
Chartpack



AIDS at 25: An Overview of Major Trends in the U.S. Epidemic

June 2006

Introduction

June 5, 2006 marks twenty-five years since the U.S. Centers for Disease Control and Prevention (CDC) issued its first warning of what soon became known as AIDS.* Since that time, more than half a million people have died of AIDS in the United States, and the cumulative number of HIV infections has reached an estimated 1.6 million, including almost one million AIDS cases (see Figure 1).

This chart pack provides an overview of major trends in the HIV/AIDS epidemic in the United States. For more information on the many political, scientific, cultural, and community developments that have occurred over the history of the epidemic, see the Kaiser Family Foundation's *Global HIV/AIDS Timeline* at: <http://www.kff.org/hiv/aids/timeline/index.cfm>.

This chart pack uses many different kinds of data and measures including:

HIV incidence: new HIV infections.

AIDS incidence: new AIDS cases, the most advanced stage of HIV disease.

HIV/AIDS prevalence: number of people living with HIV and AIDS.

AIDS prevalence: number of people living with AIDS.

AIDS case rate: number of AIDS cases per standardized measure of population, to allow for comparisons over time and/or across different populations.

HIV mortality: deaths due to HIV disease.

Deaths among people with HIV/AIDS: deaths due to HIV disease and deaths due to other causes.

Age-adjusted death rate: death rates by age group applied to a standard age distribution, to allow for comparisons over time and/or across different populations.

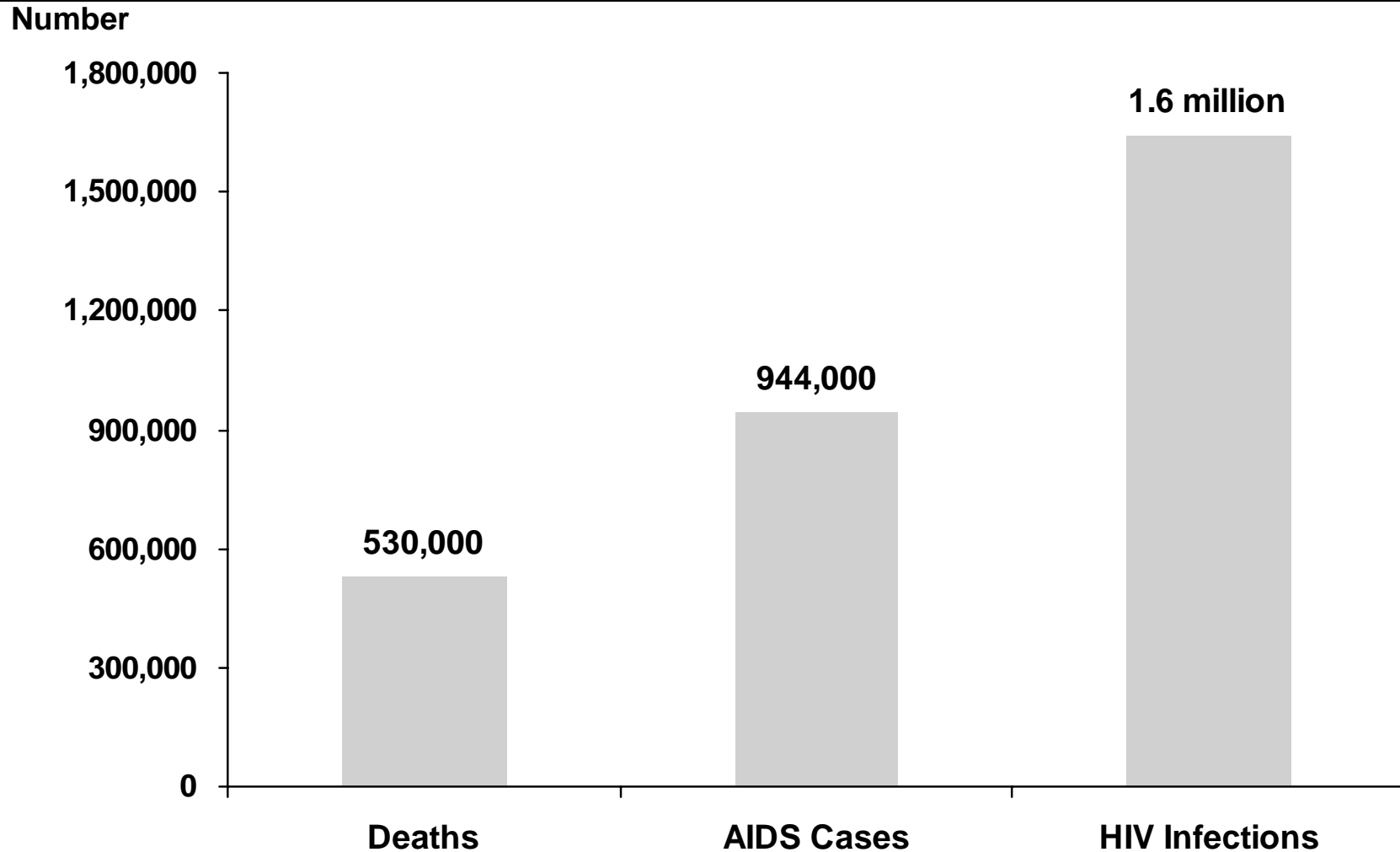
Cumulative HIV infections: total number of HIV infections that have occurred to date, including those who have progressed to an AIDS diagnosis and those who have died.

Cumulative AIDS cases: total number of AIDS cases that have occurred to date, including those who have died (does not include people with HIV who have not yet progressed to an AIDS diagnosis).

* CDC, "Pneumocystis Pneumonia – Los Angeles" *MMWR*, Vol. 30, No. 21, 1981.

Figure 1

Cumulative Number of AIDS Deaths, AIDS Cases, & HIV Infections Through 2004



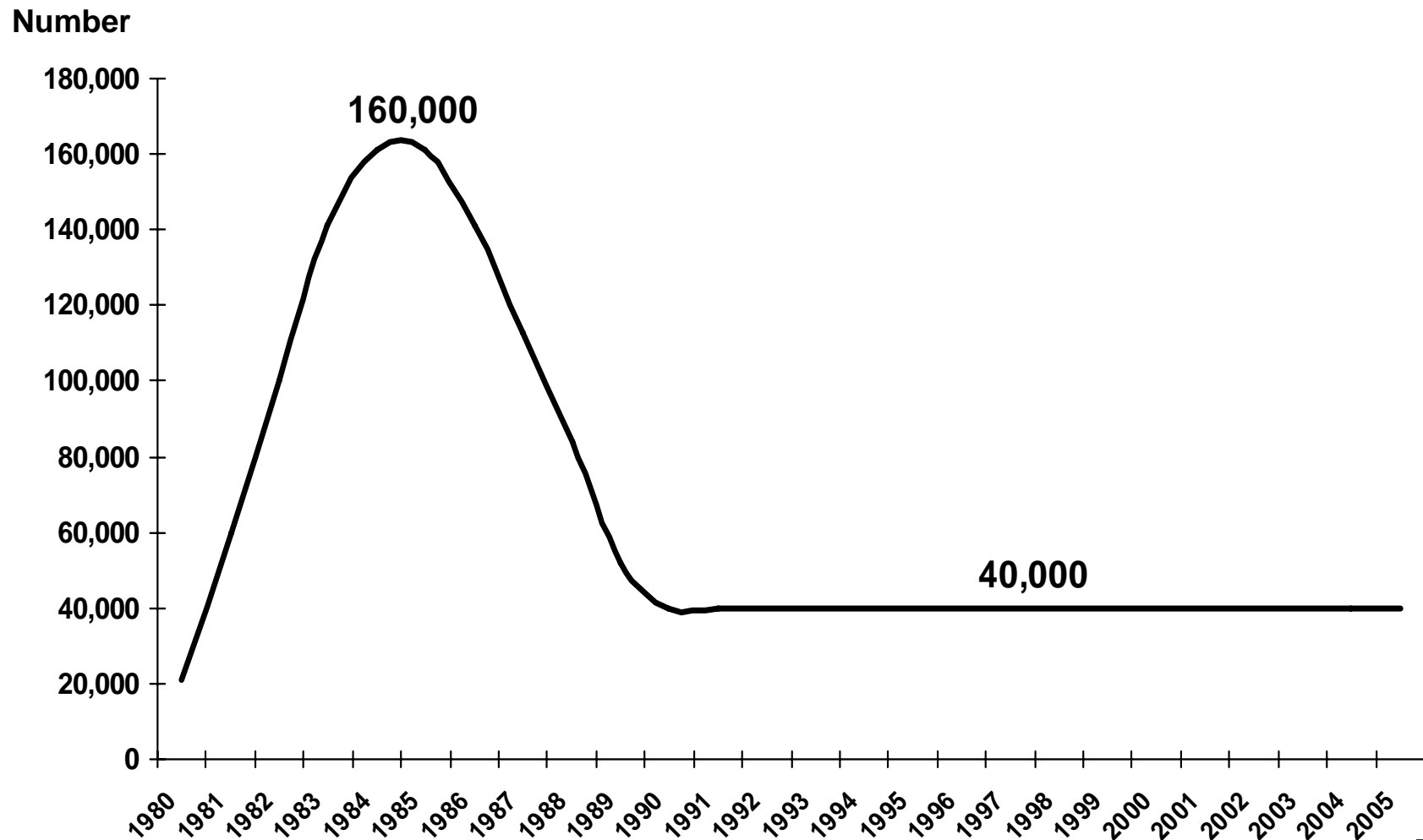
Note: Data are estimates only; Deaths represent deaths among people with AIDS; AIDS cases are by year of diagnosis; Cumulative HIV infections include AIDS diagnoses. Sources: Kaiser Family Foundation analysis of data from: Holtgrave DR., Pinkerton SD. "Implications of Economic Evaluation for National HIV Prevention Policy Makers" In Kaplan and Brookmeyer (Eds.), *Quantitative Evaluation of HIV Prevention Programs*. New Haven, CT: Yale University Press, 2002; Brookmeyer R. "Reconstruction and Future Trends of the AIDS Epidemic in the United States" *Science*, Vol. 253, 1991; CDC, *A Glance at the HIV Epidemic*, 2006; CDC, *HIV/AIDS Surveillance Report*, Vol 16, 2005.

Section One: Overview of Major Trends in the U.S. Epidemic

- HIV incidence in the U.S. rose quickly and steeply in the early years of the epidemic, reaching its peak in the mid-1980s at an estimated 160,000. Since that time, HIV incidence has dropped significantly, largely due to prevention efforts. However, the number of new HIV infections has remained steady for more than a decade, at an estimated 40,000 per year (Figure 2).
- AIDS incidence also increased for the first 15 years of the epidemic. Because AIDS case trends “lag” HIV incidence trends, due to the delay between HIV infection and progression to an AIDS diagnosis, AIDS cases reached their peak in the 1990s, almost a decade later than HIV incidence. New AIDS cases began to drop at this point, primarily due to the introduction of highly active antiretroviral therapy (HAART), which led to significant declines in HIV morbidity and mortality, but also due to prevention efforts that resulted in decreasing HIV incidence in earlier years. Declines in AIDS incidence leveled in recent years and cases have begun to rise again (Figure 3).
- HIV death rates, and deaths among people with AIDS, increased during the first 15 years of the epidemic and were highest in the mid-1990s. Since that time, they have dropped sharply, primarily due to HAART. More recently, however, the decline in deaths has begun to level off (Figures 4 & 5).
- Today there are more than one million people estimated to be living with HIV/AIDS in the U.S. including almost half a million with AIDS. HIV/AIDS prevalence is at its highest level ever and continues to rise each year. The only exception to this steady rise was in the mid-1990s, before the advent of HAART, when annual deaths among people with AIDS actually exceeded the number of new HIV infections. Increasing HIV/AIDS prevalence over time is due both to more effective treatments, which have reduced HIV-related morbidity and mortality, and to the continuing number of new HIV infections that occur in the U.S. each year (Figures 6 & 7).

Figure 2

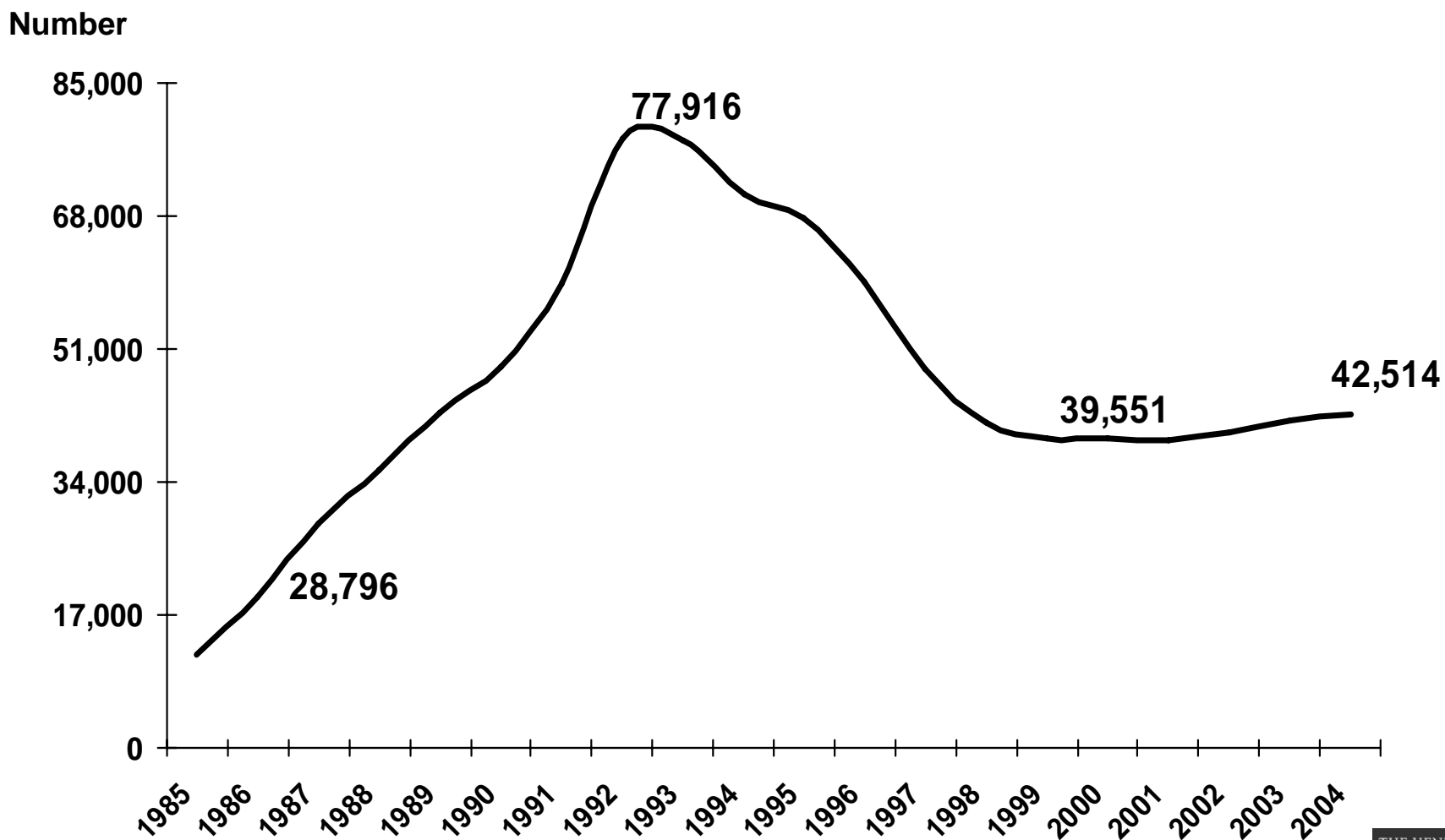
Estimated Number of New HIV Infections in the United States, 1980-2005



Note: Data are estimates only. Sources: Kaiser Family Foundation analysis of data from: Holtgrave DR., Pinkerton SD. "Implications of Economic Evaluation for National HIV Prevention Policy Makers" In Kaplan and Brookmeyer (Eds.), *Quantitative Evaluation of HIV Prevention Programs*. New Haven, CT: Yale University Press, 2002; Brookmeyer R. "Reconstruction and Future Trends of the AIDS Epidemic in the United States" *Science*, Vol. 253, 1991; CDC, *A Glance at the HIV Epidemic*, 2006.

Figure 3

New AIDS Cases, 1985-2004

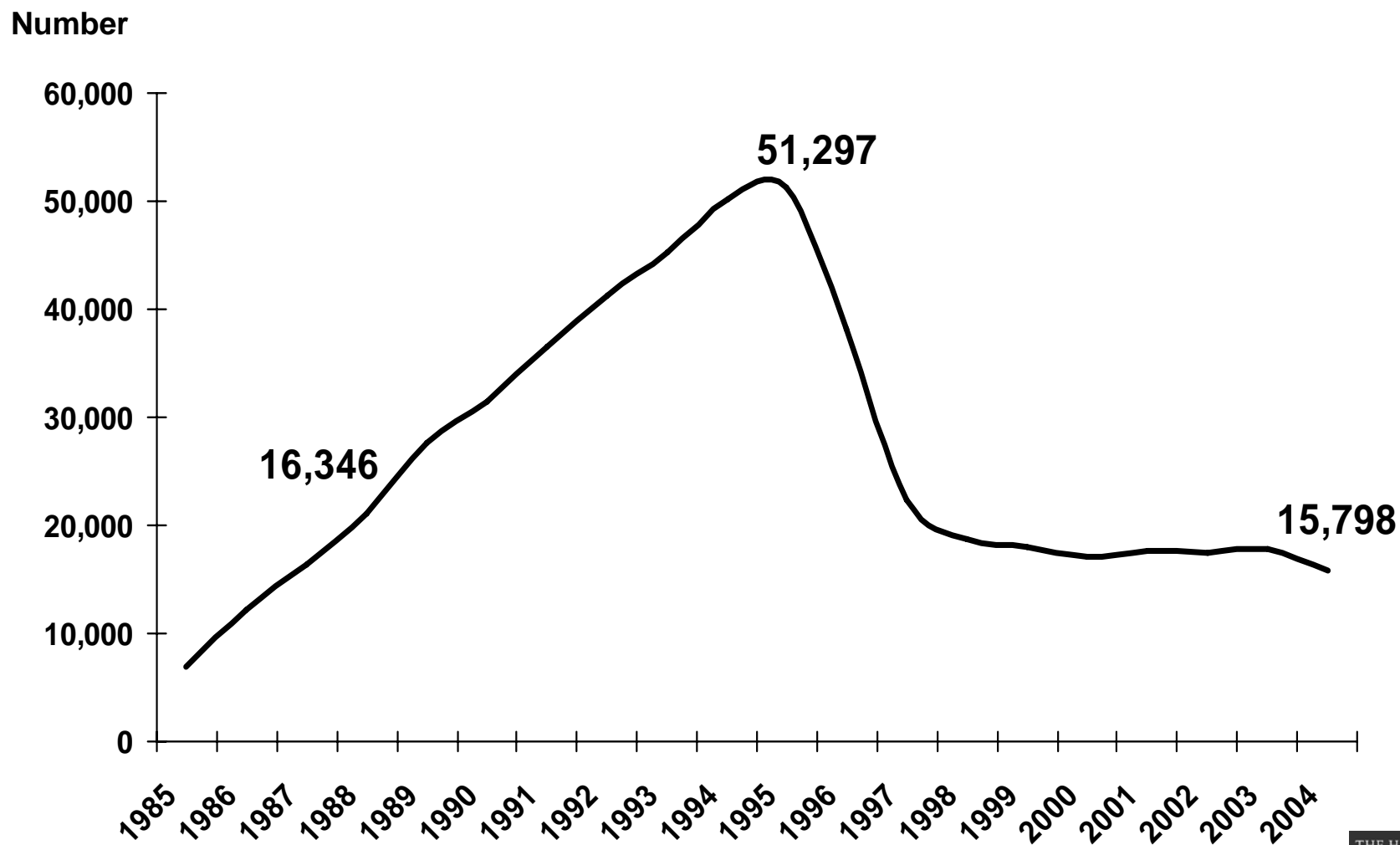


Note: Cases are by year of diagnosis.

Source: CDC, Special Data Request for the Kaiser Family Foundation, 2006.

Figure 4

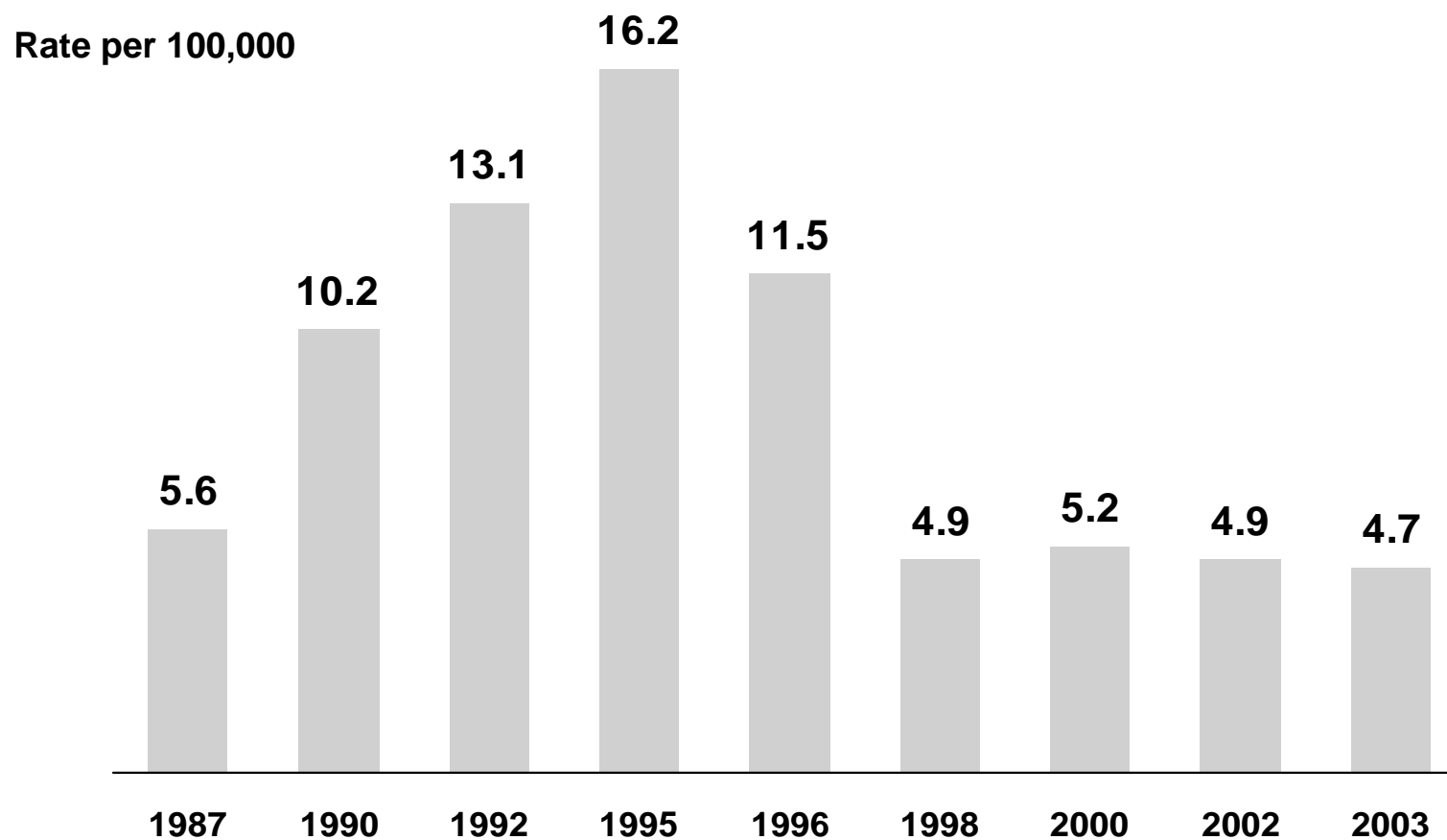
Deaths Among People with AIDS, 1985-2004



Source: CDC, Special Data Request for the Kaiser Family Foundation, 2006.

Figure 5

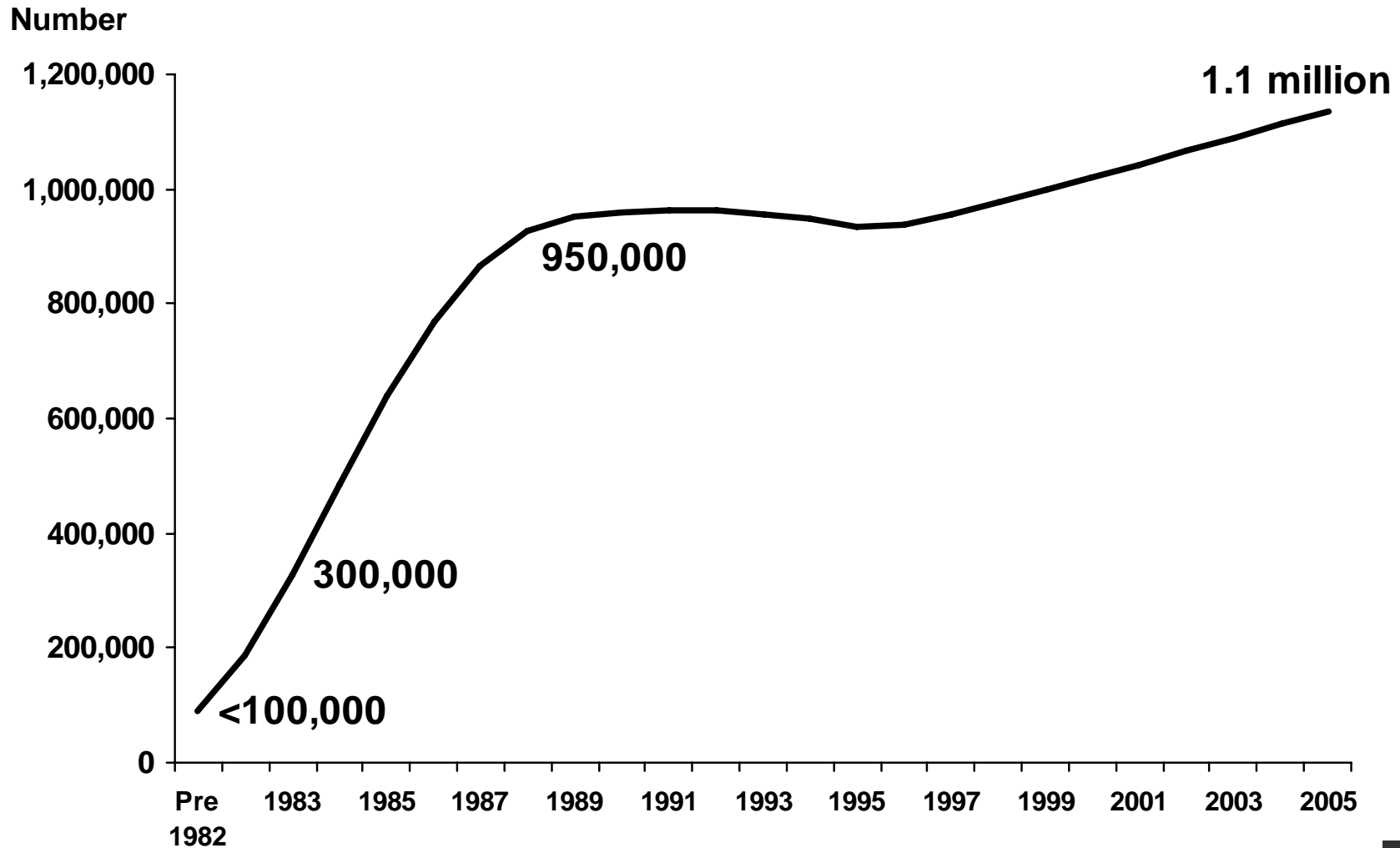
HIV Death Rates per 100,000 (age-adjusted), 1987-2003



Note: Data represent age-adjusted deaths due to HIV.
Source: NCHS, *Health, United States, 2005*.

Figure 6

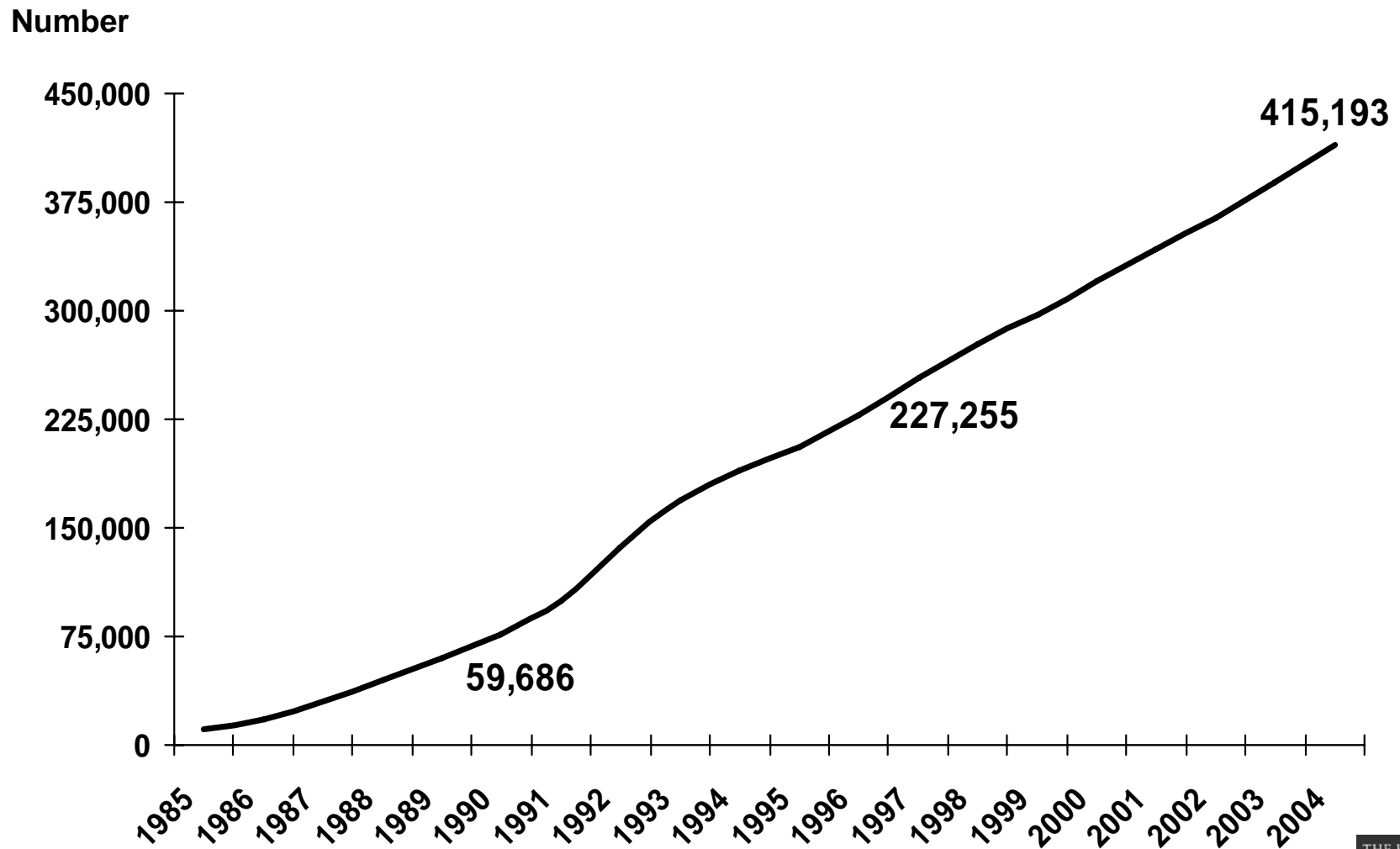
Estimated Number of People Living with HIV/AIDS, Through 2005



Note: Data are estimates only; Includes those who have progressed to an AIDS diagnosis. Sources: Kaiser Family Foundation analysis of data from: Holtgrave DR, Pinkerton SD. "Implications of Economic Evaluation for National HIV Prevention Policy Makers" In Kaplan and Brookmeyer (Eds.), *Quantitative Evaluation of HIV Prevention Programs*. New Haven, CT: Yale University Press, 2002; Brookmeyer R. "Reconstruction and Future Trends of the AIDS Epidemic in the United States" *Science*, Vol. 253, 1991; CDC, *A Glance at the HIV Epidemic*, 2006; CDC, Special Data Request for the Kaiser Family Foundation, 2006.

Figure 7

Estimated Number of People Living With AIDS, 1985-2004



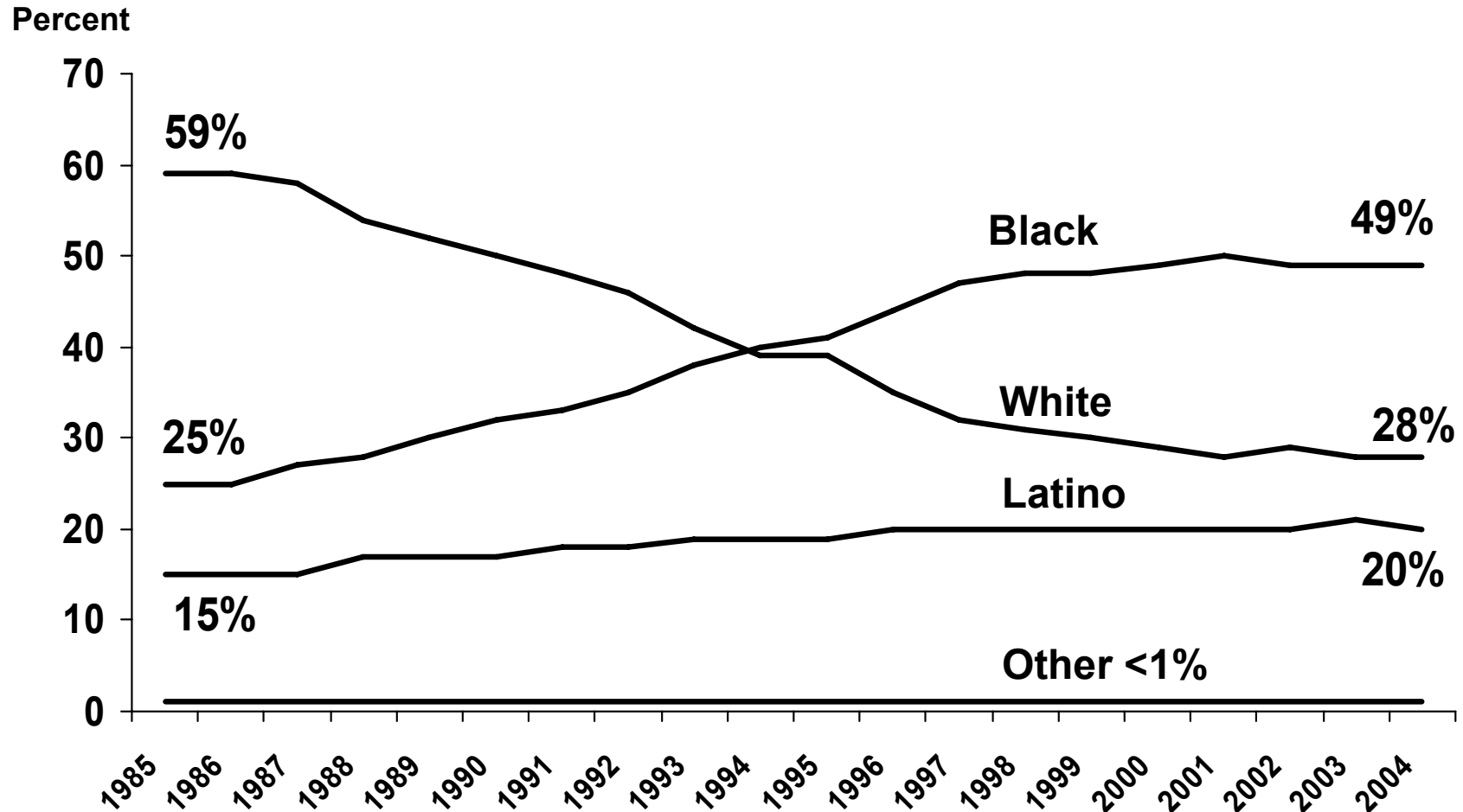
Source: CDC, Special Data Request for the Kaiser Family Foundation, 2006.

Section Two: Major Trends by Population and Other Key Characteristics

- The share of new AIDS cases among Black non-Hispanics has risen significantly over time, surpassing that of whites in 1994. Today, Blacks account for half of all new AIDS cases in the U.S. The share of AIDS cases among Latinos has also risen over time. AIDS case rates per 100,000 are highest among Blacks who, along with American Indian/Alaska Natives, were the only racial/ethnic groups with higher AIDS case rates in 2004 compared to 1990 (Figures 8 & 9).
- Due to more effective treatments and the drop in HIV incidence from its high level in the 1980s, annual AIDS incidence has fallen over time. However, not all groups have experienced the same rate of decline – cases among whites dropped the most between 1996 and 2004 (44%). Cases among Blacks dropped by 21% and cases among Latinos dropped by 27%. More recently, cases have started to rise again for all groups (Figure 10).
- While men continue to account for the majority of AIDS cases in the U.S., the share among women has risen over time, from 8% in 1985 to 27% in 2004. In addition, although the number of AIDS cases among men and women has dropped since their peak in the mid 1990s, the decrease has been less pronounced for women (13% for women compared to 35% for men). Cases have recently been on the rise for both men and women (Figures 11 & 12).
- HIV transmission patterns have shifted over time, with the share of cases attributable to heterosexual transmission rising from 3% in 1985 to 31% in 2004. Over that same period, the share of cases attributable to sex between men fell from 64% to 42% (although this still represents the single largest transmission category). The share of cases due to injection drug use was 19% in 1985, peaked at 31% in 1993, and was 22% in 2004 (Figure 13).
- Although HIV death rates have decreased over time for all racial/ethnic groups, disparities have become more pronounced, particularly for Black men and women (ages 25-44) compared to their white counterparts (Figures 14 & 15).

Figure 8

Proportion of AIDS Cases by Race/Ethnicity, 1985-2004



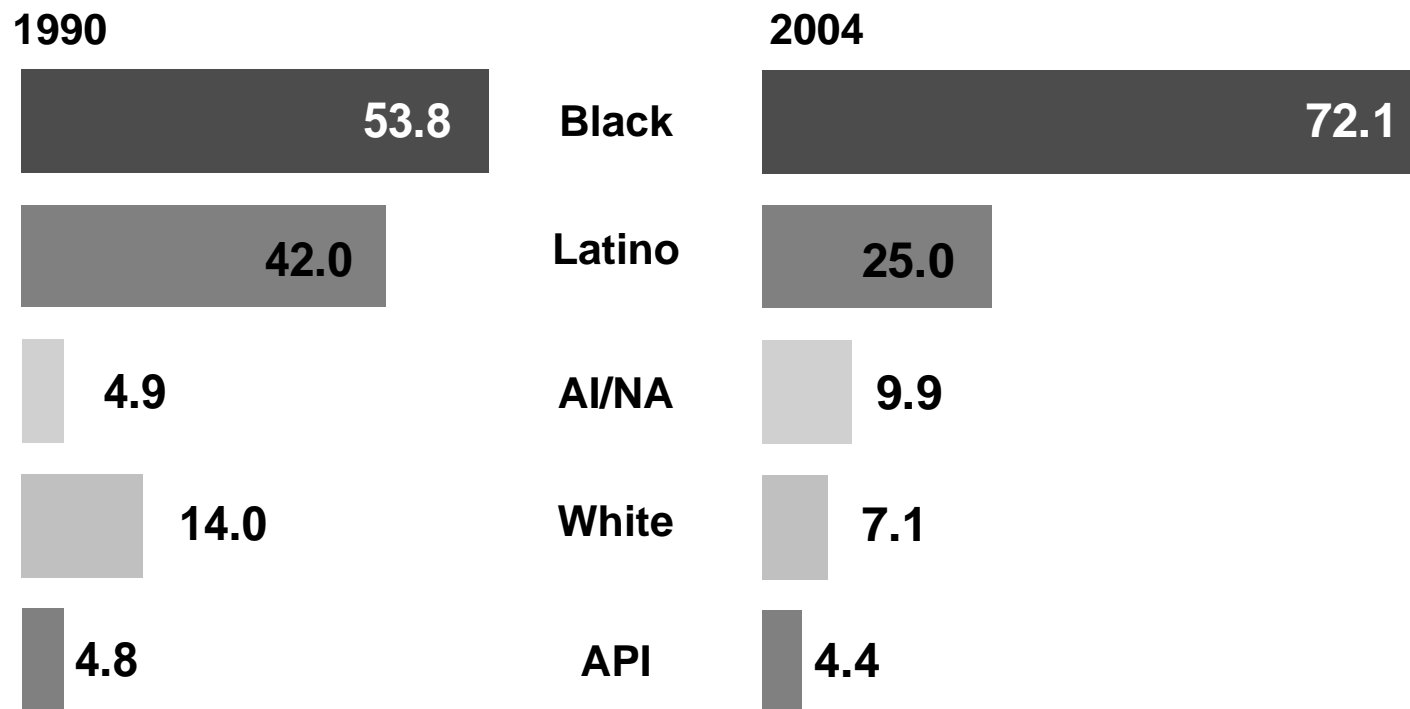
Note: AIDS cases are by year of diagnosis.

Source: CDC, Special Data Request for the Kaiser Family Foundation, 2006.

Figure 9

AIDS Case Rate per 100,000 Population by Race/Ethnicity, 1990 & 2004

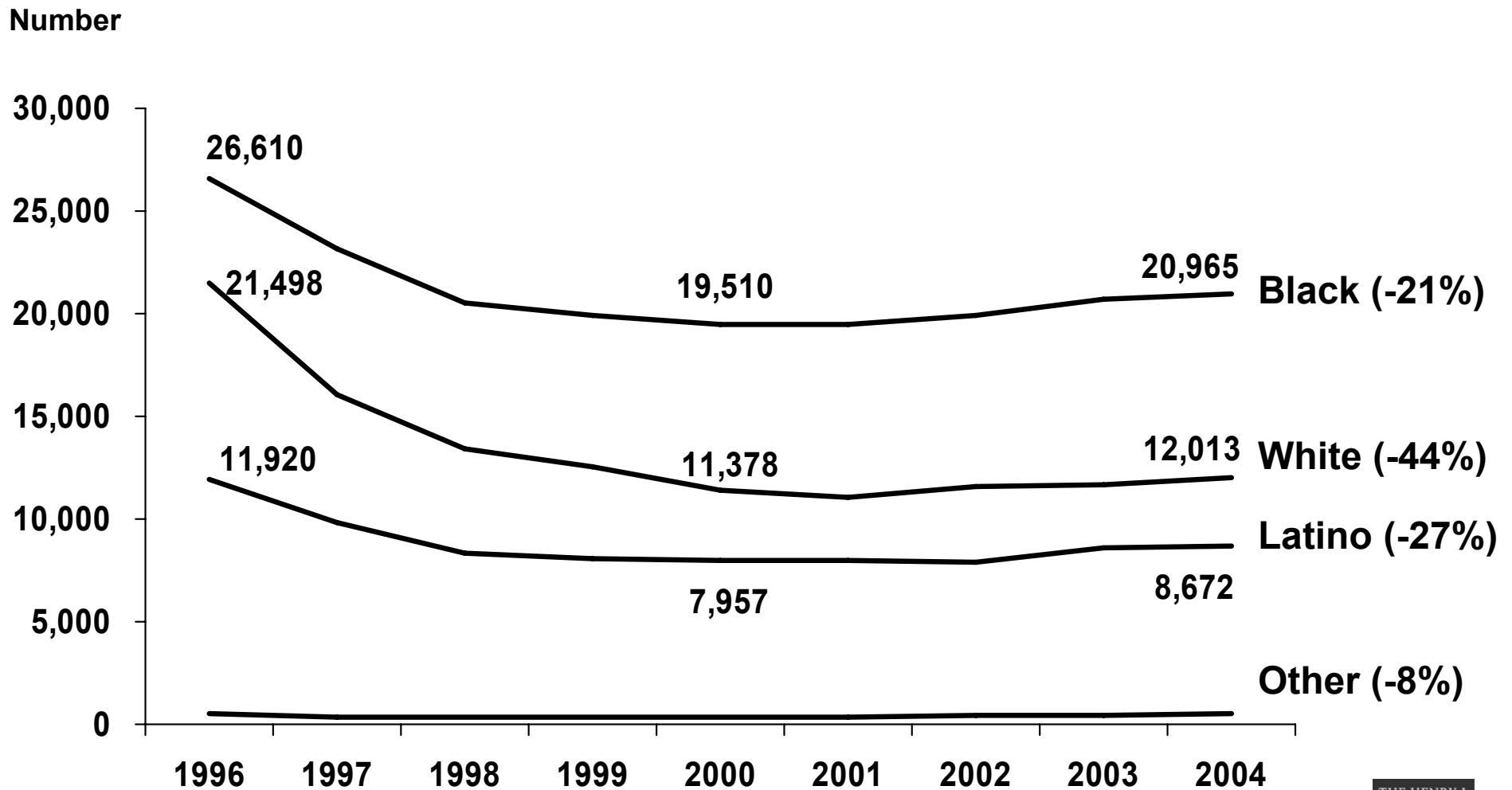
Rate per 100,000



Notes: Data for 2004 are estimates only and exclude cases from the U.S. dependencies, possessions, and associated nations, as well where state or area of residence is unknown. Sources: CDC, *HIV/AIDS Surveillance Report*, 1990; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 10

Annual Number of AIDS Cases and Percent Change by Race/Ethnicity, 1996-2004

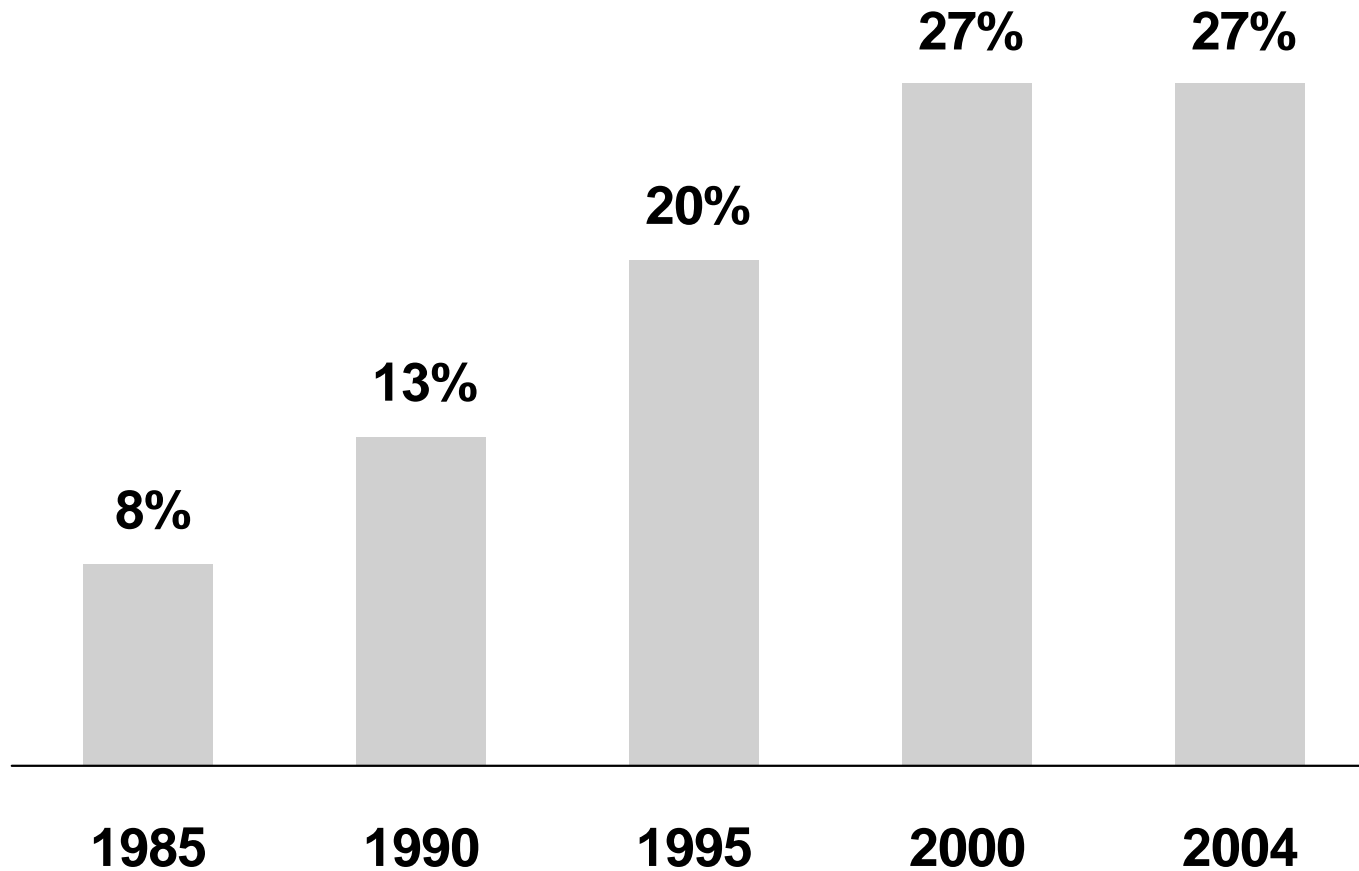


Note: AIDS cases are by year of diagnosis.

Sources: CDC, *HIV/AIDS Surveillance Report*, Vol. 13, No 2; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 11

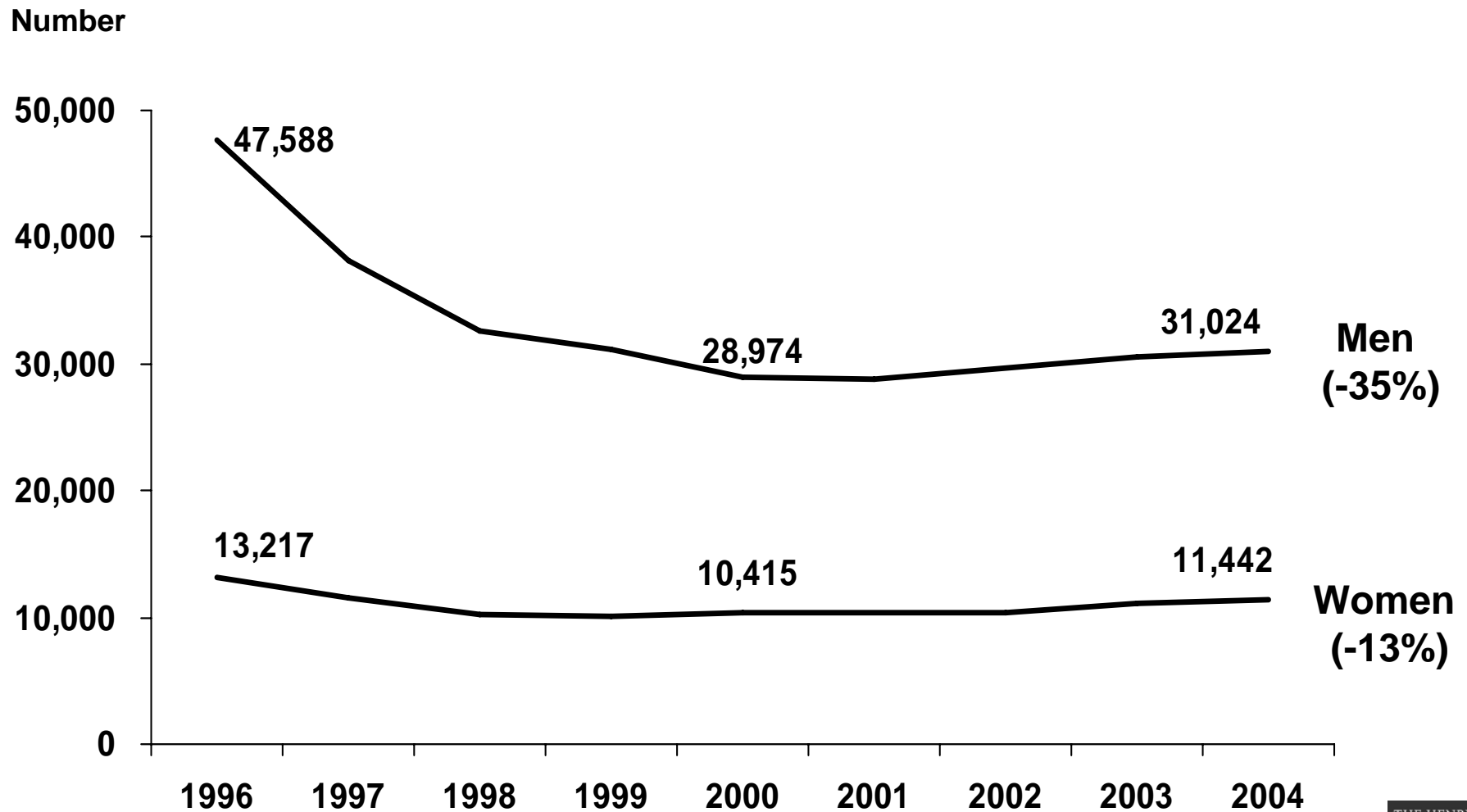
Women as a Share of New AIDS Cases, 1985 - 2004



Note: AIDS cases are by year of diagnosis.
Source: CDC, Special Data Request for the Kaiser Family Foundation, 2006.

Figure 12

Annual Number of AIDS Cases and Percent Change Among Men and Women, 1996-2004

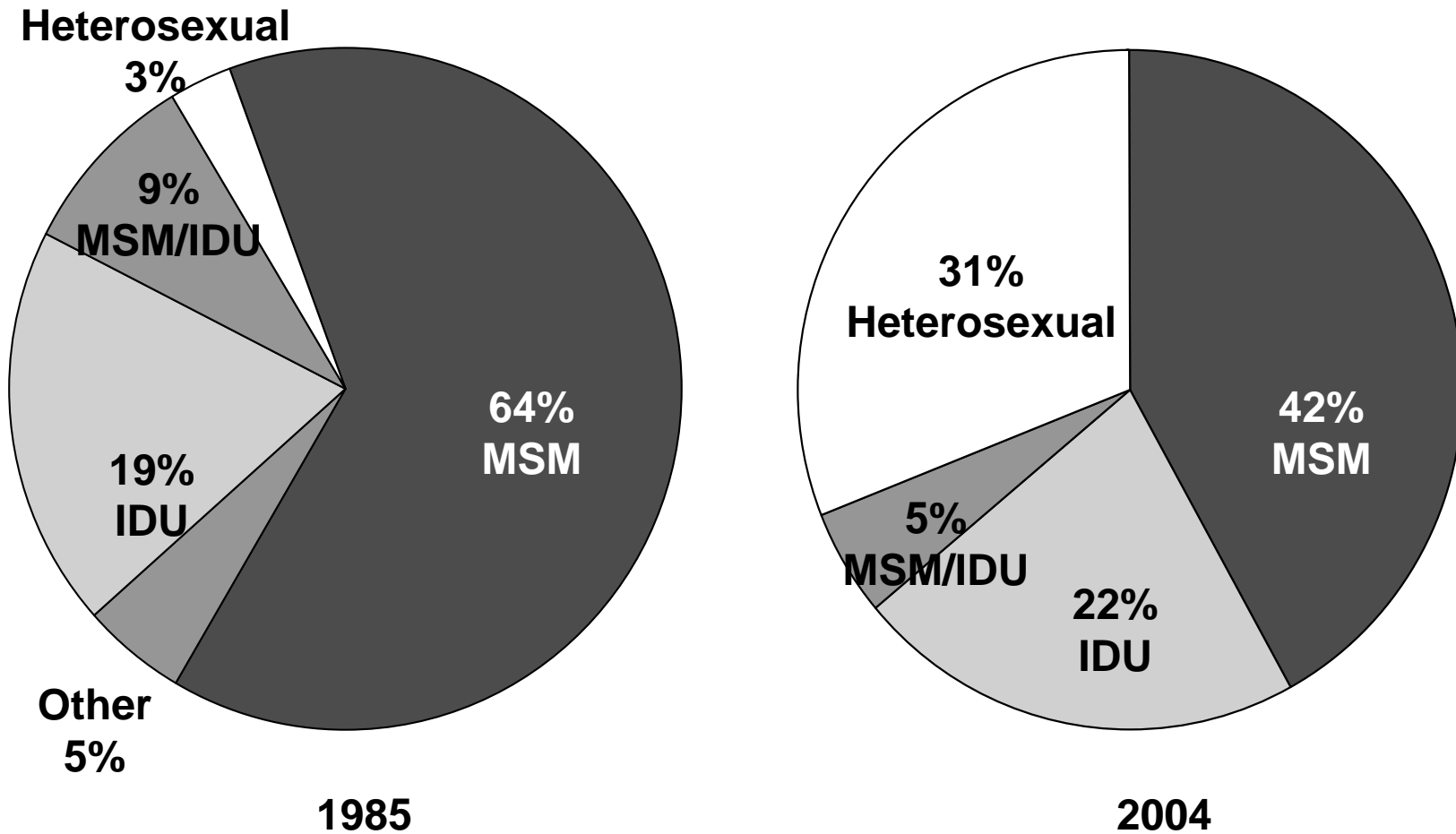


Note: AIDS cases are by year of diagnosis.

Sources: CDC, *HIV/AIDS Surveillance Report*, Vol. 13, No 2; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 13

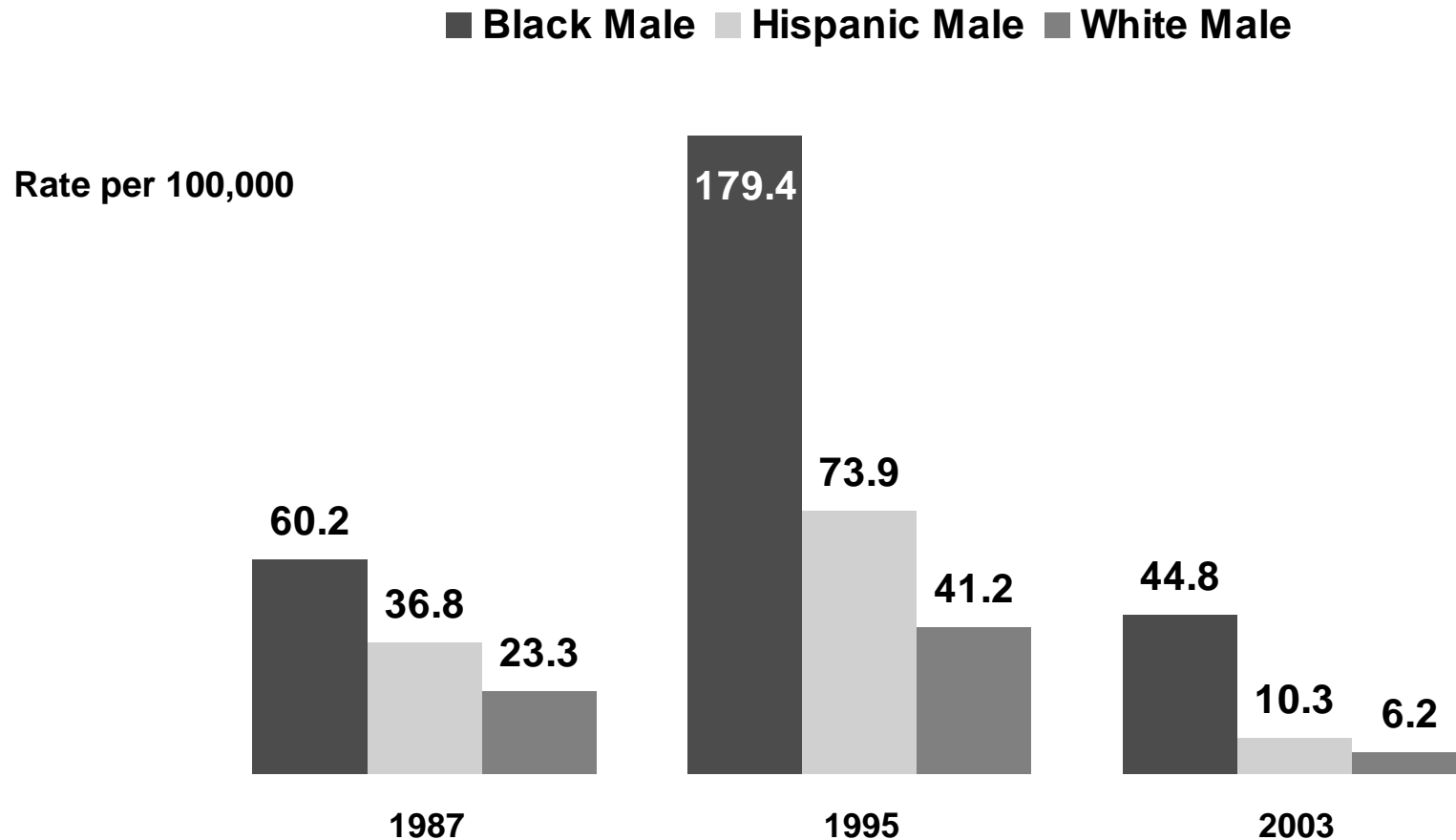
Trends in HIV Transmission, 1985-2004



Source: CDC, Special Data Request for the Kaiser Family Foundation, 2006.

Figure 14

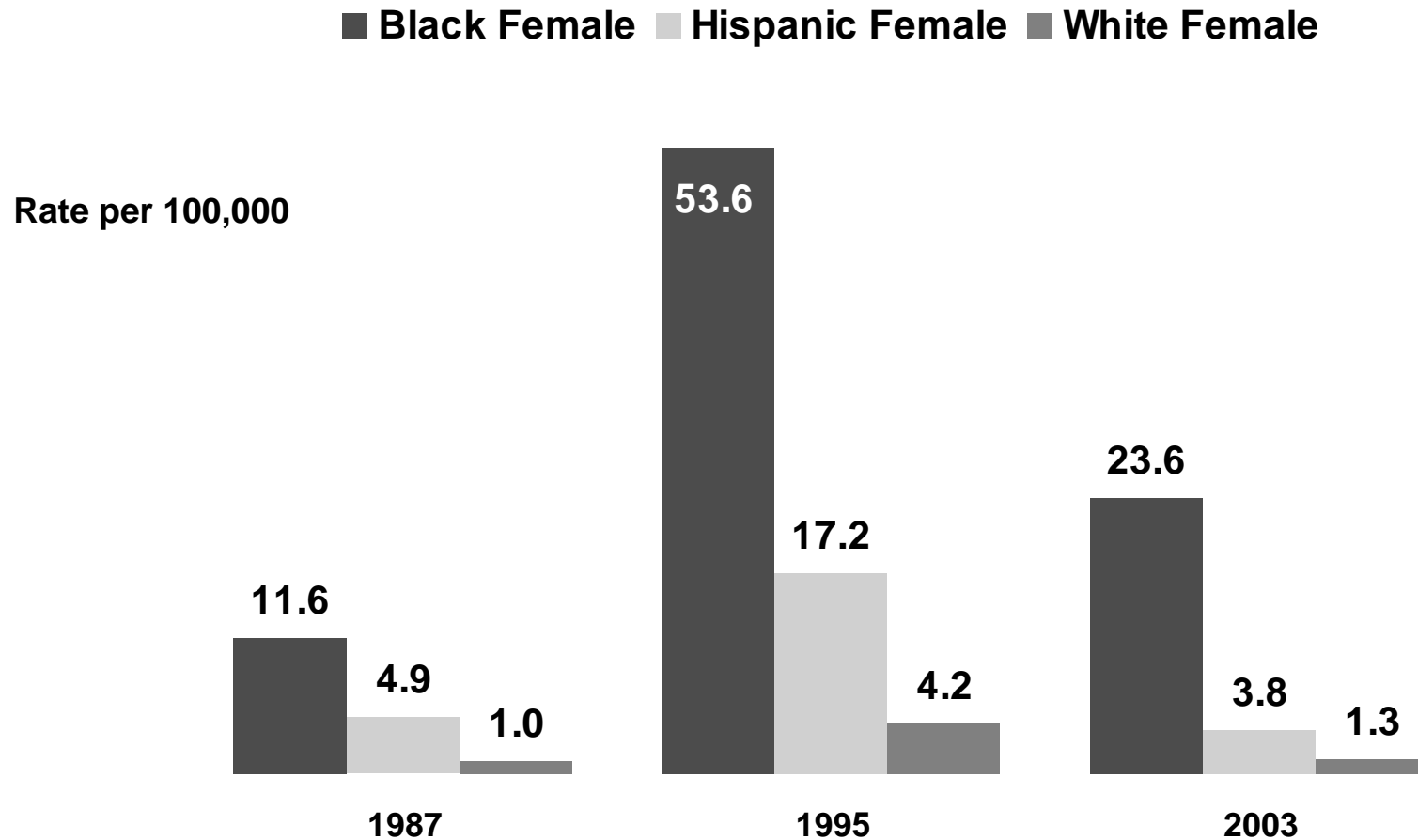
HIV Death Rates per 100,000 for Men, ages 25-44, by Race/Ethnicity, 1987-2003



Note: Data represent deaths due to HIV.
Source: NCHS, *Health, United States, 2005*.

Figure 15

HIV Death Rates per 100,000 for Women, ages 25-44, by Race/Ethnicity, 1987-2003



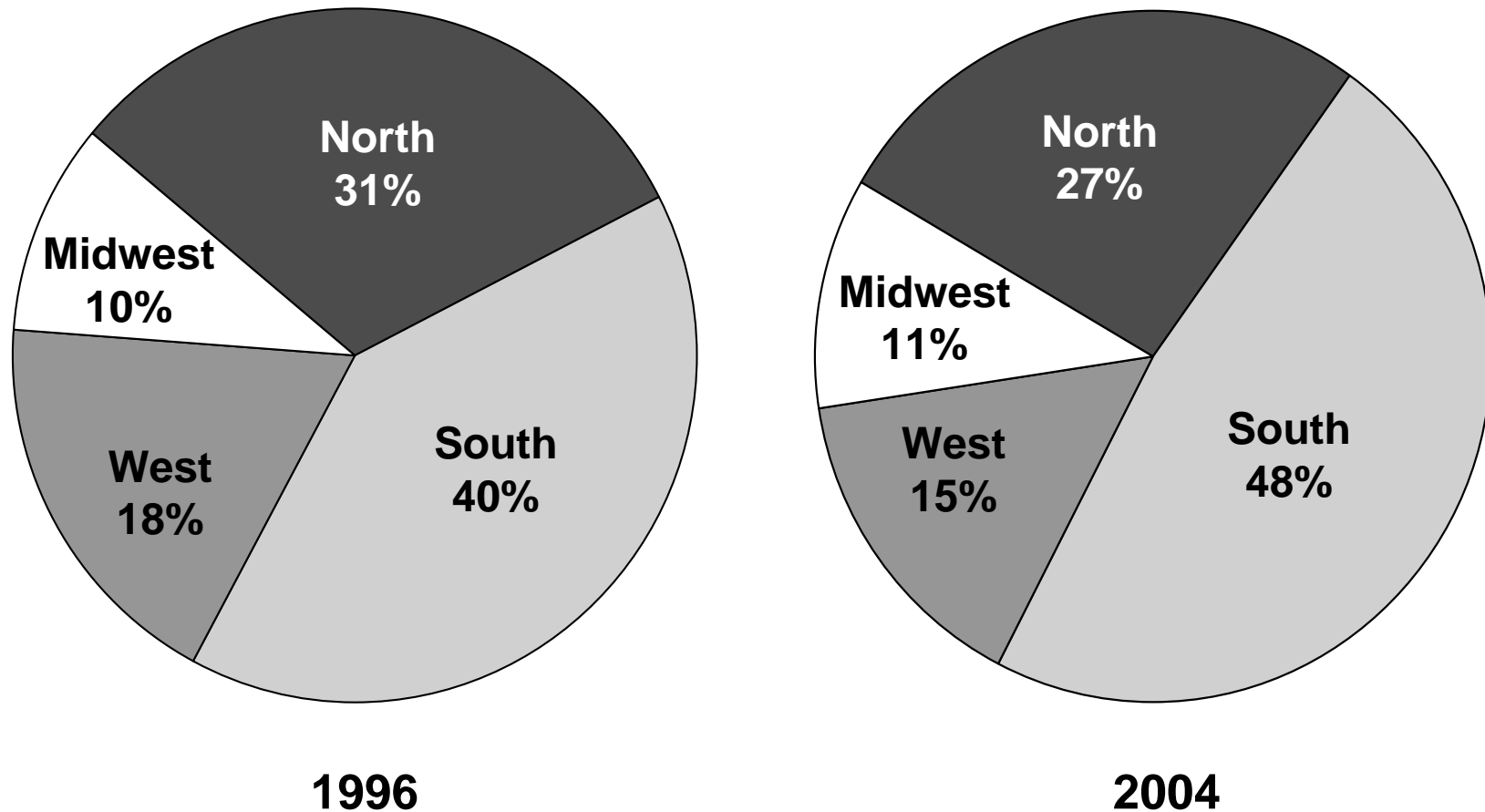
Note: Data represent deaths due to HIV.
Source: NCHS, *Health, United States, 2005*.

Section Three: Major Trends by Region, State, and Metropolitan Area

- Over time, there have been regional shifts in the HIV/AIDS epidemic. The share of AIDS cases in the U.S. South has increased, rising from 40% of cases in 1996 to almost half (48%) of cases in 2004. The Northeast and West each accounted for smaller shares in 2004 compared to the earlier period (Figure 16).
- While the number of AIDS cases has declined across all regions, the Western region experienced the greatest percent decline (-43%) and the South experienced the least (-16%). Cases in the Northeast declined by 40% and cases in the Midwest by 25% (Figure 17).
- Despite the growing share of AIDS cases occurring in the South, the Northeast had the highest concentration of AIDS cases, as measured by AIDS case rate per 100,000, in both 1996 and 2004 (Figure 18).
- There have also been shifts at the state and local level. Nine of the 10 states accounting for the greatest number of AIDS cases in 1987 remained on the top 10 list in 2004, although their relative order had shifted. There has been a bigger shift by AIDS case rate per 100,000, with only 6 of the top 10 states in 1987 remaining in the top 10 by 2004 (Figures 19 & 20).
- Similarly, nine of the 10 metropolitan areas accounting for the greatest number of AIDS cases in 1987 were in the top 10 in 2004; as with states, their relative order has shifted over time. Only 3 metropolitan areas with the top 10 highest AIDS case rates per 100,000 in 1987 remained in the top 10 in 2004 (Figures 21 & 22).

Figure 16

Proportion of New AIDS Cases by Region, 1996 & 2004

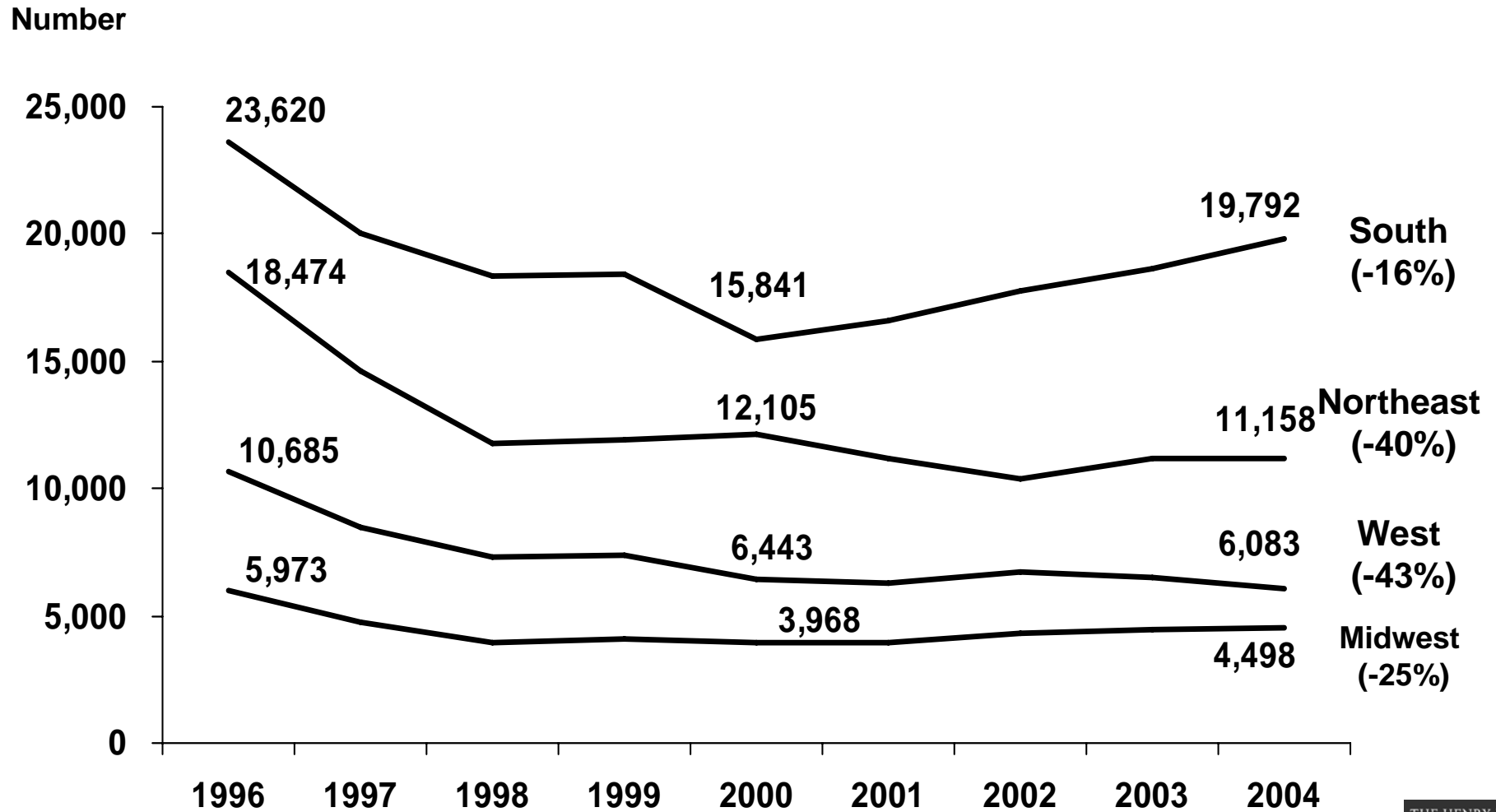


Notes: AIDS cases are by year of diagnosis.

Sources: CDC, *HIV/AIDS Surveillance Report*, Vol. 13, No 2; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 17

Number of AIDS Cases and Percent Change by Region, 1996-2004



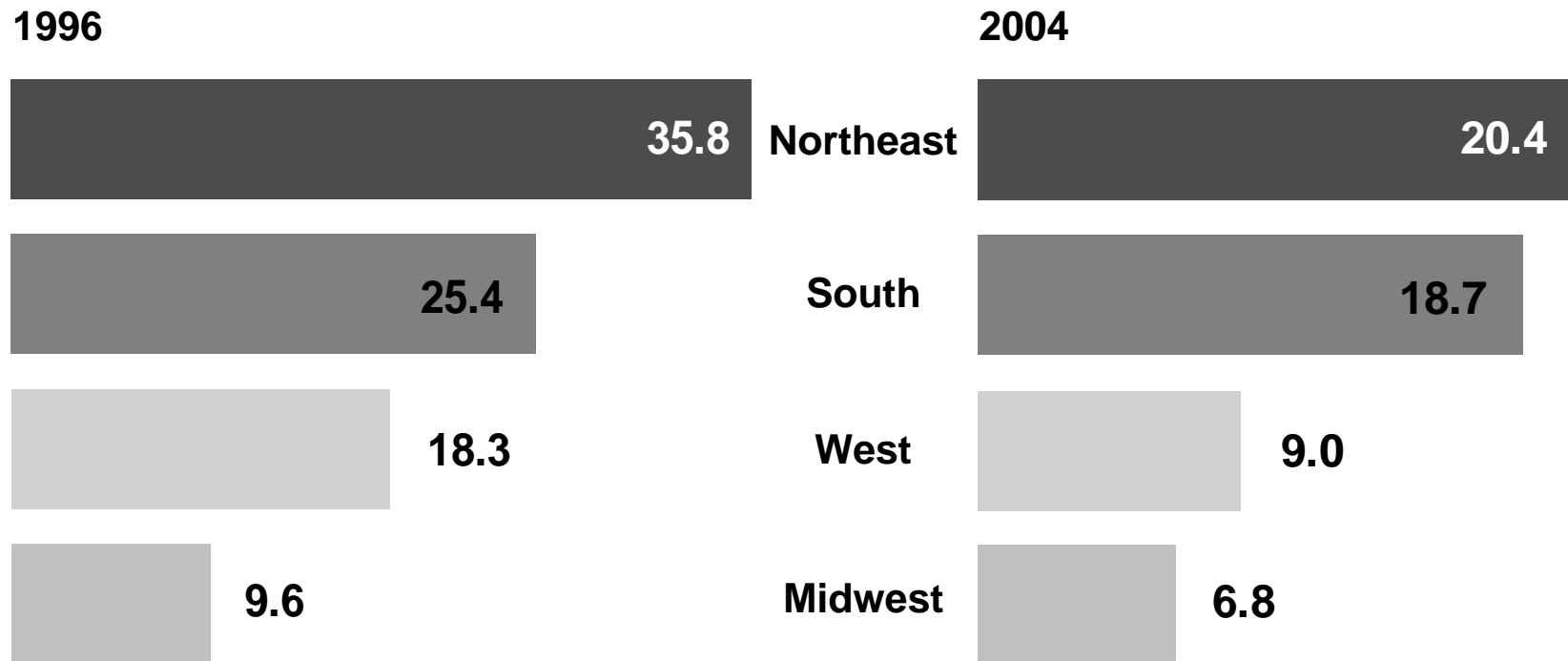
Notes: AIDS cases are by year of diagnosis.

Sources: CDC, *HIV/AIDS Surveillance Report*, Vol. 13, No 2; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 18

AIDS Case Rate per 100,000 Population by Region, 1996 & 2004

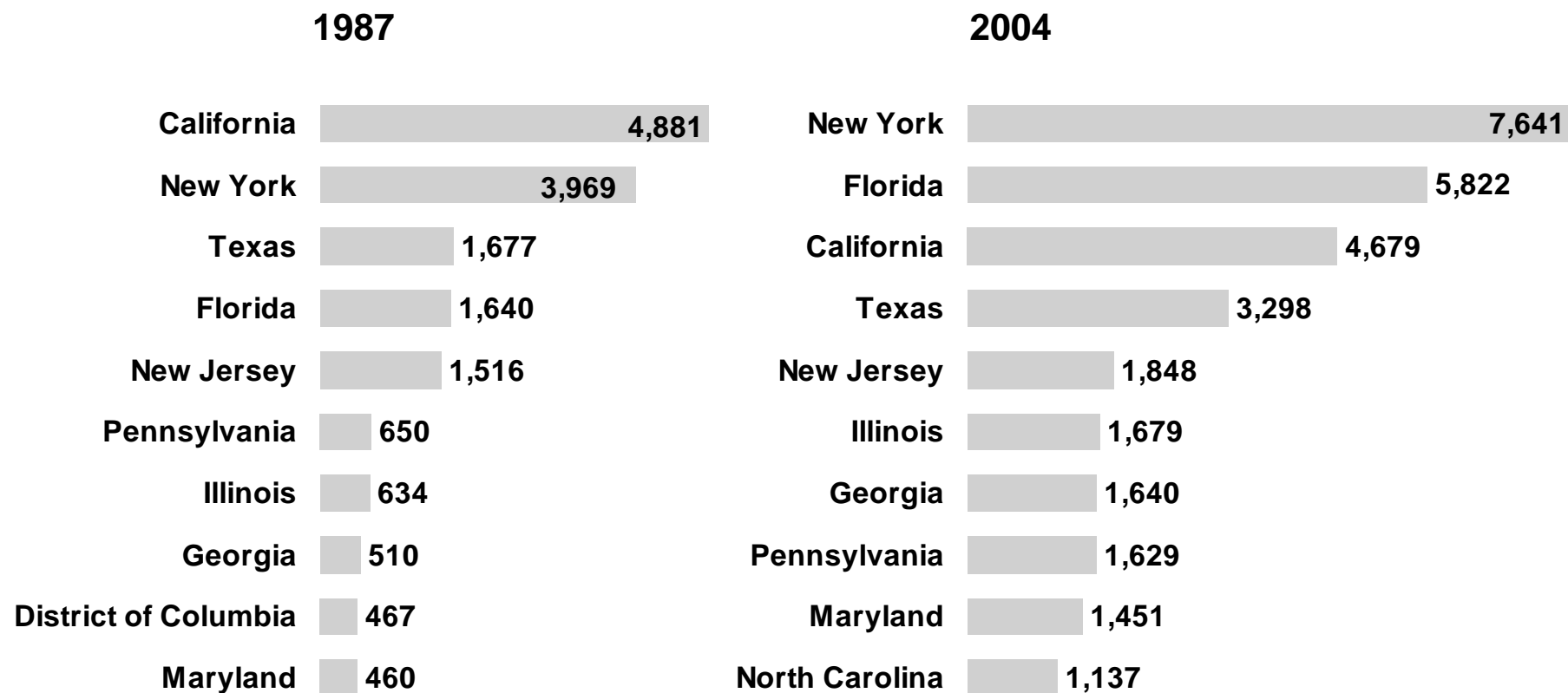
Rate per 100,000



Note: Data for 2004 are estimates only. Sources: Kaiser Family Foundation analysis of data from: CDC, *HIV/AIDS Surveillance Report*, Vol. 13, No 2; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005; U.S. Census Bureau, Population Estimates Program.

Figure 19

Top 10 States by Number of Reported AIDS Cases, 1987 & 2004

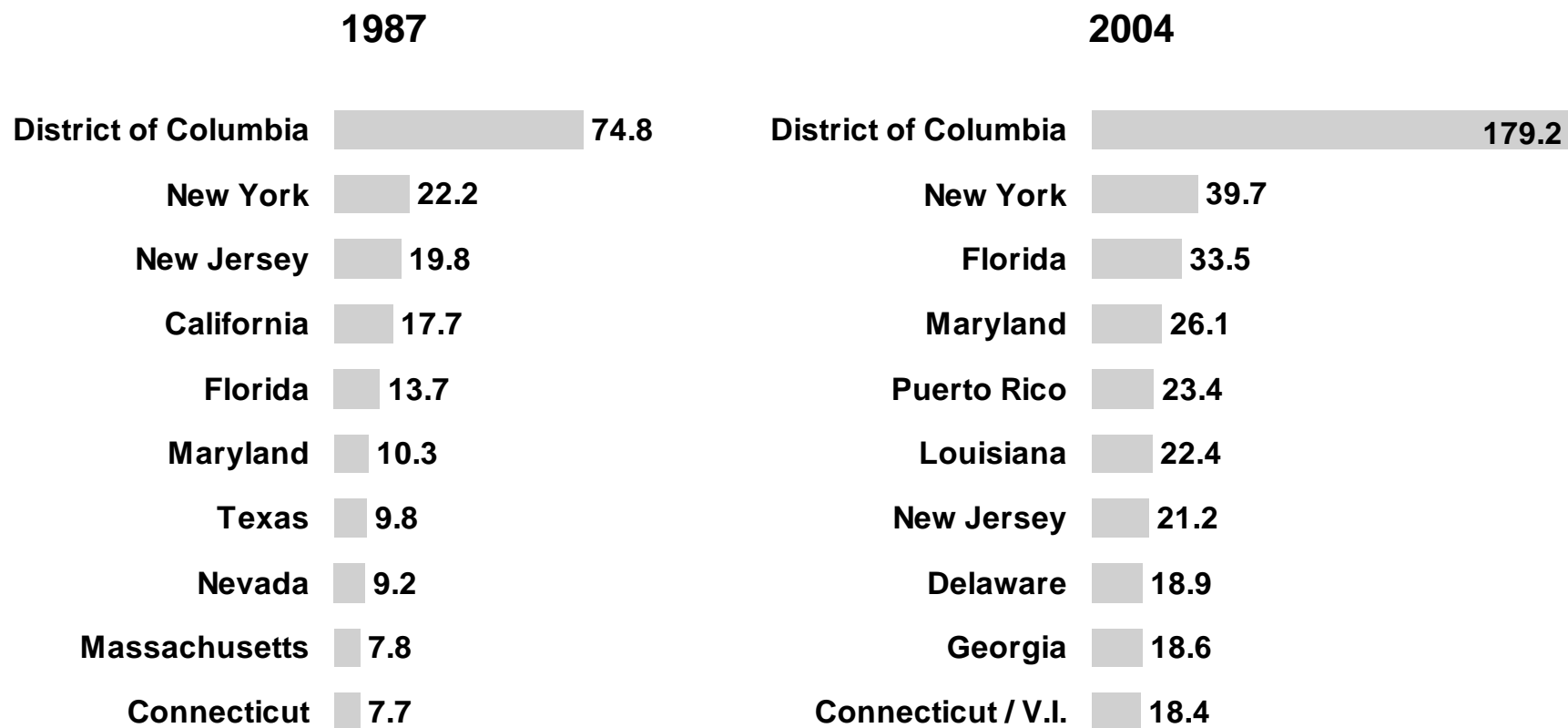


Note: AIDS cases are by year of report.

Sources: CDC, *HIV/AIDS Surveillance Report*, January 1989; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 20

Top 10 States by AIDS Case Rate per 100,000, 1987 & 2004

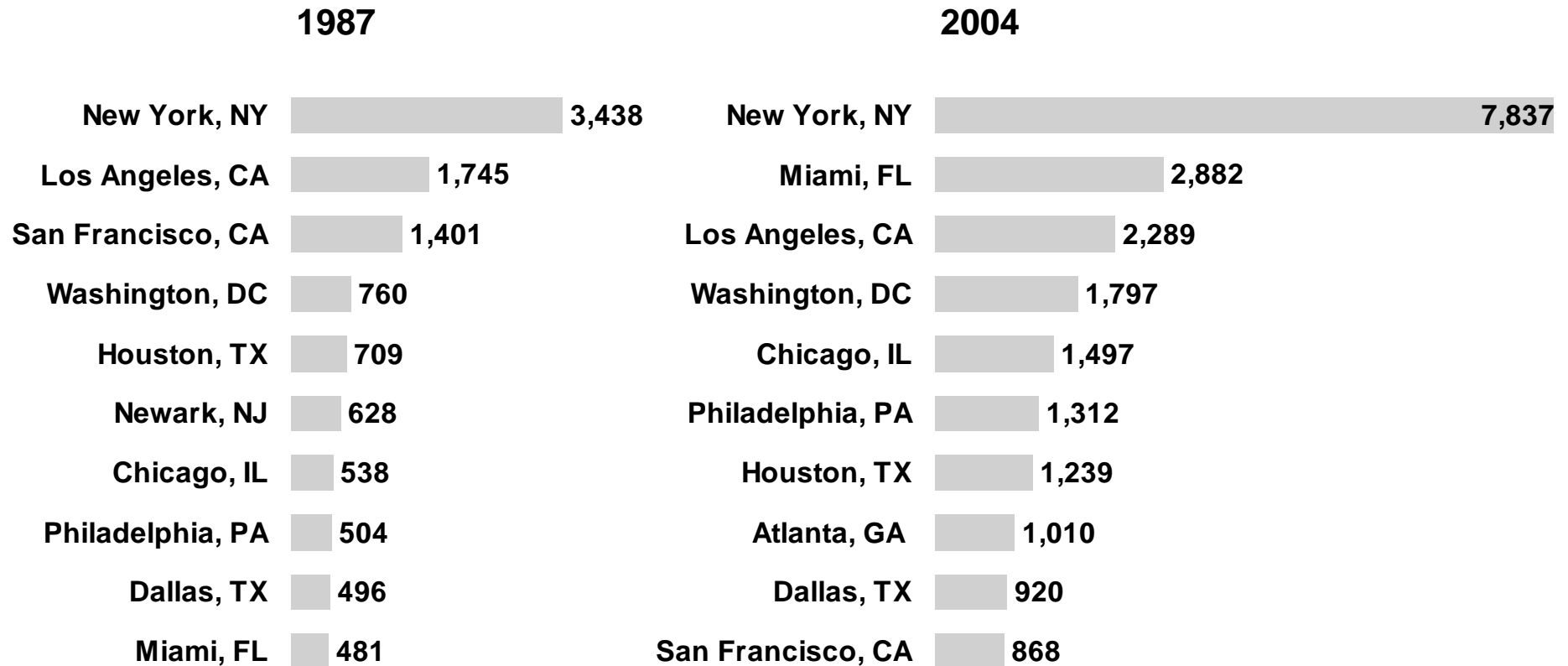


Note: AIDS cases are by year of report; V.I. is Virgin Islands.

Sources: CDC, *HIV/AIDS Surveillance Report*, January 1989; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 21

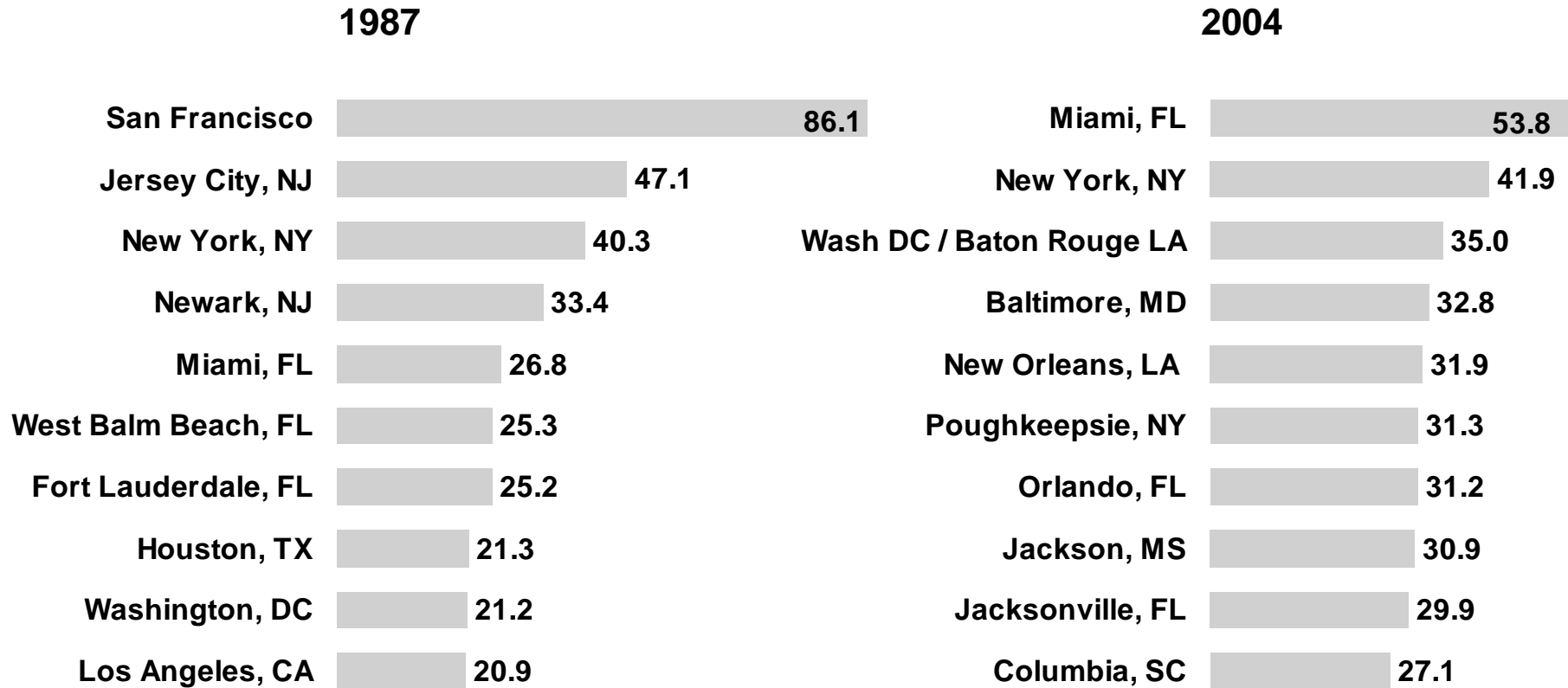
Top 10 Metro Areas by Number of Reported AIDS Cases, 1987 & 2004



Note: AIDS cases are by year of report; Data are for Metropolitan Statistical Areas (MSAs) as defined by the Office of Management and Budget; MSA definitions may have changed over time and therefore data may not be directly comparable; MSAs may contain more than one county and may cross state lines. For example, the Washington DC MSA spans three states, and includes the District of Columbia.
 Sources: CDC, *HIV/AIDS Surveillance Report*, January 1989; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Figure 22

Top 10 Metro Areas by AIDS Case Rate per 100,000, 1987 & 2004



Note: AIDS cases are by year of report; Data are for Metropolitan Statistical Areas (MSAs) as defined by the Office of Management and Budget; MSA definitions may have changed over time and therefore data may not be directly comparable; MSAs may contain more than one county and may cross state lines. For example, the Washington DC MSA spans three states, and includes the District of Columbia.

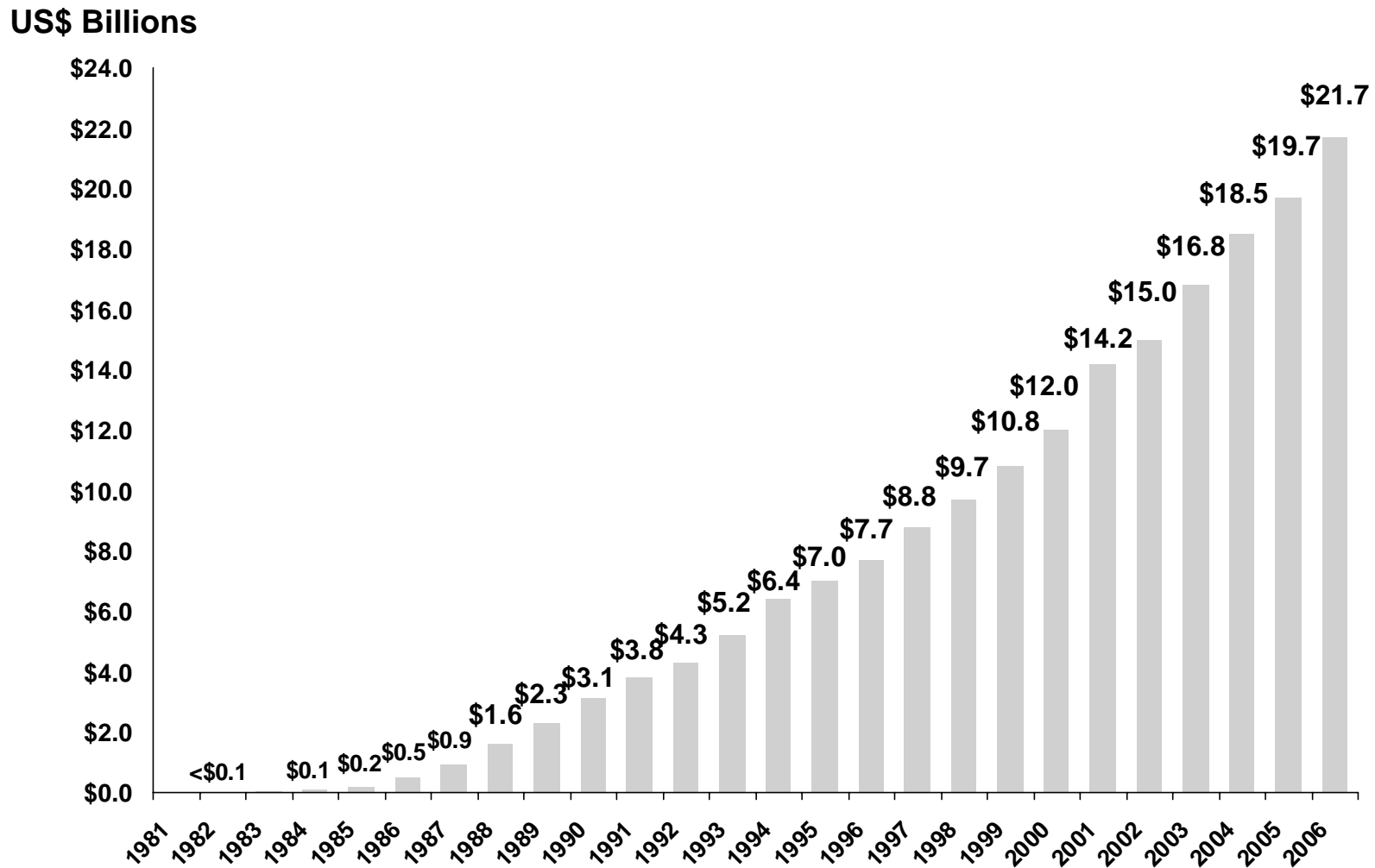
Sources: CDC, *HIV/AIDS Surveillance Report*, January 1989; CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.

Section Four: Major Trends in Federal Funding for HIV/AIDS

- Federal funding to address the newly emerging AIDS epidemic began soon after the first cases of AIDS were reported, with \$8 million allocated in FY 1982. Funding has increased significantly over time, reaching \$1.6 billion by 1988, \$10 billion by 1998, and \$22 billion by FY 2006 (Figure 23).
- Federal funding for HIV/AIDS has shifted by category over the course of the epidemic. In the earliest years, most funding was for HIV research, as scientists sought to identify the causal agent of the new disease, and develop diagnostic and therapeutic options. Funding for care and treatment quickly began to rise and, by 1990, represented the same share as research. Funding for the global epidemic first began in the late 1980s and was at 3% in 1990. By 2006, domestic care and treatment accounted for the majority of federal funding for HIV/AIDS (58%). Global funding accounted for the next largest share (15%). Domestic prevention funding accounted for the smallest share (4%) (Figure 24).
- Funding for HIV research has risen significantly over time, and is now at just over \$2 billion, although its rate of increase has slowed recently. Funding for domestic HIV prevention at the Centers for Disease Control and Prevention, which accounts for the bulk of federal funding for domestic prevention efforts, has also risen over time but it too has slowed in recent years, and decreased between FY 2005 and FY 2006 (Figures 25 & 26).
- Spending by federal Medicaid on care and treatment for people with HIV/AIDS in the U.S. represents the greatest share of HIV/AIDS care funding, and has risen significantly and steadily over time. Medicare accounts for the second largest share, and has also risen steadily over time (Figures 27 & 28).
- Funding for the Ryan White CARE Act, first enacted in 1990, now accounts for the third largest share of federal care funding. It has not risen as steeply as Medicaid and Medicare spending and, in recent years, has remained relatively flat (Figure 29).

Figure 23

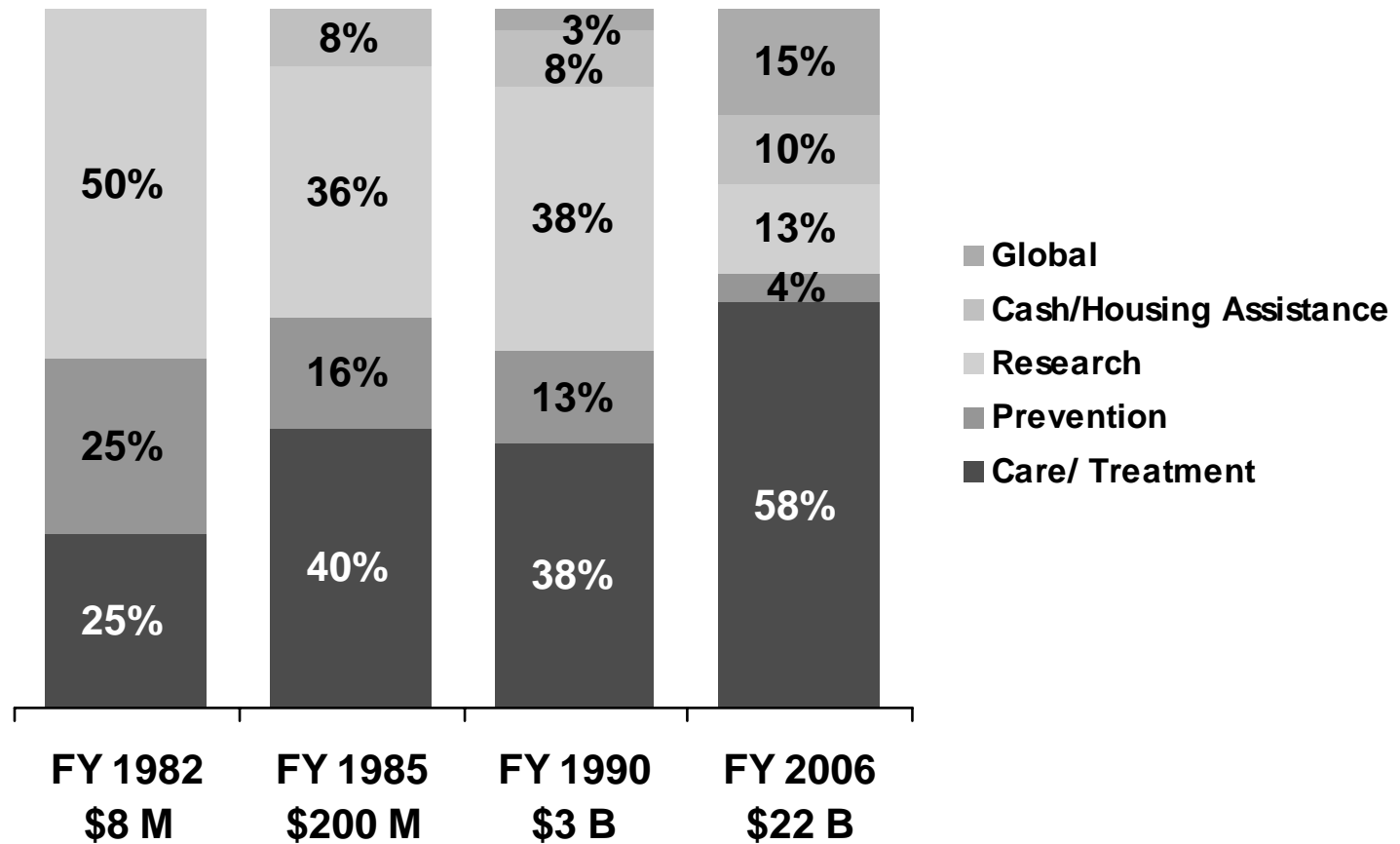
Federal Funding for HIV/AIDS, FY 1981-2006



Source: Kaiser Family Foundation analysis of data from the White House Office of Management and Budget, Congressional Appropriations bills, HHS Office of Budget, and Congressional Research Service.

Figure 24

Federal Funding for HIV/AIDS by Major Category, FY 1982-2006

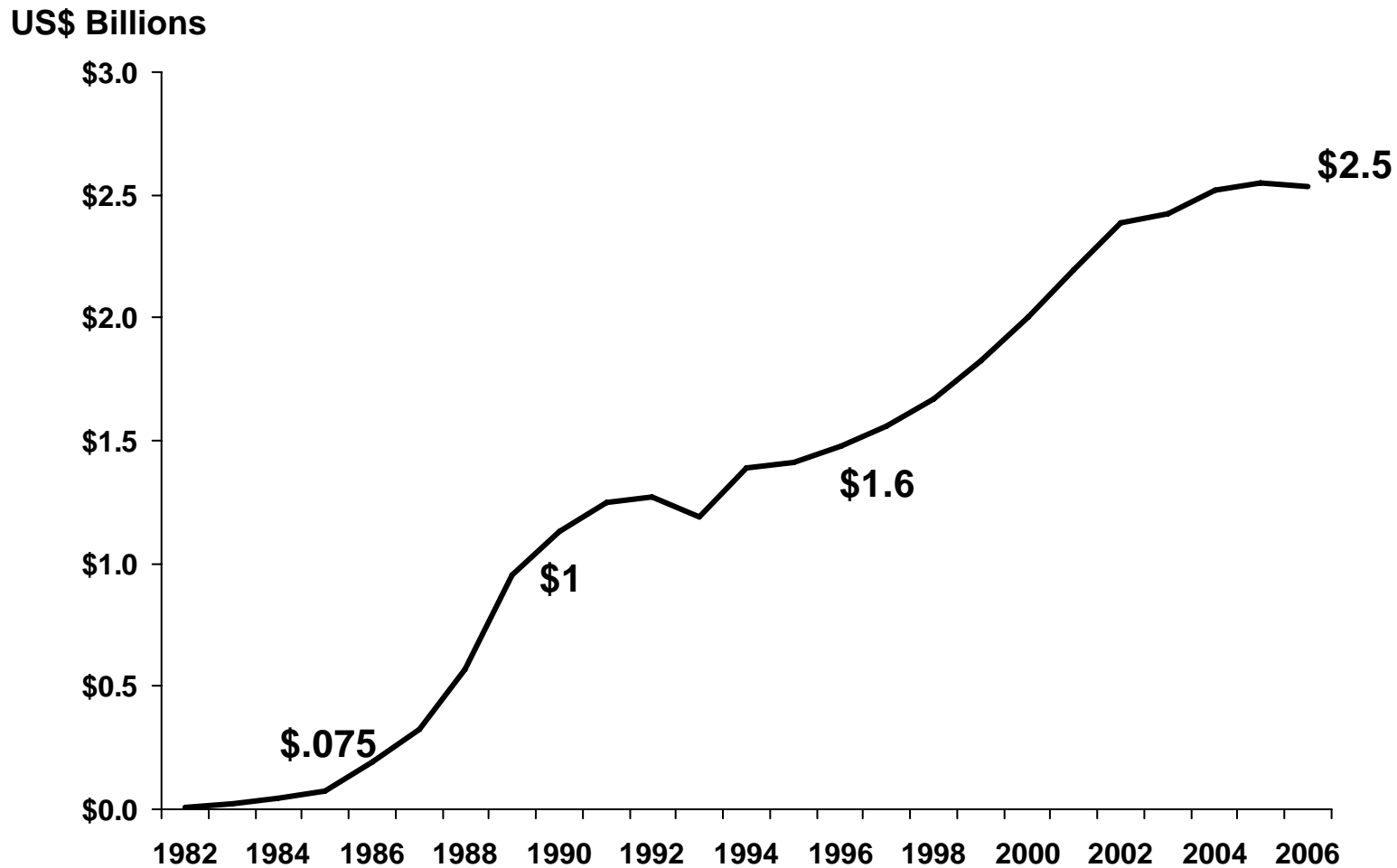


Notes: Funding for international research attributed to global category.

Source: Kaiser Family Foundation analysis of data from the White House Office of Management and Budget, Congressional Appropriations bills, HHS Office of Budget, and Congressional Research Service.

Figure 25

Federal Funding for Domestic HIV Research, FY 1982-2006

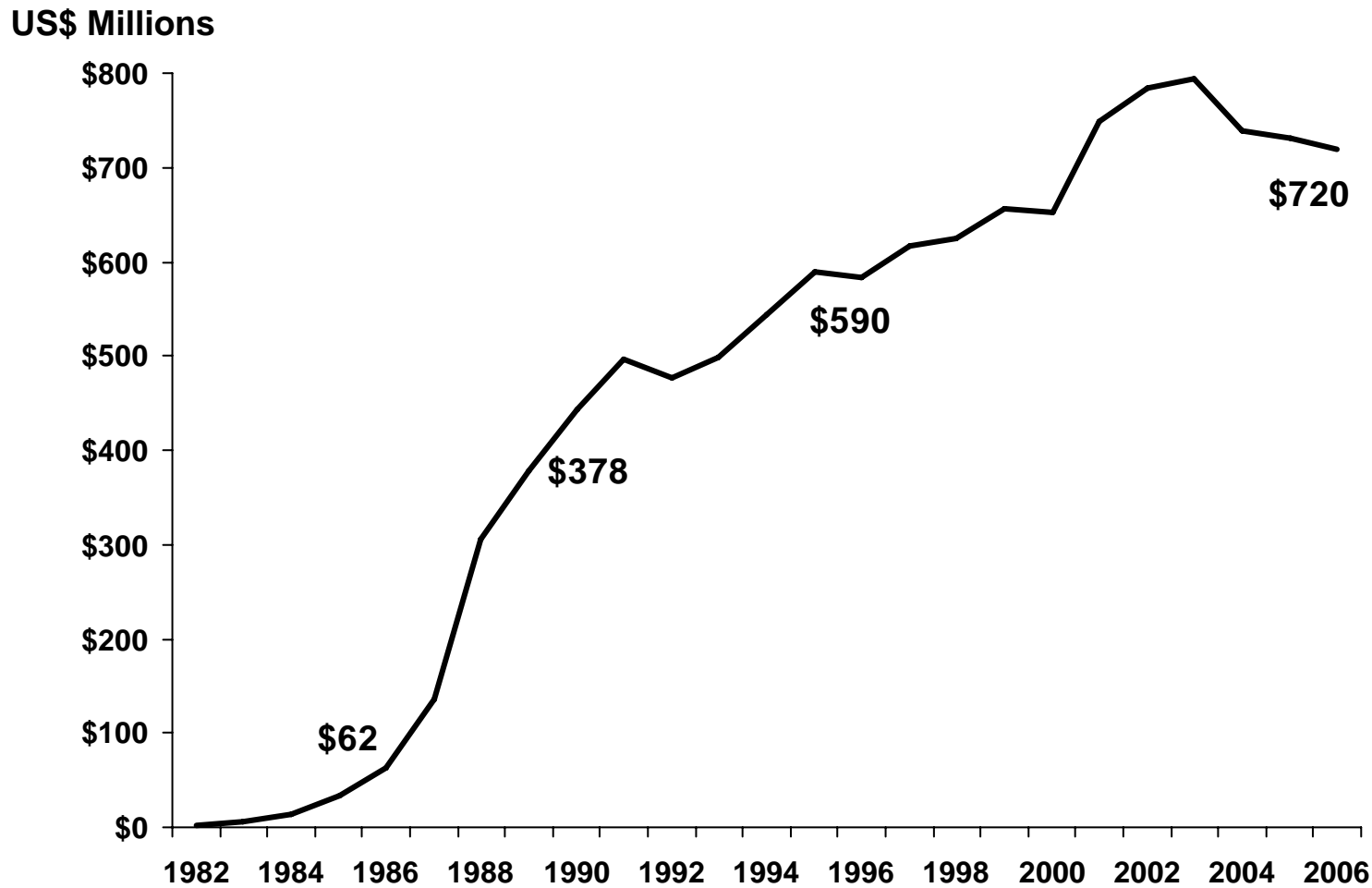


Note: Represents funding not attributable to international efforts by NIH.

Source: Kaiser Family Foundation analysis of data from the White House Office of Management and Budget, Congressional Appropriations bills, HHS Office of Budget and Congressional Research Service.

Figure 26

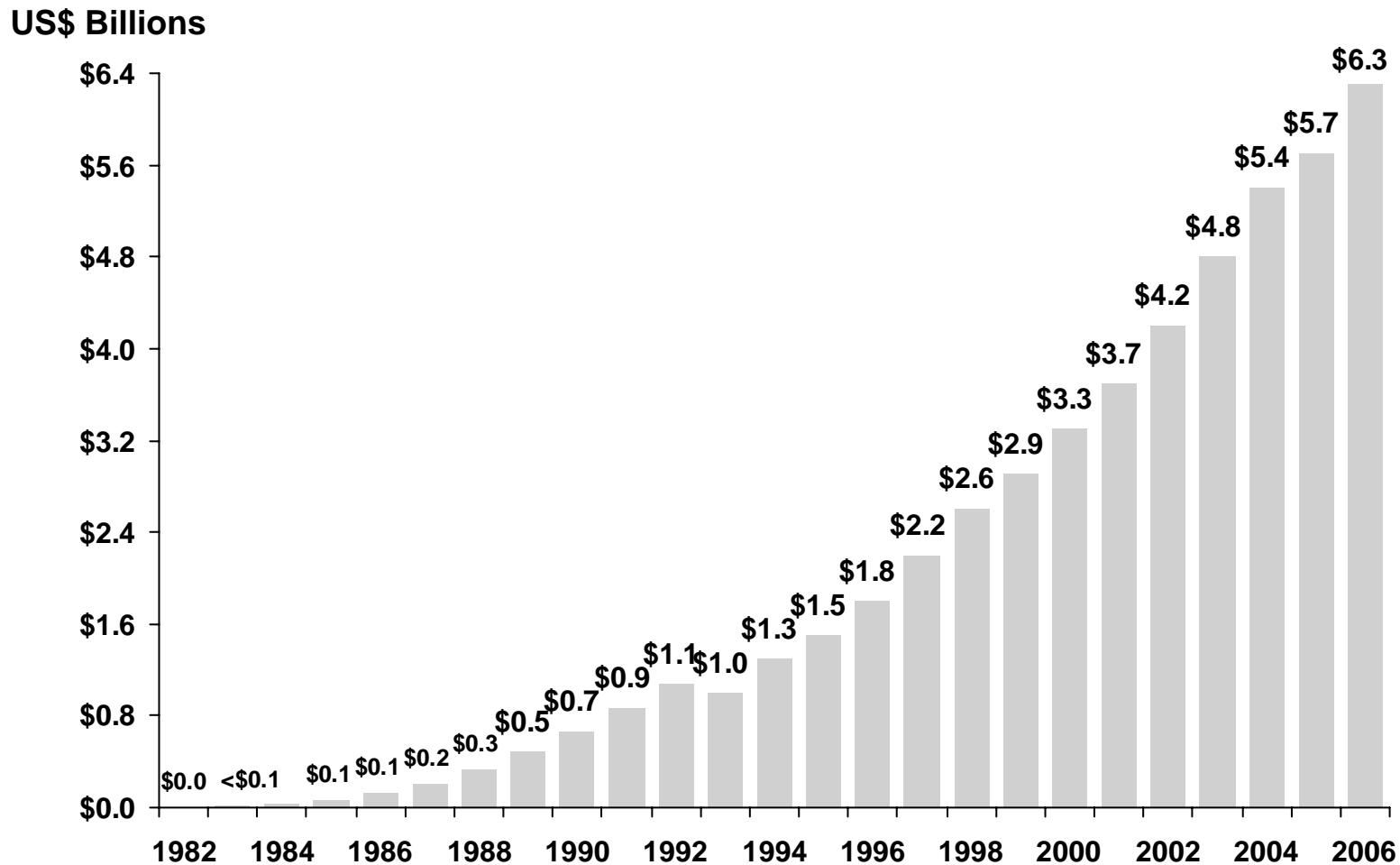
Federal Funding for Domestic HIV Prevention at CDC, FY 1982-2006



Source: Kaiser Family Foundation analysis of data from the CDC.

Figure 27

Medicaid Spending on HIV/AIDS, FY 1982-2006 (federal only)

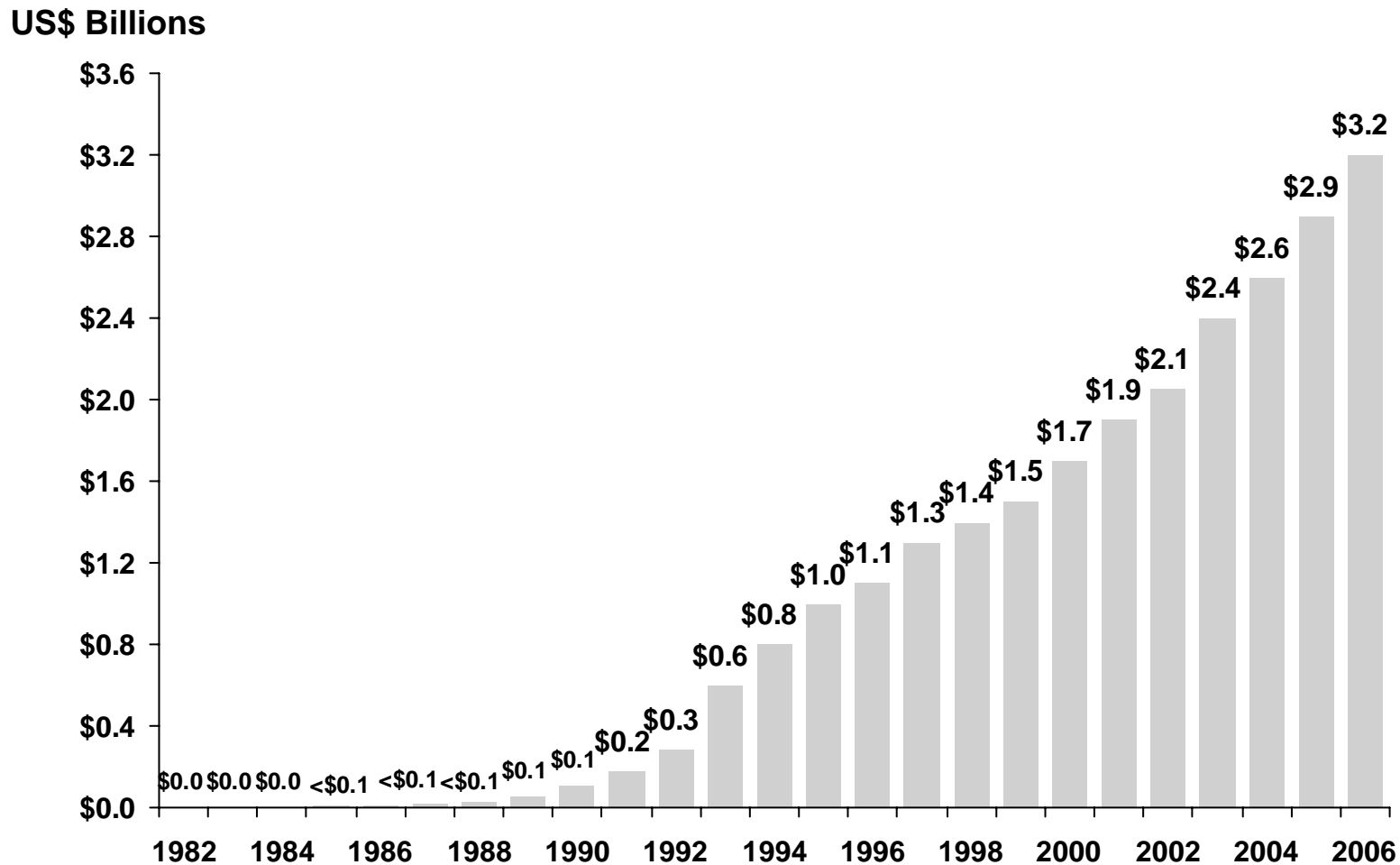


Notes: Data are estimates only; Medicaid is jointly financed by the federal government and the states and the federal government matches state spending at a rate ranging from 50% to 77%. In FY 2006, state Medicaid spending on HIV/AIDS is estimated to total \$5.1 billion.

Source: Kaiser Family Foundation analysis of data from the White House Office of Management and Budget, Congressional Appropriations bills, HHS Office of Budget, Centers for Medicare and Medicaid Services, and Congressional Research Service.

Figure 28

Medicare Spending on HIV/AIDS, FY 1982-2006

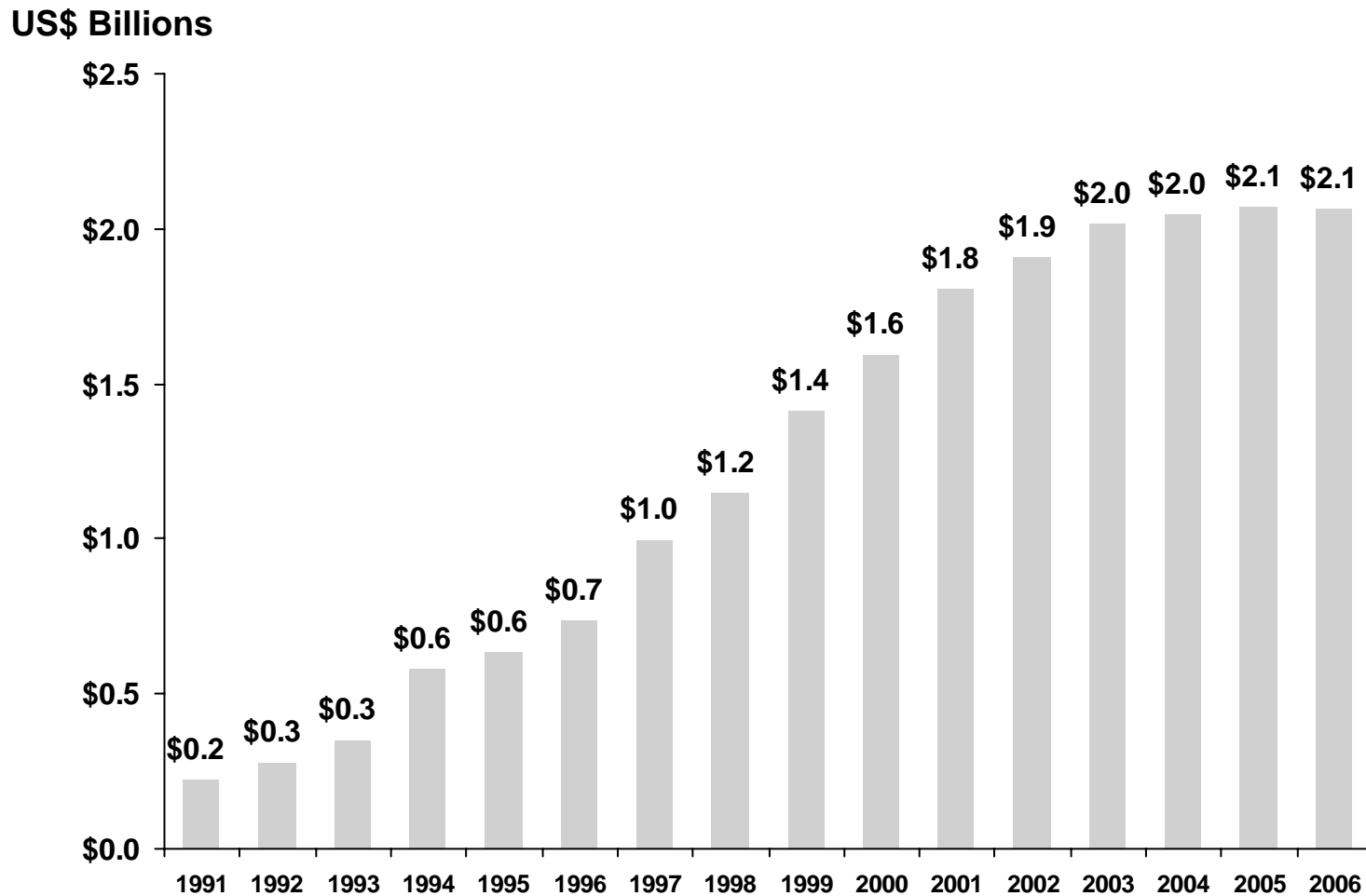


Note: Data are estimates only.

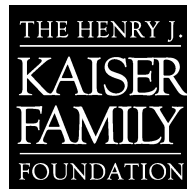
Source: Kaiser Family Foundation analysis of data from the White House Office of Management and Budget, Congressional Appropriations bills, HHS Office of Budget, Centers for Medicare and Medicaid Services, and Congressional Research Service.

Figure 29

Funding for the Ryan White Care Act, FY 1991-2006



Note: The Ryan White CARE Act was enacted in 1990, with funding beginning in the following fiscal year.
Source: Health Resources and Services Administration, HIV/AIDS Bureau.



The Henry J. Kaiser Family Foundation
2400 Sand Hill Road
Menlo Park, CA 94025
Phone: (650) 854-9400 Fax: (650) 854-4800

Washington Office:
1330 G Street, NW
Washington, DC 20005
Phone: (202) 347-5270 Fax: (202) 347-5274

www.kff.org

Prepared by Jennifer Kates of the Kaiser Family Foundation.
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