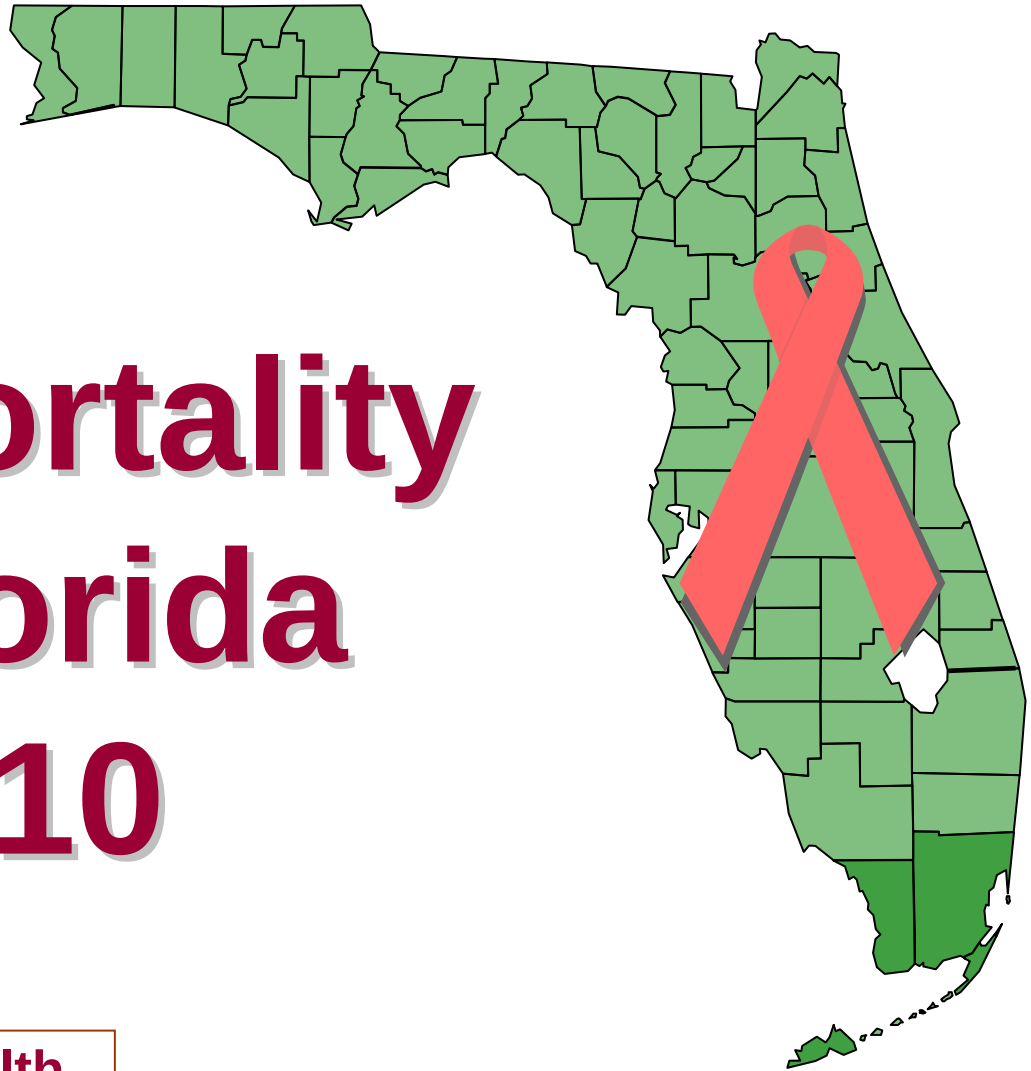

HIV Mortality in Florida 2010

Florida Department of Health
Bureau of HIV/AIDS
Death data as of 10/25/2011

HIV Mortality in Florida

Resident HIV deaths due to HIV disease represent persons who resided in Florida and whose underlying cause of death was HIV disease, regardless if they were reported with HIV disease in Florida or not.

- The data source is death certificate data from the Florida Department of Health, Office of Vital Statistics.

HIV case deaths are known cases of HIV disease (regardless of AIDS status) reported in Florida and are known to be dead, regardless of the cause of death. It is important to understand if any known HIV/AIDS cases died in any given year for estimates of the current burden of HIV/AIDS care and treatment needs within the state.

- The data source is the Florida HIV/AIDS Reporting System (eHARS) from the Florida Department of Health, Bureau of HIV/AIDS.

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HIV Mortality in Florida (con't)

Rates are expressed as deaths per 100,000 population based on 2008 Population Estimates, DOH, Office of Planning, Evaluation and Data Analysis

A new national system for coding death certificates (ICD-10) began in 1999, which resulted in an increase of approximately 14% in the annual number of HIV/AIDS deaths.

Other includes Asian/Pacific Islander, American Indian/Alaska Native, Multiracial and/or Other/Unknown races. Males and females are combined per the low number of resident deaths.

Note: HIV/AIDS deaths decreased markedly from 1996-1998, associated with the advent of HAART in 1996. Yearly declines in 2007, 2008 & 2009 appear promising.

Source: Office of Vital Statistics and Bureau of HIV/AIDS, death certificates coded to HIV/AIDS as underlying cause.

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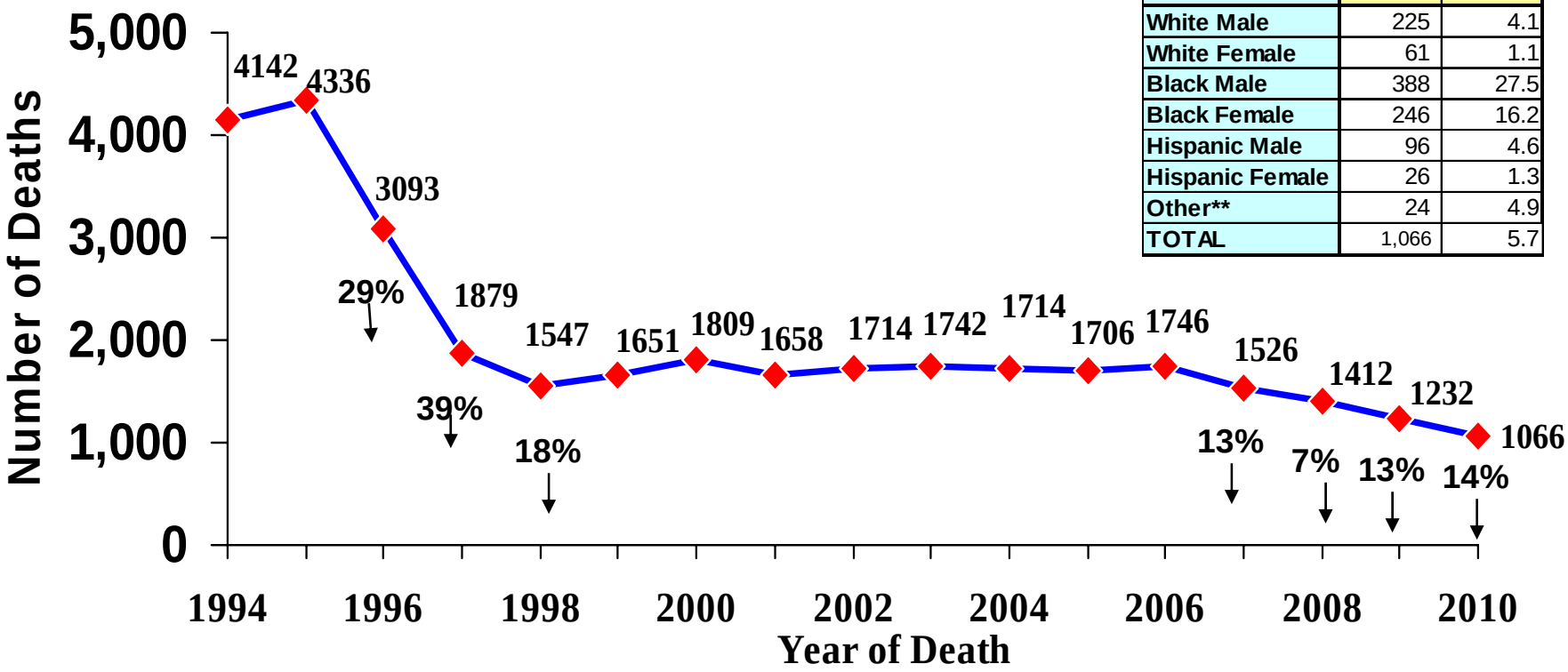
Resident Deaths due to HIV Disease, by Year of Death, 1994-2010, Florida

Race/Ethnicity	2010	
	No.	rate*
White Male	225	4.1
White Female	61	1.1
Black Male	388	27.5
Black Female	246	16.2
Hispanic Male	96	4.6
Hispanic Female	26	1.3
Other**	24	4.9
TOTAL	1,066	5.7

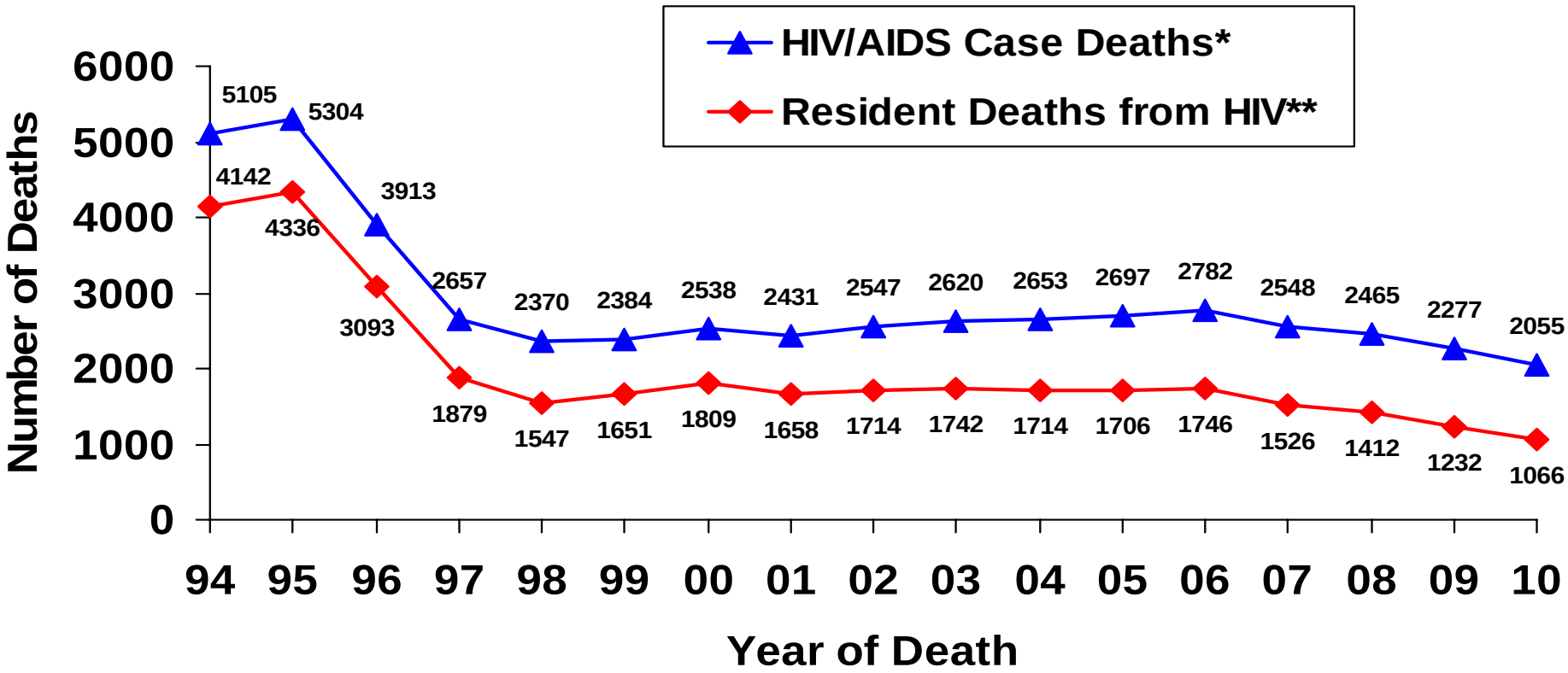


Note: HIV/AIDS deaths decreased markedly from 1996-1998, associated with the advent of highly active anti-retroviral therapy (HAART) in 1996. A leveling of the trend during 2000-2006 may reflect factors such as viral resistance, late diagnosis of HIV, adherence problems, and lack of access to or acceptance of care. Yearly declines of since 2007 (as shown in the figure above) appear to be very promising. Racial/ethnic disparities continue to be evident in the death rate data.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11). Population data are provided by FloridaCHARTS.**

FLORIDA DEPARTMENT OF HEALTH

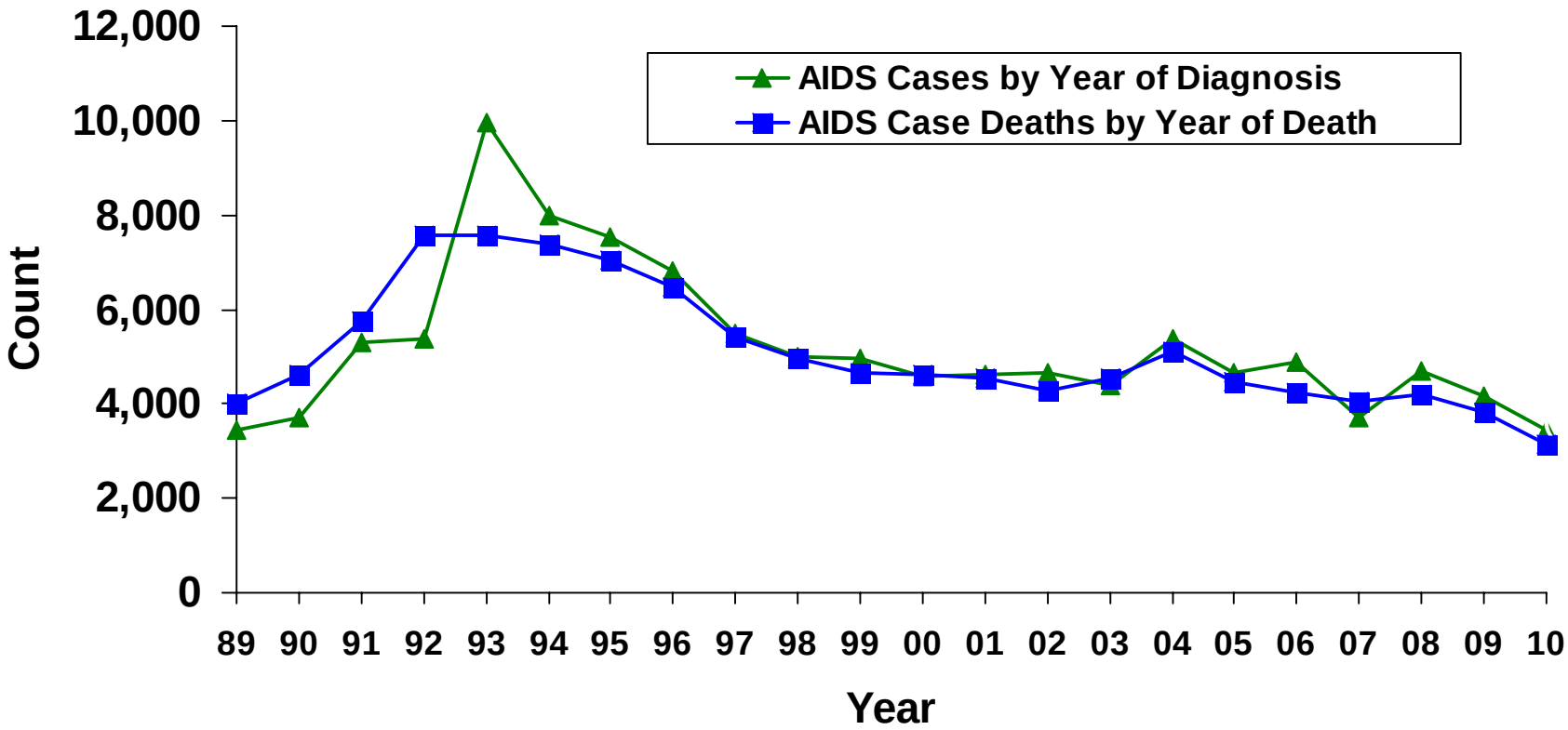
Resident Deaths* due to HIV Disease Compared to HIV/AIDS Cases** Known Dead, Regardless of Cause, by Year of Death, 1994-2010, Florida



*Source: Florida Department of Health, Bureau of HIV/AIDS, HIV/AIDS Reporting System (as of 10/25/11)

**Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11)

AIDS Cases, by Year of Diagnosis, Compared to AIDS Cases Known Dead, by Year of Death, 1989-2010, Florida*



Note: The peak in AIDS diagnoses during 1993 can be associated with the expansion of the AIDS surveillance case definition implemented in January 1993. The overall declines in new AIDS cases and deaths of persons with AIDS are due in part to the success of highly active antiretroviral therapies, introduced in 1996. In recent years, AIDS diagnoses and deaths of persons with AIDS have continued to decrease.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**

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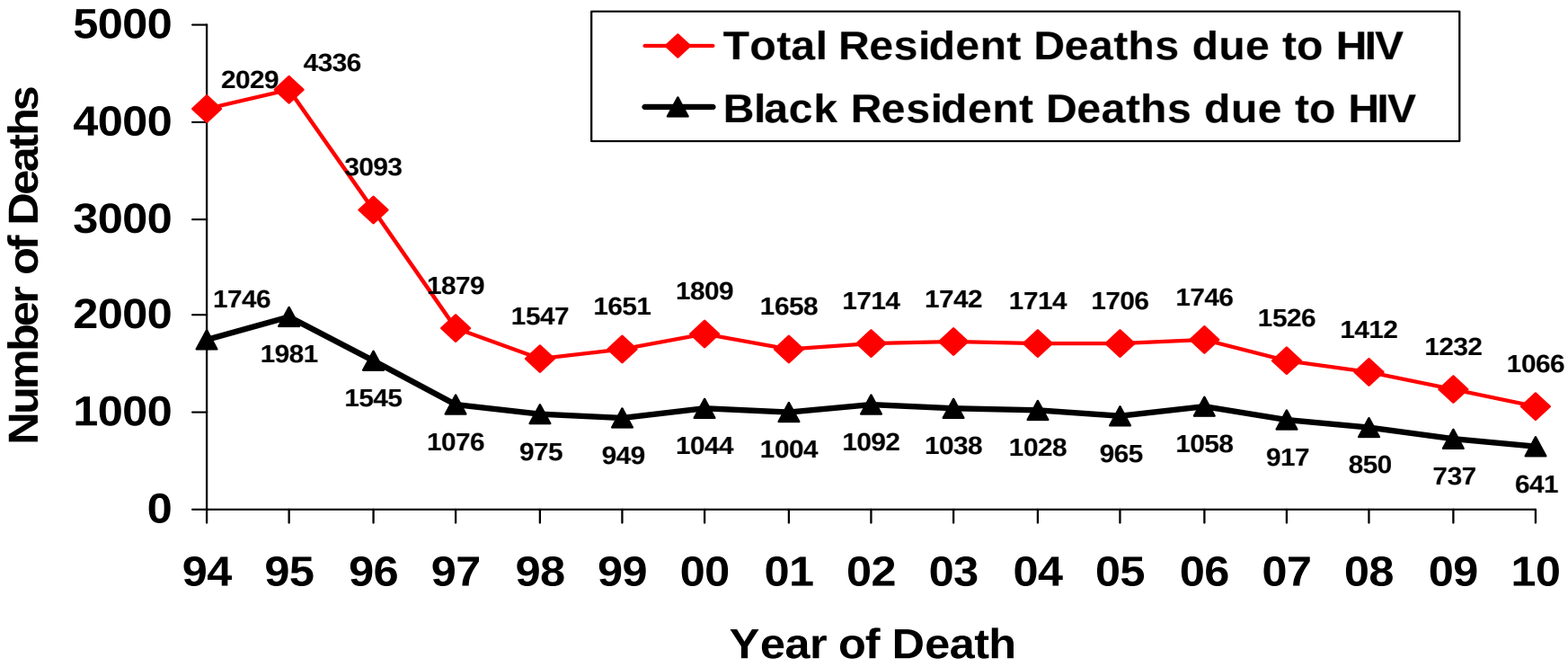
Total Resident Deaths due to HIV Disease, Compared to Resident Deaths due to HIV Disease among Blacks, by Year of Death*, 1994-2010, Florida



Note: There was a 13.5 % decrease in total resident death due to HIV from 2009 to 2010. A similar trend was seen among blacks where there was a 13.0% decrease in deaths due to HIV in the same period.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**

FLORIDA DEPARTMENT OF HEALTH

Resident Deaths* due to HIV Disease, by Race/Ethnicity and Year of Death, 2005-2010, Florida

	Total		White		Black		Hispanic	
Deaths	#	% change	#	% change	#	% change	#	% change
2005	1,706		462		965		235	
2006	1,746	2.3%	429	-7.1%	1058	9.6%	235	0.0%
2007	1,526	-12.6%	389	-9.3%	917	-13.3%	202	-14.0%
2008	1,412	-7.5%	364	-6.4%	850	-7.3%	177	-12.4%
2009	1,232	-12.7%	323	-11.3%	737	-13.3%	160	-9.6%
2010	1,066	-13.5%	291	-9.9%	641	-13.0%	122	-23.8%

Note: Overall, there has been a 75% decline in the number of Florida resident deaths due to HIV disease in Florida from 1995 (the peak of resident HIV deaths) to 2010. As of 2010, blacks still constitute a majority of HIV-related deaths (60%) and had similar annual decreases to the total. Hispanics constitute a low proportion of HIV-related deaths (11%) and also saw a 24% reduction in the number of deaths from 2009 to 2010.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**

FLORIDA DEPARTMENT OF HEALTH

Resident Deaths* due to HIV Disease, Number and Rate** by Race/Ethnicity, Sex and Year of Death, 2006-2010, Florida

Race/Ethnicity	2006		2007		2008		2009		2010	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
White Male	351	6.3	311	5.6	299	5.4	258	4.6	230	4.2
White Female	78	1.3	78	1.3	65	1.1	65	1.1	61	1.1
Black Male	625	45.3	526	37.1	533	37.8	438	31.0	395	28.0
Black Female	433	29.1	391	25.6	317	20.9	299	19.7	246	16.2
Hispanic Male	190	10.4	161	8.2	133	6.6	126	6.2	96	4.6
Hispanic Female	45	2.5	41	2.1	44	2.2	34	1.7	26	1.3
Other (both sexes)	24	5.2	18	3.8	21	4.4	12	2.5	12	2.4
TOTAL	1,746	9.5	1,526	8.1	1,412	7.5	1,232	6.5	1,066	5.7

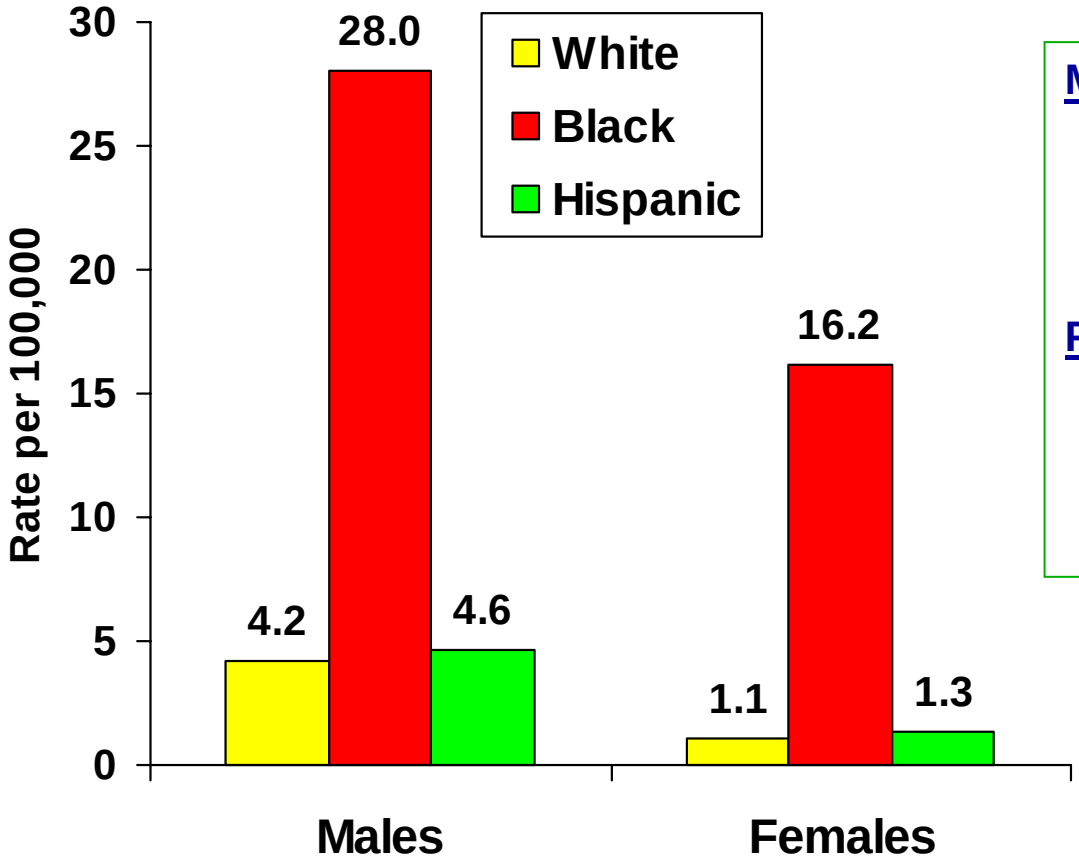
Note: Racial/ethnic disparities continue to be evident in the death rate data, where both black males and black females have the highest death rates.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**

****Source: Population data are provided by FloridaCHARTS.**

FLORIDA DEPARTMENT OF HEALTH

Rate* of Resident Deaths** due to HIV Disease, by Sex and Race/Ethnicity, 2010, Florida



MALES

Rate ratios

Blacks:Whites, 7:1

Hispanics:Whites, 1:1

FEMALES

Rate ratios

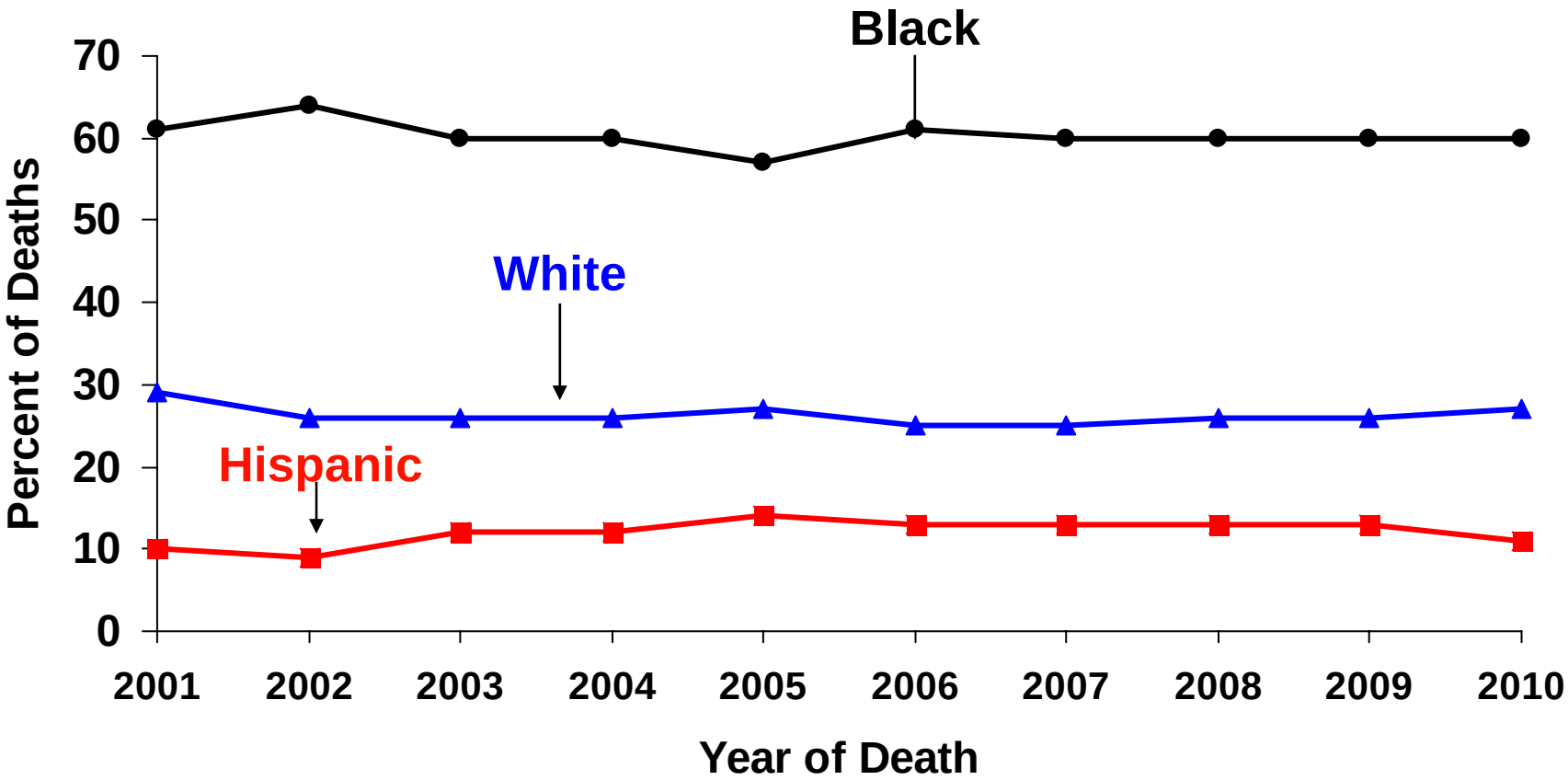
Black:Whites, 15:1

Hispanics:Whites, 1:1

Note: In 2010, black males were 7 times as likely as white males to die of HIV/AIDS. The HIV/AIDS death rate among black females was 15 times higher than among white females.

***Source: Population data are provided by FloridaCHARTS.**
****Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**

Resident Deaths* due to HIV Disease, by Race/Ethnicity and Year of Death, 2001-2010, Florida



Note: In 2010, the proportional distribution of resident HIV deaths due to HIV by race/ethnicity was: whites 27%, blacks 60%, Hispanics 11% and other 2%. This compares to 26%, 60%, 13% and 1% respectively for 2009.

Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).

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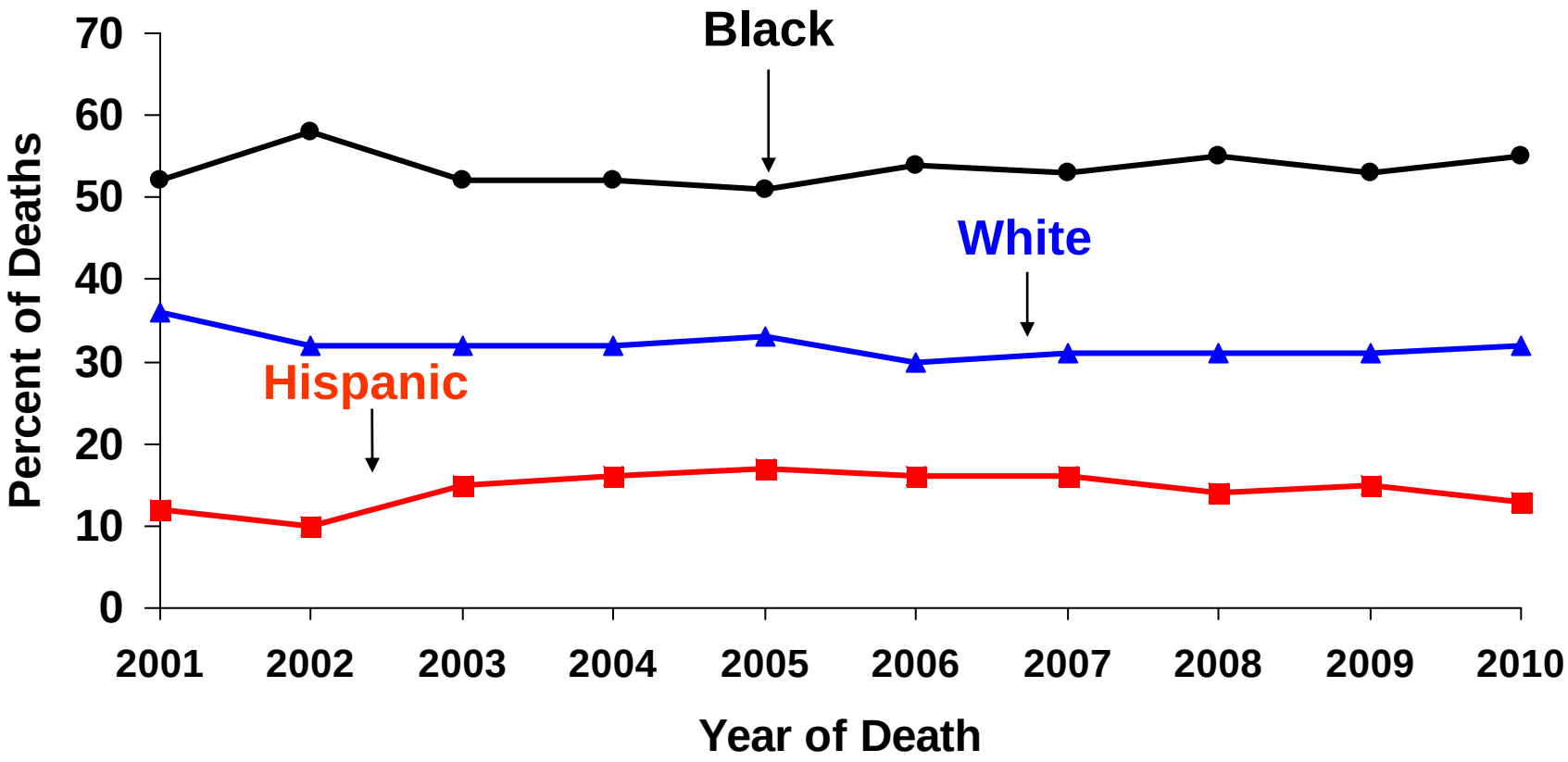
Resident Deaths* due to HIV Disease among Males, by Race/Ethnicity and Year of Death, 2001-2010, Florida



Note: In 2010, the proportional distribution of Male resident HIV deaths due to HIV Disease by race/ethnicity was: whites 32%, blacks 55% and Hispanics 13%. This compares to 31%, 53% an 15% respectively for 2009.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**

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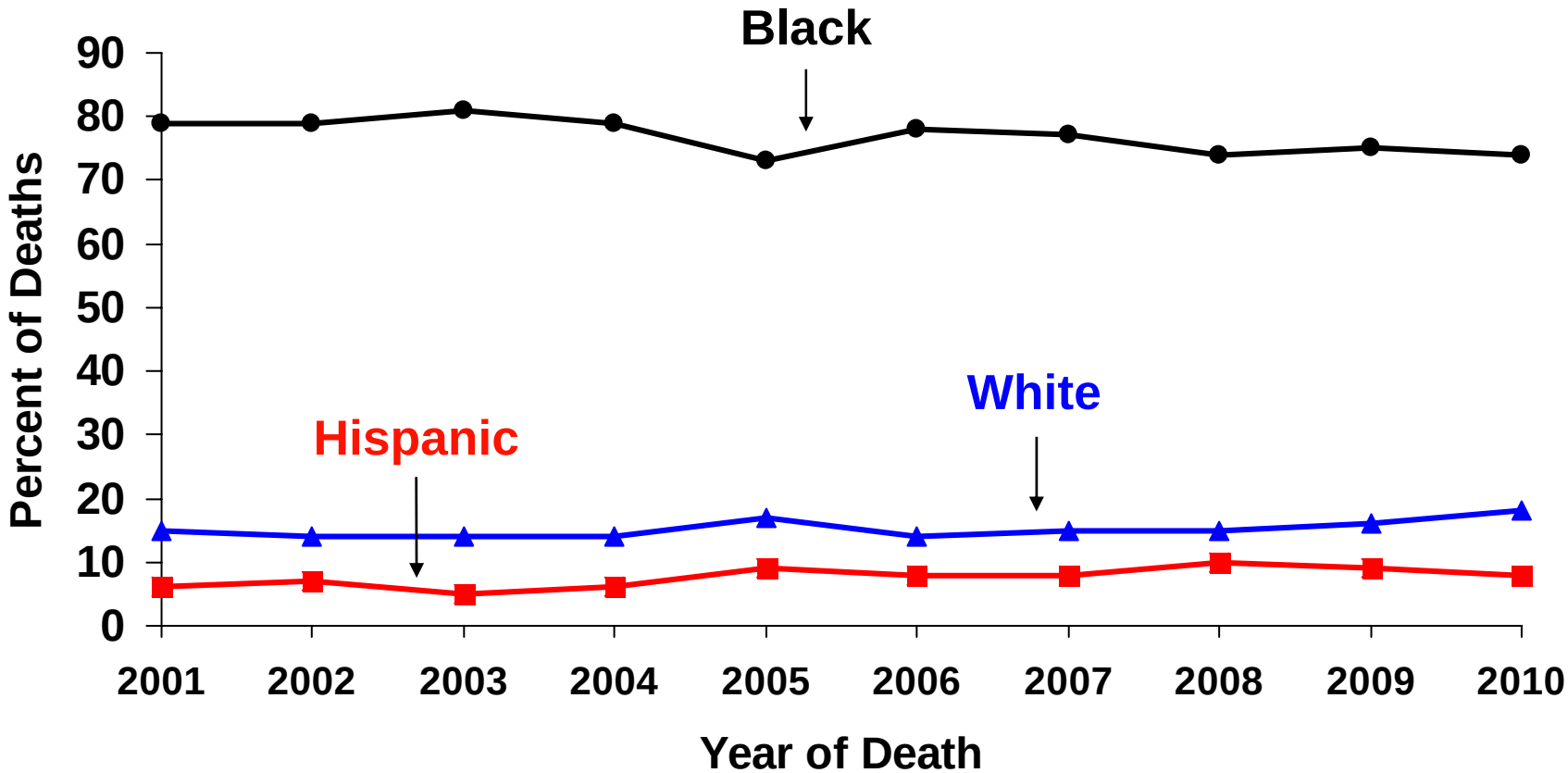
Resident Deaths* due to HIV Disease among Females by Race/Ethnicity and Year of Death, 2001-2010, Florida



Note: In 2010, the proportional distribution of Female resident HIV deaths due to HIV disease by race/ethnicity was: whites 18%, blacks 74% and Hispanics 8%. This compares to 16%, 75% an 9% respectively for 2009.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**

Resident Deaths due to HIV Disease among Persons 25-44 Years Old

Focusing on persons 25 to 44 years old emphasizes the importance of HIV disease among causes of death. Compared with rates among other age groups, the rate of death due to HIV disease is relatively high in this age group, but rates of death due to other causes are relatively low.

People 25-44 years old represent more than one-half of all newly reported cases of HIV disease in Florida. The large number of cases in this age group presents challenges for resources. Beyond that, deaths among this age group represent a significant source of years of potential life lost (YPLL). The average American can expect to live about 78 years; deaths due to HIV disease in those 25-44 represent between 34 and 54 YPLL each. Between 25 and 44 years of age people are typically working and having children. Deaths in this age group can potentially have large impacts on society from that perspective. Additionally, HIV disease-related deaths account for a larger proportion of overall deaths in this age group compared to other age groups.

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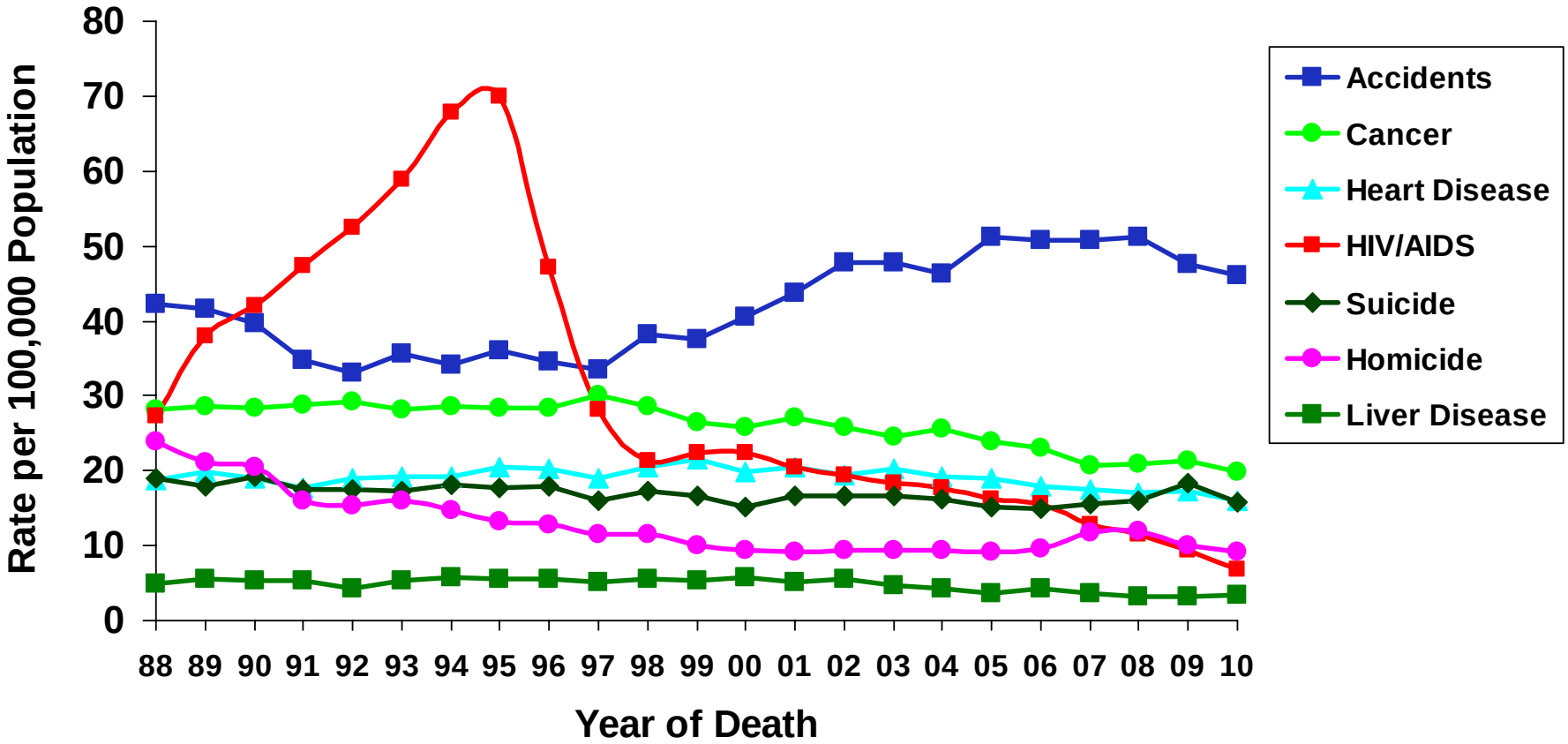
Death Rates* for the Top 7 Leading Causes of Death** among Persons 25-44 Years Old, by Year of Death, 1988-2010, Florida

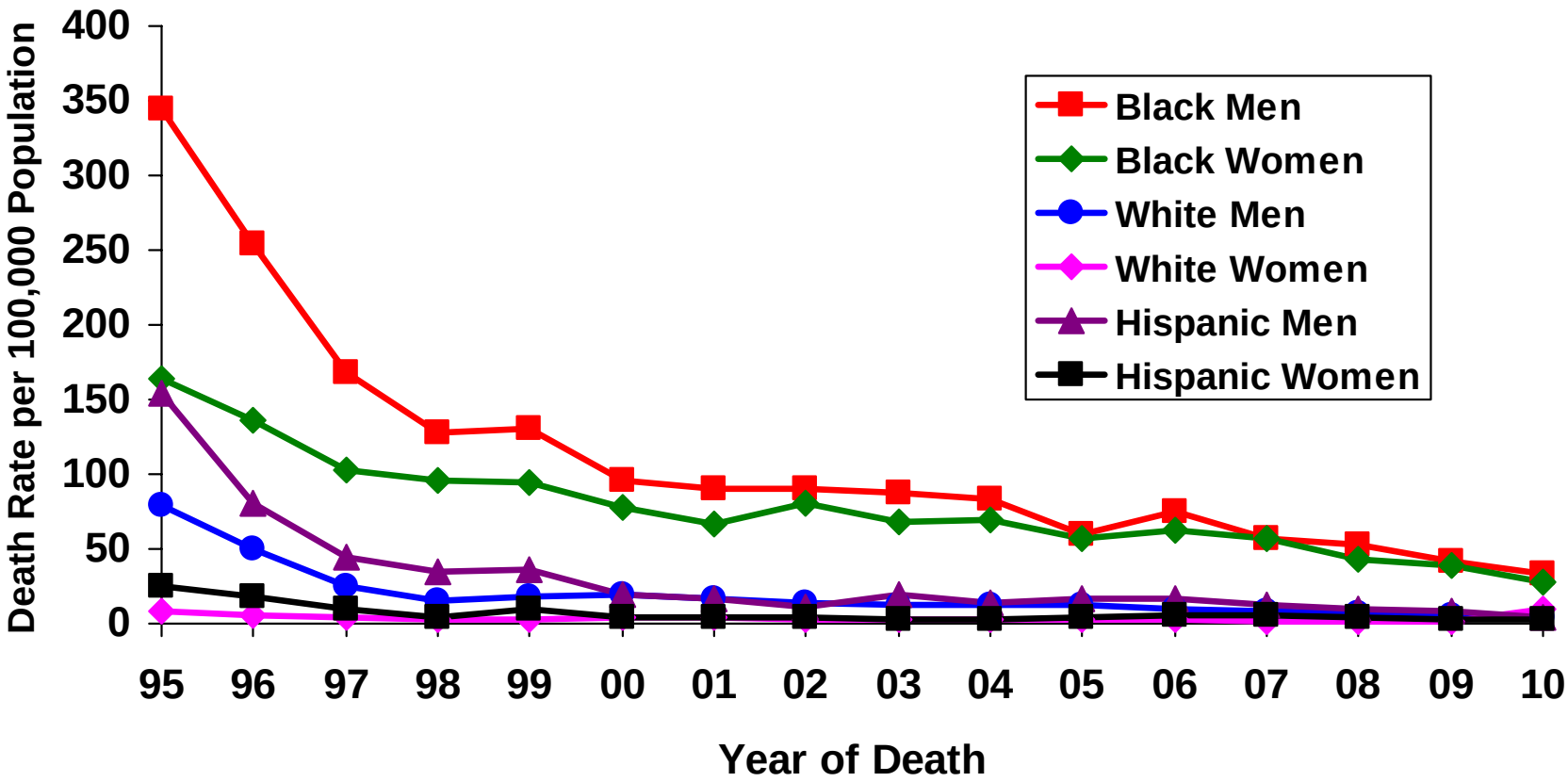


Note: The peak year for resident deaths due to HIV for person 25-44 years old was 1995. HIV was the 6th leading cause of death for this age group in 2009 & 2010.

*Source: Population data are provided by FloridaCHARTS.
**Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).

FLORIDA DEPARTMENT OF HEALTH

Annual Death* Rates** due to HIV Disease, among Persons 25-44 Years Old, by Race/Ethnicity and Sex, 1995-2010, Florida



Note: In every racial/ethnic group, the death rate has decreased greatly since 1995.

***Source: Florida Department of Health, Office of Vital Statistics, Death Certificates (as of 10/25/11).**
****Population data are provided by FloridaCHARTS.**

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Deaths due to HIV Disease among Persons 25 to 44 Years Old, 2010, Florida

- HIV is the 6th leading cause overall
- HIV is the 4th leading cause among blacks (*down from number 1 for the first time ever since 1988*).
- HIV is the 8th leading cause among both whites and Hispanics.
- HIV is the 6th leading cause of death among men but the 5th leading cause among women:
  - **Men**:
    - HIV is the 7th leading cause among whites,
    - The 4th leading cause among blacks and
    - The 6th leading cause among Hispanics.
  - **Women**:
    - HIV is the 9th leading cause among whites,
    - The 2nd leading cause among blacks (*down from number 1 for the first time ever since 1988*) and
    - The 5th leading cause among Hispanics.

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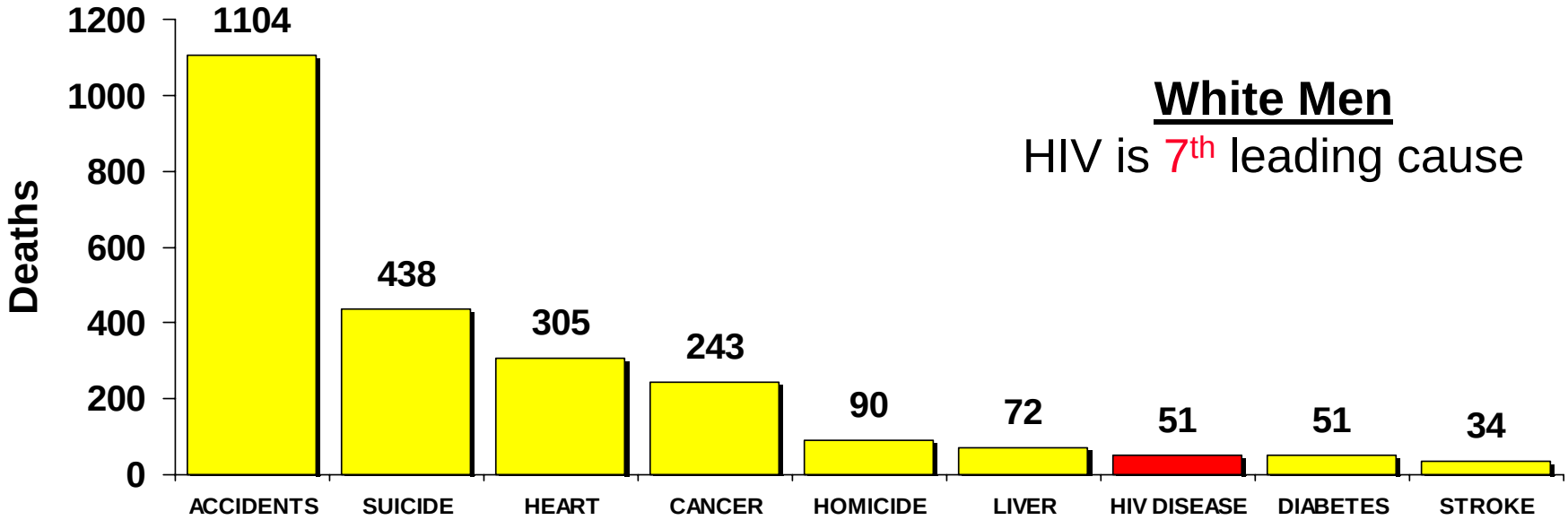
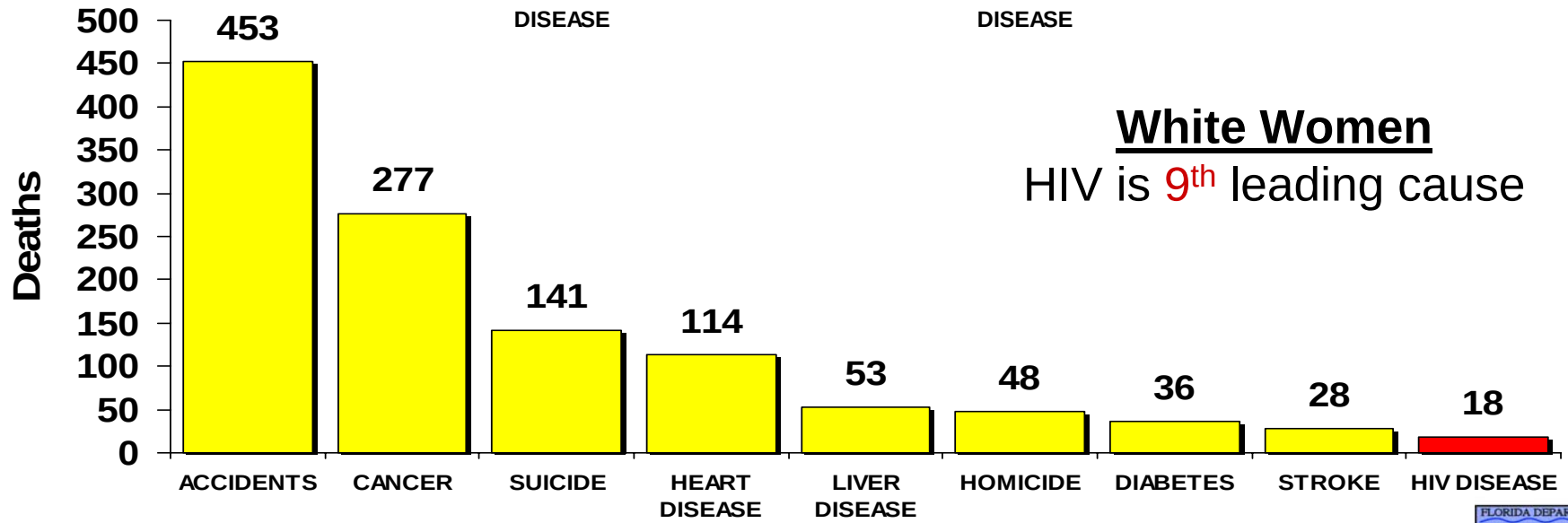
Leading Causes of Death among Whites 25-44 Years Old by Sex, 2010, Florida



White Men

HIV is 7th leading cause



White Women

HIV is 9th leading cause

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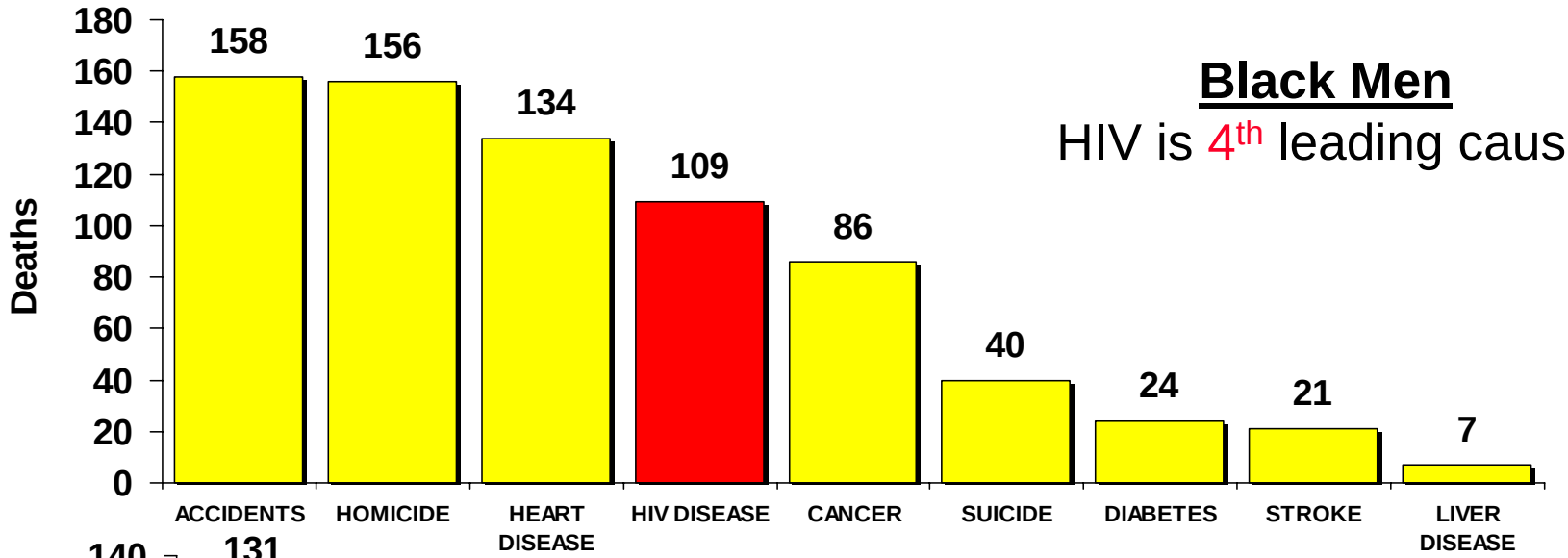
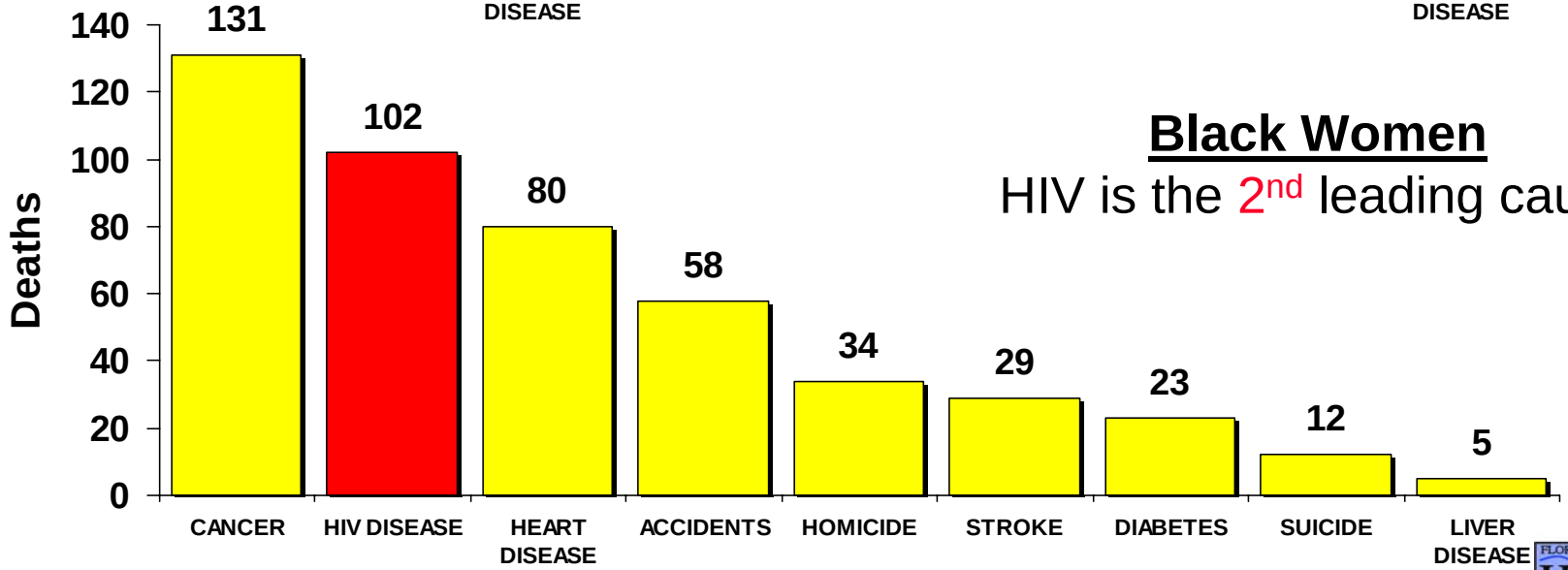
Leading Causes of Death among Blacks 25-44 Years Old by Sex, 2010, Florida



Black Men

HIV is 4th leading cause



Black Women

HIV is the 2nd leading cause

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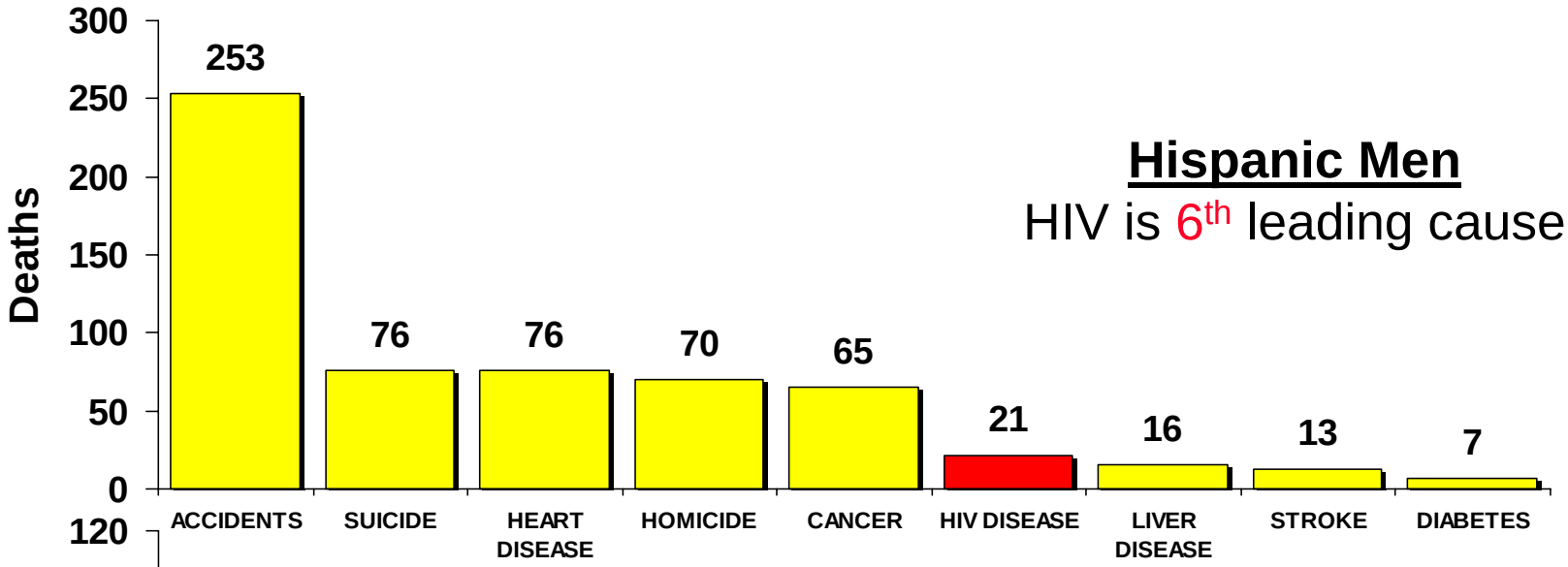
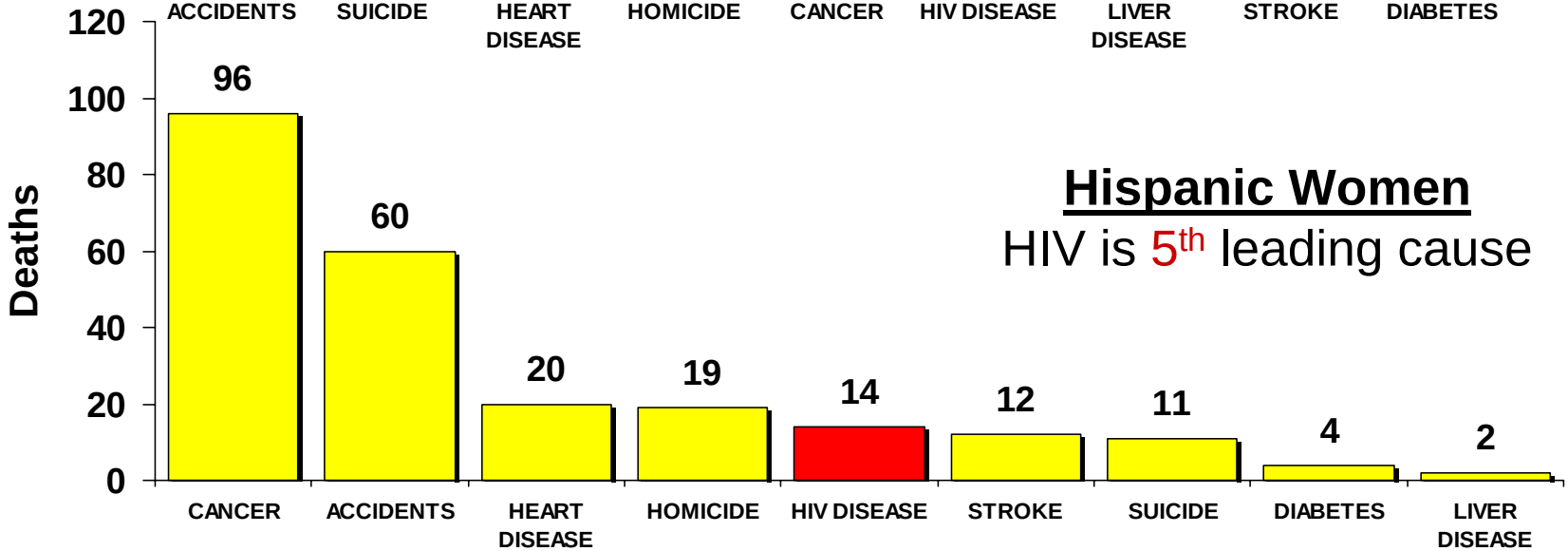
Leading Causes of Death among Hispanics 25-44 Years Old by Sex, 2010, Florida



Hispanic Men

HIV is 6th leading cause



Hispanic Women

HIV is 5th leading cause

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Ten Leading Causes of Deaths by Age Group, Florida, 2010

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65+
1	Perinatal Conditions 727	Unintentional Injuries 95	Unintentional Injuries 41	Unintentional Injuries 39	Unintentional Injuries 264	Unintentional Injuries 505	Unintentional Injuries 1,106	Unintentional Injuries 979	Malignant Neoplasm (Cancer) 3,262	Malignant Neoplasm (Cancer) 7,281	Cardiovascular Diseases 53,585
2	Cogenital Malformations 247	Other Causes 43	Other Causes 31	Other Causes 29	Homicide 103	Homicide 212	Suicide 308	Cardiovascular Diseases 756	Cardiovascular Diseases 2,577	Cardiovascular Diseases 5,126	Malignant Neoplasm (Cancer) 40,883
3	Other Causes 61	Cogenital Malformations 26	Malignant Neoplasm (Cancer) 13	Cogenital Malformations 16	Other Causes 57	Suicide 155	Other Causes 282	Malignant Neoplasm (Cancer) 735	Unintentional Injuries 1,316	Other Causes 1,747	Other Causes 19,818
4	Respiratory Diseases 34	Homicide 21	Cardiovascular Diseases 8	Malignant Neoplasm (Cancer) 16	Suicide 54	Other Causes 91	Homicide 239	Other Causes 465	Other Causes 1,154	Respiratory Diseases 1,381	Respiratory Diseases 15,412
5	Cardiovascular Diseases 26	Malignant Neoplasm (Cancer) 21	Respiratory Diseases 7	Suicide 14	Malignant Neoplasm (Cancer) 39	Cardiovascular Diseases 50	Cardiovascular Diseases 236	Suicide 423	Suicide 661	Unintentional Injuries 934	Abnormal Findings 5,758
6	Homicide 23	Respiratory Diseases 20	Cogenital Malformations 5	Homicide 12	Cardiovascular Diseases 22	Malignant Neoplasm (Cancer) 49	Malignant Neoplasm (Cancer) 195	HIV 224	Digestive Diseases 652	Diabetes Mellitus 850	Unintentional Injuries 5,475
7	Intestinal Infections 21	Abnormal Findings 19	Homicide 5	Respiratory Diseases 10	Abnormal Findings 16	Abnormal Findings 37	Abnormal Findings 125	Homicide 188	Respiratory Diseases 513	Digestive Diseases 824	Diabetes Mellitus 4,992
8	Septicemia 17	Cardiovascular Diseases 16	Septicemia 3	Cardiovascular Diseases 6	Cogenital Malformations 15	Respiratory Diseases 20	HIV 94	Digestive Diseases 147	HIV 405	Suicide 558	Alzheimers Diseases 4,776
9	Unintentional Injuries 7	Anemias 4	In Situ, Benign, Neoplasms 2	Abnormal Findings 6	Respiratory Diseases 5	Diabetes Mellitus 14	Respiratory Diseases 56	Abnormal Findings 141	Diabetes Mellitus 403	Abnormal Findings 318	Urinary Tract Diseases 3,306
10	Urinary Tract Diseases 6	In Situ, Benign, Neoplasms 3	Unintentional Injuries 2	In Situ, Benign, Neoplasms 5	Anemias 4	HIV 14	Diabetes Mellitus 42	Diabetes Mellitus/ Respiratory Diseases 107	Abnormal Findings 273	Urinary Tract Diseases 311	Digestinve Diseases 2,960

FLORIDA DEPARTMENT OF HEALTH

Median Survival Time (in months) from AIDS Diagnosis to Death, by Race/Ethnicity and Time Period of Death, 1980-2010, Florida

	Time Period of Death			
	Early Years		HAART	
	1980-1988	1989-1995	1996-2000	2001-2010
White	4 mo.	15 mo.	32 mo.	65 mo.
Black	1 mo.	10 mo.	22 mo.	46 mo.
Hispanic	3 mo.	12 mo.	23 mo.	49 mo.
Amer. Ind.	N/A	14 mo.	21 mo.	39 mo.
Asian	1 mo.	13 mo.	24 mo.	32 mo.

Note: In the early years, survival times for increased for all race/ethnicity groups with the introduction of AZT in 1994. With the introduction of Highly Active Retroviral Therapy (HAART) in 1996, survival time increased significantly for all age groups, however, overall survival times are not without racial/ethnic disparities.

***Source: Florida Department of Health, Bureau of HIV/AIDS, HIV/AIDS Reporting System (as of 10/25/11)**

FLORIDA DEPARTMENT OF HEALTH

Median Survival Time (in months) from AIDS Diagnosis to Death, by Sex and Period of Death 2001-2010, Florida

Period of Death: 2001-2010		
Males	**Females**	**TOTAL**
54 mo.	**44 mo.**	**49 mo.**
15,418 deaths	6,734 deaths	22,152 deaths

Note: These data show that the median survival time for females is about 10 months less than for males. This could be due to women being diagnosed with AIDS later in their course of illness thus shortening their apparent survival time. However, it could also reflect that females enter care for HIV disease later, have more drug adherence issues, or a host of other factors that could be damaging to a patient's underlying health status and outcomes

***Source: Florida Department of Health, Bureau of HIV/AIDS, HIV/AIDS Reporting System (as of 10/25/11)**

FLORIDA DEPARTMENT OF HEALTH

Median Survival Time (in months) from AIDS Diagnosis to Death, by Race/Ethnicity and Sex, Period of Death 2001-2010, Florida

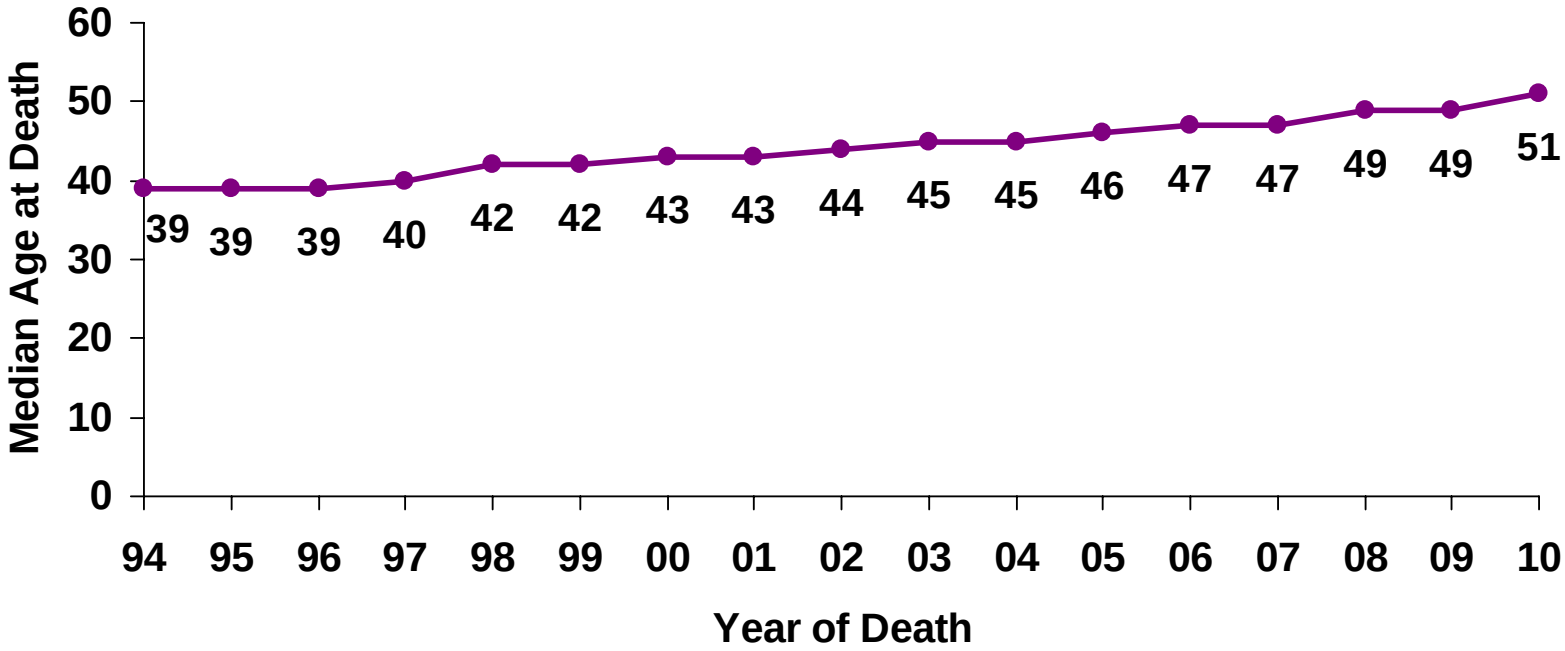
Period of Death: 2001-2010			
	Males	**Females**	**TOTAL**
White	**67 mo.**	**47 mo.**	**63 mo.**
	4,433 deaths	875 deaths	5,308 deaths
Black	**45 mo.**	**42 mo.**	**44 mo.**
	7,059 deaths	4,597 deaths	11,656 deaths
Hispanic	**48 mo.**	**43 mo.**	**47 mo.**
	2,350 deaths	573 deaths	2,923 deaths
Amer. Ind.	**40 mo.**	**17 mo.**	**35 mo.**
	51 deaths	19 deaths	70 deaths
Asian	**33 mo.**	**26 mo.**	**32 mo.**
	43 deaths	11 deaths	54 deaths

Note: These data show that the differences in median survival time by gender discussed on the previous table are not uniform for all racial/ethnic groups. For instance, the gender difference among whites, American Indians, and Asians is much larger than the difference between genders for blacks and Hispanics. This confirms the assertion that there are not biologic differences between these groups that account for their differences in outcomes but rather it is most likely social and cultural barriers that are leading to poorer outcomes.

***Source: Florida Department of Health, Bureau of HIV/AIDS, HIV/AIDS Reporting System (as of 10/25/11)**

FLORIDA DEPARTMENT OF HEALTH

Median Age at Death among HIV/AIDS Cases Known Dead Regardless of Cause, 1898-2010, Florida



The median age at death among HIV/AIDS cases increased from 39 years in 1994 to 51 in 2010. This is a reflection of the trend in delaying progression from HIV to AIDS and therefore delaying the occurrence of opportunistic infections and other conditions that often lead to death.

***Source: Florida Department of Health, Bureau of HIV/AIDS, HIV/AIDS Reporting System (as of 10/25/11)**

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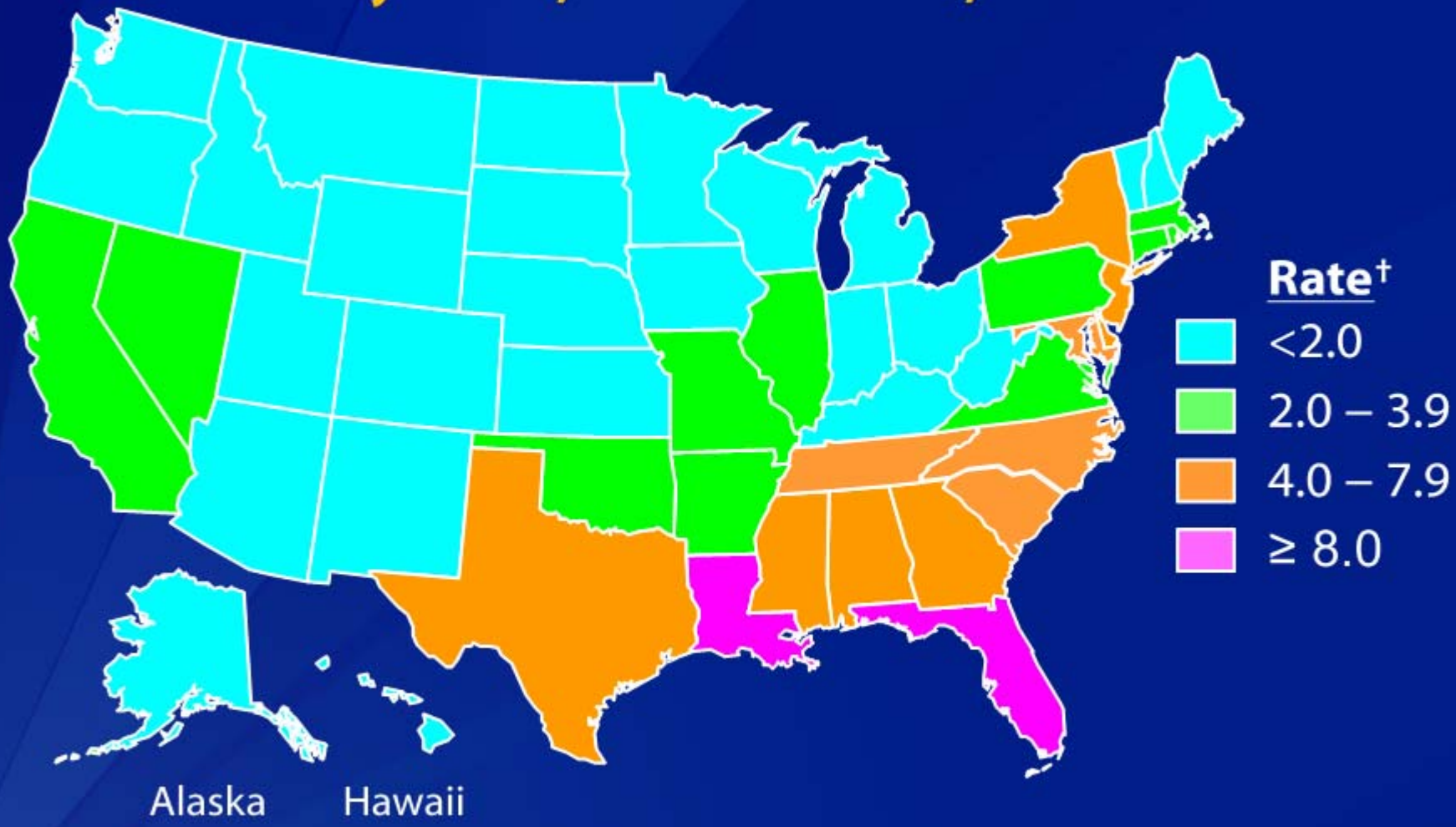
Age-Adjusted* Rate† of Death due to HIV Disease by State, United States, 2007



*Standard: age distribution of 2000 US population
†Per 100,000 population.

Conclusions

- Florida has one of the highest HIV disease death rates in the U.S.
- HIV disease-related deaths in Florida increased rapidly in the 1980's and peaked in 1995 after which there was a sharp decline. After 1998 the annual number of HIV disease-related deaths remained relatively stable. However, since 2007 Florida has seen an annual decrease in the number of HIV disease-related deaths to an overall low of 1,066 deaths reported in 2010.
- The decrease in the HIV disease-related death rate starting in 1996 was largely due to improvements in antiretroviral therapies, including highly active anti-retroviral therapies (HAART). Additionally, improved treatments for and prophylaxis of opportunistic infections may also have contributed to this decrease.
- The median survival time from AIDS diagnosis to death has increased dramatically from 1-4 months in the 1980's to 3-5 years in the 2000's. This is also due to improvements in treatments for HIV disease and prevention of opportunistic infections. As a result, persons with HIV disease are living longer on average in 2010 than they were in 1995.

FLORIDA DEPARTMENT OF HEALTH

For Florida HIV/AIDS Surveillance Data

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- **Slide Sets and Fact Sheets**
- **Annual Reports and Epi Profiles**

http://www.doh.state.fl.us/disease_ctrl/aids/trends/trends.html

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http://www.cdc.gov/hiv/topics/surveillance/resources/reports/index.htm