and 6. When comparing cumulative totals to more recent data, rates are greater than the mean value in these Wards that have the highest number of AIDS cases.

Table 41.

Distribution of AIDS, Primary and Secondary Syphilis, Chlamydia, Gonorrhea, TB, and TB/AIDS by Ward, Washington, D.C., by years of report 1981-1998, 1995-1998, and 1984-1998.

DISEASE		WARD											
		1	2	3	4	5	6	7	8	Homeless	Inmates	Unknown	TOTAL
AIDS	1981-98	1,980	1,845	419	1,029	1,366	1,620	897	942	449	474	291	11,312
AIDS	1995-98	500	420	66	305	444	468	354	346	231	254	90	3,478
Syphilis*	1995-98	43	50	4	27	59	53	71	72	N/A	N/A	48	427
Chlamydia	1995-98	427	383	46	298	484	554	571	830	N/A	N/A	6,548	10,141
Gonorrhea	1995-98	1,300	1,049	178	794	1,705	1,809	2,024	2,276	N/A	N/A	7,764	18,899
TB	1995-98	94	58	24	50	57	55	36	24	37	15	8	458
TB/AIDS	1984-98	96	70	7	51	64	77	33	39	25	39	5	506

*Primary & Secondary

SOURCES: DOH/AHA/DOE, Bureau of STD Control, Bureau of TB Control, Washington, D.C., 1999

Among the sexually transmitted diseases (STDs), syphilis has mandated reporting in the District. Although chlamydia is not a required reportable disease in the District like syphilis, it falls into a gray area of "encouraged reporting." The above Table 41 includes syphilis, gonorrhea, and chlamydia, which can be used as surrogate indicators of HIV infection. Some published data showed that "HIV infection could not be established in the general U.S. heterosexual population in the absence of chlamydial infection (or other STDs with comparable effects on HIV transmission)." (The Hidden Epidemic, pg. 56)

In the United States, heterosexual transmission represents the fastest growing proportion of AIDS cases (CDC, 1994c). From unpublished 1996 data from CDC, Division of STD Prevention, studies indicate that heterosexual transmission of HIV is currently most common among age, ethnic, and socioeconomic groups that have the highest incidence of traditional STDs, such as gonorrhea and syphilis. In addition, increases in syphilis incidence in specific areas throughout the United States have preceded increases in HIV prevalence among prenatal women by about two years. For example, the geographic distribution of reported gonorrhea and syphilis in the United States corresponds closely with the distribution of areas with the highest prevalence of HIV among pregnant women.

Further examining District resident data by Ward, the highest numbers of recent primary and secondary syphilis cases are in Wards 7 and 8. The disparity between the syphilis and AIDS case data in especially these Wards is significant and bodes ill. If HIV infection data were collected, it is probable that Wards 7 and 8 would have high rates. Wards 7 and 8 stand out when periods of AIDS case report are compared across the Wards, with higher AIDS case totals for the same period of report.

HIV contributes to the high infant mortality rates in the District of Columbia. In 1996, the infant mortality rates per 1,000 live births in D.C. were highest in Ward 7 (20.6) followed by Ward 8 (17.4). Consistently, the highest percentages of teen births per year are in Wards 7 and 8. Also in Wards 7 and 8, the percentages of births with less than adequate prenatal care were the highest in 1995 (55.7% and 56.8%, respectively) and in 1996 (49.5% and 55.8%, respectively). In 1996, the highest percentages of low birthweight infants were found in Wards 5, 7, and 8. In Ward 5, the percent of births with less than adequate prenatal care was 54% and 48.7% in 1995 and 1996, respectively. For infants who are prenatally and perinatally exposed to HIV, the lack of prenatal care has very grave implications. As mentioned previously, the use of ZDV has the potential to substantially reduce the rate of HIV perinatal transmission, which would reduce overall child mortality.

The above table shows the geographic concentration of sexually-transmitted diseases, the surrogate indicators of HIV infection. From 1995 through 1998, Wards 7 and 8 have the highest rates of gonorrhea and syphilis. Examining the AIDS case data for the same time period (1995-1998), Wards 7 and 8 have the highest number of female adult/adolescent AIDS cases. Not surprisingly, Wards 7 and 8 also have the lowest number of cases among men who have sex with men, and have numbers among the highest for cases attributed to heterosexual contact and illicit injection drug use.

The 1990 Census data show Wards 7 and 8 have the lowest educational attainment and the highest percentages of households in poverty in the District. Ward 8 has the highest rate of unemployment with 15.5 (per 1994). Looking at race/ethnicity, Wards 7 and 8 have the highest percentages of Black or African-American residents, 97% and 90%, respectively. According to the District's HIV seroprevalence survey of childbearing women, the only population-based survey for which data are available, five zip codes were identified as having the highest average number of HIV-infected

Black childbearing women for the period 1989-1993. The three zip codes with the highest average number of HIV-infected women are in Wards 7 and 8; this appears to show the most recent HIV acquisition and measure newer infections.

Technical Notes: DEATHS and YPLL

1. Caveats of Data

Death certificates are a useful source of information on deaths. However, a number of limitations have been observed. Some causes of death may be under-represented.

2. Mortality

Numbers of observed deaths are from the DC State Center for Health Statistics (SCHS). The 20 leading causes of death were obtained from a frequency distribution of all the 3-digit causes of death (9th revision of the International Classification of Diseases - ICD-9). Motor and other accidents were combined into Unintentional injuries, Homicides and suicides were combined into Intentional injuries, and Drug and Alcohol deaths were similarly combined.

3. Life Expectancy

Life expectancy is derived from a Life Table. It is the average number of years remaining for a group of people in a given age interval who survived to the beginning of that age interval. Starting off with an initial cohort of 100,000 babies, the Life Table applies a schedule of current age-specific mortality figures, and ends up with, among other things, the number of years remaining at each age. The most popular measure of the Life Table is the life expectancy at birth. This is the number of years a newborn is expected to live if exposed to current mortality experience at each age.

4. Years of Potential Life Lost (YPLL)

Crude mortality data do not account for the fact that most deaths occur among the elderly. Premature mortality is a measure designed to summarize the mortality experience of younger age groups. Years of potential life lost (YPLL) is an epidemiologic measure of premature mortality. For the purpose of calculating YPLL, premature death is defined as death occurring to DC residents before the age of 75, the new end-point set by the NCHS as a result of the increase from 65 to 75 years in the US average life expectancy at birth. To calculate the YPLL for an individual, the age at death is subtracted from 75. For a given age group, the observed number of deaths is multiplied by the remaining years of life until age 75 years (*i.e. 75-midpoint of that age group*). For the 0-4 age group, the midpoint of the age group, in addition to a correction factor (0.5), is subtracted from 75 to yield 72.5 years of remaining life. The summation overall ages is the number of years lost as a result of a given cause of death.

A. Crude YPLL Rates: The crude YPLL rate represents the number of years lost per 100,000 population due to a specific cause of death.

B. Age-adjusted YPLL Rates: Age-adjusted YPLL rates are used for the purpose of comparing DC YPLL rates with those of the US and other states that are similarly computed. The crude YPLL rate is adjusted to the US 1940 standard million population to yield rates that can be directly compared to national and state YPLL rates.

5. Premature Death Rates

The most recent figures available for the District of Columbia suggest that the mean life expectancy at birth is 69.2 years. Premature mortality is therefore a measure of mortality before age 70. Thus any death before age 70 is counted as a premature death. Crude premature mortality rates per 100,000 population were computed for each racial group. Mortality distributions in five-year age categories were used to derive premature deaths to age 70, which entailed the summation of observed mortality across 14 of the 18 age distributions.

6. Age-Adjusted Death Rate (AADR)

Age-adjusted death rate (AADR) is designed to eliminate differences in the age structure of populations before valid comparisons of their mortality experiences can be made. The direct method of standardization was employed using the 1940 U.S. standard million population as standard.

7. Population

The 1995 D.C. population estimates by race and gender were employed as the estimated annual average population for the period 1992-1996. The US 1940 standard million population in 10 year age groups was used for the purpose of standardization.

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