

21. HIV

Number	Objective
1	AIDS incidence
2	HIV incidence
3	Condom use
4	Screening for STDs and immunization for hepatitis B
5	HIV counseling and testing for injecting drug users
6	HIV counseling and testing for prison inmates
7	Knowledge of HIV serostatus among people with tuberculosis
8	Classroom education on HIV and STDs
9	Compliance with Public Health Service treatment guidelines
10	Mortality due to HIV infection
11	Years of healthy life following HIV diagnosis
12	Perinatally acquired HIV infection
13	Treatment for injecting drug use

HIV

Goal

Prevent HIV transmission and associated morbidity and mortality by (1) ensuring that all persons at risk for HIV infection know their serostatus, (2) ensuring that those persons not infected with HIV remain uninfected, (3) ensuring that those persons infected with HIV do not transmit HIV to others, and (4) ensuring that those infected with HIV are accessing the most effective therapies possible.

Terminology

(A listing of all acronyms used in this publication appears on page 27 of the Introduction.)

AIDS: Acquired Immune Deficiency Syndrome, the most severe phase of infection with the Human Immunodeficiency Virus (HIV). People infected with HIV are said to have AIDS when they get certain *opportunistic infections* or when their *CD4+ cell count* drops below 200.

CD4+ cell count: A type of T cell involved in protecting against viral, fungal, and protozoal infections. These cells normally orchestrate the immune response, signaling other cells in the immune system to perform their special functions. Also known as T helper cells. Because HIV infection kills these cells, their number is a good way to track the progress of an HIV infection. A higher number usually means better health.

HIV: Human Immunodeficiency Virus, the virus that causes AIDS.

Opportunistic infections: Infections that take advantage of the opportunity offered when a person's immune system has been weakened by HIV infection. At least 25 medical conditions, including cancers and bacterial, fungal, and viral infections, are associated with HIV infection.

Serostatus: The result of a blood test for the antibodies that the immune system creates to fight specific diseases.

Seropositive: Indicates that a person's blood contains antibodies to HIV.

It also may be helpful to focus on the effect HIV/AIDS has had on the United States in the context of terms that are common to other Healthy People 2010 chapters:

Disability: An indicator of the extent to which an individual is forced to cut back on his or her activities of daily life. Although people with an asymptomatic HIV infection are able to go about their everyday business in a routine manner, the degree of HIV-associated disability can range from slight to severe, and even people with debilitating AIDS may respond well to new combination treatments.

Incidence: A measure of the number of *new* cases reported in a given amount of time, usually within a year. Because HIV infection often is without clear early symptoms, most persons fail to recognize their infection until some period of time has passed, often years. It is estimated that approximately 40,000 new HIV infections occur each year in the United States.

Morbidity: The term often used in the place of *illness* or *disease*. In the case of HIV, morbidity is usually measured in illnesses that are part of a group referred to as opportunistic infections.

1
2 **Mortality:** A measure of the number of deaths directly attributed to an HIV infection or AIDS. Recently,
3 for the first time in the AIDS epidemic, there has been a marked decline in the number of deaths among
4 people with AIDS—44 percent during the first 6 months of 1997 compared to the first 6 months of 1996.
5 These surveillance data suggest that new therapies, coupled with the success of comprehensive prevention
6 efforts begun in the 1980s, not only are delaying progression from AIDS to death but, with early diagnosis
7 and treatment, also are helping to delay the progression from HIV infection to an AIDS diagnosis for many
8 individuals.

9
10 **Prevalence:** A measure of the number of people who are infected, at any one point in time, with HIV.
11 Because HIV infection is not a reportable condition in all States, we can only estimate that the number of
12 persons with HIV infection in the United States ranges from 650,000 to 900,000. It has also been
13 estimated that perhaps a third of these people do not know they are infected with HIV. As the number of
14 new AIDS cases has stabilized and as the number of deaths has begun to decrease, the number of people
15 living with AIDS has grown, rising 10 percent since mid-1995. As prevalence increases, it underscores the
16 increasing need for medical and other services for people living with AIDS and the importance of
17 continued prevention efforts to reduce the number of new HIV/AIDS infections.

18
19 **Survival rates:** A measure of the time that elapses between a person's infection with HIV and the time of
20 death. The HIV or AIDS survival rate has been of interest to researchers from the earliest days of the
21 AIDS epidemic. There is much that is thought to contribute to a person's ability to survive after infection,
22 and the ability to stay alive seems to vary considerably among individuals. Some persons appear to get
23 sick quickly and die, while others have remained disease free for nearly 20 years. Many researchers
24 believe that receiving good medical care and treatment with the new combination therapies may extend a
25 person's time and quality of life after infection with HIV.

26 27 **Overview**

28
29 The HIV/AIDS epidemic is a relatively recent public health phenomenon in the United States and globally.
30 The disease was first recognized in 1981, and the primary population group affected appeared to be white
31 homosexual men.¹ However, other AIDS cases quickly followed, soon appearing among persons with
32 hemophilia,² persons who injected illegal drugs, and ethnic and racial minorities. Eighty percent of the
33 reported AIDS cases in the United States were concentrated in six metropolitan areas, predominantly on
34 the east and west coasts.³

35
36 In the early years of the epidemic, a majority of AIDS cases occurred in men, with only 5 percent occurring
37 in females in 1982.⁴ In late 1982, cases of AIDS traceable to blood transfusions were first reported in the
38 United States.⁵ Very soon after, interagency recommendations to prevent AIDS were published,⁶ with
39 specific guidance focused on blood donations. As the Nation continued to learn more about AIDS and
40 HIV disease, precautions and guidelines continued to be developed, with recommendations designed to
41 protect health care workers⁷ and to test donated blood.⁸ In late 1985, recommendations for the prevention
42 of AIDS in the workplace⁹ and perinatal transmission were published.¹⁰

43
44 By the early 1990s, many changes in the epidemic were apparent. AIDS cases were being reported from
45 every State and most large cities. The proportion of AIDS cases in white homosexual men declined, while
46 the proportion in minority men and women began to increase. Cases also appeared to be increasing among
47 injecting drug users and their partners. In recent years, the number of AIDS cases in females has increased
48 steadily and now makes up nearly 20 percent of the total. In 1992, AIDS became a leading cause of death
49 among Americans aged 25 to 44 years, first among African American females and later among all

1 Americans in this age group.¹¹ Today, it is the second leading cause of death among Americans 25 to 44
2 years old and remains the leading cause of death for African Americans in this age group. By 1995, AIDS
3 cases clearly were seen as disproportionately affecting minority populations, with opportunistic infections
4 7 times higher in African Americans and 3 times higher in Hispanics than among non-Hispanic whites.¹²
5

6 *Trends*

7
8 Since the early 1980s, it has become clear that there are at least four distinct HIV/AIDS epidemics of
9 public health significance:
10

- 11 • An epidemic among *men who have sex with men*, facilitated by both frequent changes of sex partners
12 in highly infected sexual networks and high-risk (traumatic) sexual practices.
13
- 14 • An epidemic among *injecting drug users*, facilitated by the multiperson use of needles and syringes
15 that are contaminated with HIV-infected blood.
16
- 17 • An epidemic among *heterosexual persons* (principally in minority communities), facilitated by (1)
18 high rates of other sexually transmitted diseases (STDs) that can increase both susceptibility to and
19 transmissibility of HIV infection and (2) high-risk sexual practices (mainly unprotected sex) associated
20 with certain addictive substances such as crack cocaine.
21
- 22 • A *perinatal* epidemic among infants caused by undetected and untreated HIV infection in pregnant
23 women.
24

25 Since 1995, for the first time in the history of the epidemic, a decline has been noted in the number of
26 people diagnosed annually with AIDS.¹³ From 1995 to 1996, AIDS incidence in people over age 12
27 declined by 6 percent. This decline reflects the combined impact of the comprehensive prevention efforts
28 instituted in the 1980s, which have helped slow the epidemic in recent years, and the success of new
29 therapies in lengthening the healthy lifespan of people with HIV.
30

31 A continuing trend in AIDS incidence is the decline in AIDS cases among white gay and bisexual men,
32 which contrasts with an increase in heterosexual incidence, primarily among minority men and women.
33 The continued increase in AIDS incidence in minorities underscores the need for intensified prevention
34 efforts in this community, as well as the need to ensure timely access to HIV counseling and testing and
35 HIV and STD treatment services.
36

37 From 1995 to 1996, AIDS incidence decreased among men (-8 percent), but continued to increase among
38 women (+2 percent). AIDS incidence declined in all regions of the country, with greater declines in the
39 Midwest (-10 percent), the West (-12 percent), and the Northeast (-8 percent) than in the South (-1
40 percent). AIDS incidence declined or remained the same in all racial and ethnic groups, with decreases
41 among whites (-13 percent) and Hispanics (-5 percent) and a leveling among African Americans (0
42 percent).
43

44 In calendar year 1996, for the first time, African Americans accounted for a larger proportion of AIDS
45 cases than whites, and this trend is continuing. Of the 64,966 AIDS cases among persons of all ages and
46 racial and ethnic groups newly reported to the Centers for Disease Control and Prevention (CDC) between
47 July 1996 and June 1997, 28,156 (43 percent) occurred among African Americans, 23,139 (36 percent)
48 among whites, and 12,691 (20 percent) among Hispanics. The AIDS case rate among African Americans

1 in calendar year 1996 was 89.7 per 100,000 population, almost 7 times the rate for whites (13.5 per
2 100,000) and twice the rate for Hispanics (41.3 per 100,000).

3
4 The proportion of total AIDS cases attributable to women also is increasing. From 1985 through 1996, the
5 proportion of AIDS cases among adolescent and adult women reported to CDC increased steadily each
6 year, from 7 percent to 20 percent. In 1996, HIV infection became the third leading cause of death among
7 women aged 25 to 44 and the leading cause of death among African American women in this same age
8 group.

9
10 Deaths from AIDS continued to decline throughout 1996 (23 percent decline compared to 1995), and the
11 number of people living with AIDS (i.e., AIDS prevalence) increased 11 percent. If declines in newly
12 diagnosed AIDS cases (i.e., AIDS incidence) continue, there will also be an increasing number of people
13 living with HIV infection who have not yet developed AIDS (HIV prevalence) in the coming years. As
14 HIV surveillance improves, so will our ability to monitor HIV prevalence and to better direct critical
15 prevention and treatment services to those with asymptomatic or mild illness. The latest data on AIDS
16 prevalence indicate that almost one-quarter million people (239,000) were reported to be living with AIDS
17 as of December 1996, compared with 215,000 in 1995. By 1996, 84 percent of the cumulative AIDS cases
18 had occurred in men, 15 percent in women, and 1 percent in children.

19
20 As previously noted, in 1997, AIDS had retreated to the second leading cause of death in all persons 25 to
21 44 years old. However, these changing trends in AIDS incidence and AIDS deaths varied by risk group,
22 gender, and race, and both AIDS incidence and AIDS deaths continue to increase among African
23 American women and among people infected through heterosexual contact. While AIDS deaths declined
24 among all racial and ethnic groups, declines were much greater among whites (21 percent) than among
25 African Americans (2 percent) and Hispanics (10 percent).

26
27 The lifetime costs of health care associated with HIV, in light of recent advances in HIV diagnostics and
28 therapeutics, have grown from \$55,000 to \$155,000 or more per person. HIV prevention efforts can be
29 cost-effective and even cost-saving to society (“cost-effective” meaning that the costs of the intervention
30 compare favorably to life-saving interventions associated with other diseases, usually costing less than
31 \$50,000 per quality-adjusted life year saved, and “cost-saving” meaning that the intervention averts health
32 care costs in excess of the cost of the intervention). These efforts include (1) counseling, testing, referral,
33 and partner notification services for clients at high risk for HIV infection; (2) needle and syringe exchange
34 programs; and (3) information, education, and counseling for injecting drug users.

35
36 It also is important to maintain a perspective on the effect of HIV on the world outside the United States.
37 By the end of 1996, approximately 600,000 people have been reported with AIDS, and nearly 375,000 had
38 died. The United Nation’s Global Programme on AIDS estimates that more than 30 million people around
39 the world are infected with HIV. Ninety percent of these people are in developing countries and have
40 limited access to HIV education, prevention, or treatment services. International cooperation and
41 collaboration on implementation of interventions, research, and training are essential to combating the
42 AIDS epidemic worldwide.

43 44 ***Principal Health Determinants***

45
46 Behaviors (sexual, substance use, and prenatal care seeking) and biomedical status (e.g., having other
47 STDs) are major determinants of HIV transmission. Unprotected sexual contact (whether homosexual or
48 heterosexual) with a person infected with HIV and sharing drug-injection needles with an HIV-infected
49 individual account for most HIV transmission in the United States. Improving access to effective prenatal
50 care and increasing the number of people who know their HIV serostatus are important components of a

1 national program to slow or halt the transmission of HIV in the United States.

2
3 For persons infected with HIV, behavioral determinants also play a large role in health maintenance.
4 While drugs are available specifically for both treatment and prevention of a number of opportunistic
5 infections, HIV-infected individuals also may take lifestyle-related behavioral steps to avoid many of these
6 infections. With the new antiretroviral drug therapies for HIV infection, difficulty in adhering to complex,
7 expensive, and demanding medication schedules is a significant behavioral barrier for many persons
8 infected with HIV.

9 10 ***Interventions***

11
12 Interventions for combating HIV are both biomedical and behavioral. Recent advances in antiretroviral
13 therapy have been credited with dramatic declines in mortality associated with HIV and AIDS. However,
14 declines in AIDS incidence and prevalence, particularly in early epicenters of the epidemic such as San
15 Francisco and New York, predate the advent of antiretroviral therapies and support the belief that
16 behavior-based prevention programs are effective. In San Francisco, for example, AIDS incidence among
17 men who have sex with men began dropping in 1992, suggesting that sustained, comprehensive prevention
18 activities begun in the 1980s have succeeded in reducing HIV transmission in this group.

19
20 Behavioral interventions vary nationwide, depending on the audience for whom the program is designed,
21 who designed it, and available funds. Among the most successful strategies are a combined video and
22 small-group discussion approach, the use of popular opinion leaders, and peer-led street counseling.

23
24 A combination of counseling and testing has been identified as an effective tool not only for assisting HIV-
25 infected individuals in effectively coping with their infections, but also for preventing these individuals
26 from infecting others. It provides an opportunity to counsel people with seronegative test results on
27 behaviors and strategies for avoiding infection, as well as a chance to refer persons to other needed medical
28 and social services. Biomedical and behavioral research efforts are essential to the development of more
29 effective interventions, including therapies, vaccines, and behavioral interventions.

30
31 Following the 1994 finding that perinatal HIV transmission rates could be substantially reduced with
32 zidovudine therapy, the Public Health Service issued guidelines recommending that HIV counseling and
33 voluntary testing be a part of routine prenatal care for all pregnant women. This policy ensures that HIV-
34 infected women have access to important health care for themselves and also have the opportunity to
35 reduce the risk of HIV transmission to their infants. Subsequent declines in AIDS incidence among
36 children offer promising hope that these strategies are showing success in reducing mother-to-infant
37 transmission.

38
39 Adherence to the principles of “universal precautions” guidance has greatly reduced the occupational
40 exposure to HIV that previously affected health care workers. The primary means of preventing
41 occupational exposure to HIV and other bloodborne pathogens is to follow infection control precautions
42 with the assumption that the blood and other body fluids from *all* patients are potentially infectious. Safety
43 devices have also been developed to help prevent needlestick injuries.

44 45 **Disparities in Health**

46
47 In the United States, African Americans and Hispanics have been disproportionately affected by HIV and
48 AIDS since the early years of the epidemic. Through June 1997, CDC had received reports of 612,078
49 cases of AIDS among persons of all ages and racial and ethnic groups in the United States, including
50 279,072 cases among whites, 216,980 cases among African Americans, and 109,252 cases among

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1 Hispanics. Although 53 percent of the 612,078 reported AIDS cases occurred among African Americans
2 and Hispanics, these two population groups represent an estimated 13 percent and 10 percent, respectively,
3 of the total U.S. population.

4
5 Among women and children with AIDS, African Americans and Hispanics have been especially affected,
6 with these two population groups accounting for more than 75 percent of cases reported among women
7 and more than 80 percent of cases reported among children. Of the 92,242 AIDS cases among women
8 reported to CDC through June 1997, 51,410 cases occurred among African American women and 18,663
9 occurred among Hispanic women. Of the 7,902 AIDS cases reported among children less than 13 years of
10 age, 4,586 occurred among African American children and 1,833 occurred among Hispanic children.

11
12 For young adults aged 20 to 24 years old, 22,070 AIDS cases have been reported through June 1997. Of
13 this total, 8,889 (40.3 percent) occurred among African Americans, 8,242 (37.3 percent) among whites,
14 and 4,653 (21.1 percent) among Hispanics. Overall, 74 percent of the AIDS cases in this age group
15 occurred among males and 26 percent among females. Among African Americans reported with AIDS in
16 this age group, 35 percent are female and 65 percent are male; among Hispanics, 26 percent are female and
17 74 percent are male. Because the time from initial infection with HIV to the development of AIDS is long
18 and variable (often 8 to 10 years or more), many of these young adults likely acquired their infections
19 while in their teens.

20
21 Among teenagers (13 to 19 years of age), 2,953 AIDS cases had been reported in the United States through
22 June 1997. In this age group, 963 cases (33 percent) occurred among whites, 1,378 (47 percent) among
23 African Americans, and 564 (19 percent) among Hispanics. Overall, 63 percent of the AIDS cases in this
24 age group are among males and 37 percent are among females. Among African American teenagers with
25 AIDS, 47 percent are male and 53 percent are female; among Hispanic teens, 68 percent of those with
26 AIDS are male and 32 percent are female; among white teens with AIDS, 80 percent are male and 20
27 percent are female.

28
29 The disproportionate impact of HIV/AIDS on African Americans and Hispanics underscores the
30 importance of implementing and sustaining effective prevention efforts for all communities of color. HIV
31 prevention efforts must take into account not only the multiracial and multicultural nature of our society,
32 but also other social and economic factors, such as poverty, underemployment, and poor access to the
33 health care system, that impact health status and disproportionately affect African American, Hispanic,
34 Asian/Pacific Islander, Alaska Native, and American Indian populations.

Progress Toward Year 2000 Objectives

Of the 17 HIV objectives included in Healthy People 2000, three have met or exceeded their targets (18.7, 18.8, and 18.14). Progress has been made toward an additional seven objectives, (18.1, 18.2, 18.4-18.6, 18.13, and 18.15), and two objectives show trends moving away from the targets (18.10 and 18.12). Data beyond baseline are not available for assessing the status of two objectives (18.9 and 18.16). A summary of the highlights of our progress toward the year 2000 objectives is presented below.

- Objective 18.7, to lower the risk of transfusion-transmitted HIV infection, had a baseline of 1 per 40,000 to 150,000 in 1989. The year 2000 target for this objective was 1 per 250,000, and in 1993, this goal had been achieved, with a rate of 1 per 450,000 to 600,000 cases of HIV infection transmitted through transfusion.
- Objective 18.8, to raise the percentage of HIV-infected people who know their serostatus, as measured by the percentage of HIV-positive tests for which people returned for counseling, had a baseline of 72.5 percent in 1989. The year 2000 target was set at 80 percent. However, in 1995, this target had been exceeded, with a total of 83 percent of people with positive HIV tests returning to public counseling and testing sites for posttest counseling.
- In 1991, the Occupational Safety and Health Administration (OSHA) published bloodborne pathogen standards. This action met the target set by objective 18.14, to extend to all workplaces regulations to protect workers from exposure to bloodborne infections.
- Objective 18.1 targets a slowing of the rise in the rate of AIDS cases. The number of AIDS cases diagnosed in 1994 per 100,000 population is below the 1993 rate, and this decline is continuing: The rate in 1995 per 100,000 population (28.6) is below the rate in 1994 (29.8).
- Data from the 1995 National Survey of Family Growth (NSFG) update the 1988 baseline for objective 18.4, showing an increase in the proportion of sexually active females whose partners used condoms at last sexual intercourse. Baseline data indicate reported condom use by sexually active females at 19 percent in 1988; this number increased to 25 percent in 1995.
- Objective 18.5, to increase the proportion of injecting drug users in treatment programs, had a baseline in 1989 of 11 percent. In 1995, this proportion had increased to 34.1 percent, with a year 2000 target of 50 percent.
- Similarly, objective 18.6 was designed to increase the proportion of injecting drug users who did not share needles. The 1991 baseline for this objective was 30.8 percent, and the target was set at 75 percent. In 1995, the proportion of injecting drug users who reported not sharing needles was 60 percent.
- Objective 18.15, to increase the proportion of sexually active adolescents who have not had sexual intercourse during the previous 3 months, had a 1988 baseline of 23.6 percent for females 15 to 17 years old. In 1995, this proportion had increased to 27 percent.
- Objective 18.10 was designed to increase the proportion of schools that provide appropriate HIV and other STD education for students in 4th through 12th grade. Data show trends moving away from the year 2000 target. In addition, objective 18.12, to increase the proportion of cities that have outreach

1 programs to contact drug users, has been difficult to track, with the most recent available data from
2 1992.

- 3
- 4 • Data beyond baseline are not available to assess the status of objective 18.9, to increase the proportion
5 health care providers who provide HIV prevention counseling, and objective 18.16, to increase the
6 proportion of businesses that implement comprehensive HIV/AIDS workplace programs.
- 7
- 8 • Baseline data are not available for objective 18.17, to increase the number of federally funded primary
9 care clinics that have linkages with substance abuse treatment programs.
- 10

11 **Draft 2010 Objectives**

12 *HIV/AIDS Incidence*

13 **1a. (Former 18.1) Confine annual incidence of diagnosed AIDS cases among adolescents and adults** 14 **to no more than 12 per 100,000 population.** (Baseline: 28 cases per 100,000 population in 1996)

15 Select Populations	16 1996	17 2010 Target
African American	111	12
American Indian/Alaska Native	13	12
Asian/Pacific Islander	8	7
Hispanic	52	12
White	13	12
Male	46	22
African American male	168	22
American Indian/Alaska Native male	21	19
Asian/Pacific Islander male	13	12
Hispanic male	82	22
White male	24	22
Female	12	2
African American female	62	2
American Indian/Alaska Native female	6	2
Asian/Pacific Islander female	2	2
Hispanic female	22	2
White female	3	2

18
19 **Target Setting Method:** 10 percent improvement in the lowest rate of AIDS cases among whites,
20 African Americans, and Hispanics in 1996. These three groups were chosen as the base because they
21 comprised 98.5 percent of all adult and adolescent AIDS cases in 1996. Targets for Asian/Pacific
22 Islanders and American Indian/Alaska Natives are based on a 10 percent improvement from their 1996
23 baseline rates.

24
25 **Data Source:** HIV/AIDS Surveillance System, CDC, National Center for HIV, STD, and TB
26 Prevention (NCHSTP).
27

1 **1b. Confine annual number of diagnosed AIDS cases among adolescents and adults to no more than**
 2 **30,000 cases.** (Baseline: 61, 844 in 1996*)
 3

Diagnosed Cases by Exposure Category	1996	2010 Target
Male exposure category		
Men who have sex with men	23,420	8,500
Injecting drug use	11,105	6,500
Men who have sex with men and inject drugs	2,680	2,000
Heterosexual contact	3,458	2,500
Female exposure category		
Injecting drug use	4,478	2,500
Heterosexual contact	5,765	3,500

4
 5 * Figures adjusted for reporting delay. Figures include reported cases from Puerto Rico, U.S. Virgin
 6 Islands, and Pacific Islands.

7
 8 **Target Setting Method:** Calculated by estimating the total number of cases based on the target rate
 9 of 12 per 100,000 (see objective 1a) and Bureau of the Census population projections for adults and
 10 adolescents in the year 2010.

11
 12 **Data Source:** HIV/AIDS Surveillance System, CDC, NCHSTP.

13
 14 **2. (Developmental/Former 18.2) Confine annual incidence of diagnosed HIV infection adolescents**
 15 **and adults to no more than __ per 100,000 population.**
 16

17 **Potential Data Source:** HIV/AIDS Surveillance System, CDC, NCHSTP.
 18

19 HIV is the retrovirus recognized as the causing agent of AIDS. HIV/AIDS is a multifaceted national and
 20 international health problem. People are diagnosed with AIDS when they get an opportunistic infection or
 21 their CD4+ cell count drops below 200. In persons with normally functioning immune systems, CD4+ cell
 22 counts usually range from 500 to 1,500. Therefore, persons with an AIDS diagnosis are much more
 23 susceptible to infections that would otherwise be suppressed by the immune system. In recent years,
 24 treatments that delay the progression of HIV disease and prevent opportunistic infections have changed the
 25 face of AIDS. People are living longer, healthier lives. Nonetheless, it is still important to track annual
 26 incidence of diagnosed AIDS cases to inform the Nation of where the epidemic is occurring and whom it is
 27 affecting most and to identify groups who are not receiving optimal care.
 28

29 At the same time, new treatments have made the reporting of AIDS cases alone less indicative of recent
 30 trends in the epidemic. As of January 1998, 31 States were conducting pediatric HIV case surveillance; 28
 31 of the 31 were also conducting adolescent and adult HIV surveillance. The September 19, 1997,
 32 *Morbidity and Mortality Weekly Report (MMWR)* states that "(a)ll States and territories should conduct
 33 HIV case surveillance as an extension of their AIDS Surveillance programs, and CDC is developing HIV
 34 surveillance policy and technical guidance to assist all States and territories to conduct HIV/AIDS case
 35 surveillance." Although 31 States conduct HIV case surveillance, combined these States represent roughly
 36 30 percent of the AIDS cases. Without complete information from States such as California, Texas, and
 37 New York, it is difficult to estimate a national representative number of HIV infections.
 38

39 The HIV/AIDS surveillance system is a nationally recognized population-based surveillance system used
 40 to monitor trends in the AIDS epidemic. In addition to the importance of HIV/AIDS surveillance data for
 41 tracking trends in the epidemic, data on the number of persons reported with AIDS are used to target and

1 allocate resources for prevention and treatment services. The data are also used to evaluate program
 2 activities. Through June 30, 1997, a cumulative total of 612,078 persons with AIDS were reported to
 3 CDC by State and territorial health departments. Estimates of the number of people infected with HIV in
 4 the United States range between 650,000 and 900,000. Once HIV case surveillance is implemented, CDC
 5 will be able to monitor progress toward the objective of “reducing the annual incidence of diagnosed HIV
 6 infection.”

7
 8 **Condom Use**

- 9
 10 **3. (Former 18.4) Increase to 46 percent the proportion of sexually active unmarried people who**
 11 **reported that a condom was used at last sexual intercourse.** (Baseline: 40 percent of sexually
 12 active unmarried women reported use of condoms by their partner in 1995)
 13

Select Populations	1995	
	Female	Male
African American, non-Hispanic		
Aged 15-19	Not available	39
Aged 20-24	Not available	35
Aged 25-29	Not available	23
Aged 30-34	Not available	17
Aged 35-44	Not available	12
American Indian/Alaska Native	Not available	Not available
Asian/Pacific Islander	Not available	Not available
Hispanic		
Aged 15-19	Not available	22
Aged 20-24	Not available	18
Aged 25-29	Not available	19
Aged 30-34	Not available	22
Aged 35-44	Not available	8
White, non-Hispanic		
Aged 15-19	Not available	40
Aged 20-24	Not available	29
Aged 25-29	Not available	24
Aged 30-34	Not available	14
Aged 35-44	Not available	17

14
 15 **Target Setting Method:** 15 percent improvement.

16
 17 **Data Source:** National Survey of Family Growth (NSFG), CDC, NCHS.

18
 19 Scientific data about the effectiveness of latex condoms in preventing HIV transmission are very clear.
 20 Latex condoms are highly effective barriers to HIV when used consistently and correctly. Carefully
 21 designed studies among heterosexual couples in which one partner is HIV positive and the other is not
 22 demonstrate that latex condoms provide a high level of protection against HIV. Increased condom use is
 23 essential for slowing the spread of HIV infection.

24
 25 Individuals in some populations, especially sexually active young people, may experience problems
 26 accessing condoms because of several factors, including cost, convenience, and embarrassment. For these
 27 individuals, the fact that condoms are not readily accessible may be a significant barrier to consistent use.
 28 To eliminate this barrier, many local communities actively support programs that make condoms available

1 to populations most vulnerable to HIV infection, including sexually active young people. Research shows
2 that providing access to condoms can increase their use among sexually active young people. Despite fears
3 to the contrary, research clearly demonstrates that young people who participate in comprehensive HIV
4 prevention programs that include approaches to ensure access to condoms are no more likely to initiate or
5 increase sexual activity than other young people.

6
7 In addition to access, the issue for many young women, some of whom are having intercourse with older
8 men, is the correct and consistent use of condoms. Young women are often limited by intimidation or
9 threats of mistrust by their partners if they suggest condom use; knowledge of effective negotiating skills is
10 another critical element of increased condom use.

11
12 *STD Screening in HIV Counseling and Testing Sites*

- 13
14 **4. (Developmental) Increase to __ percent the proportion of clients who are screened for common**
15 **bacterial STDs (chlamydia, gonorrhea, and syphilis) and immunized against hepatitis B in**
16 **confidential federally funded HIV counseling and testing sites.**

17
18 **Potential Data Source:** HIV counseling and testing surveillance system, CDC.

19
20 Recent data indicate that other STDs substantially increase the risk of HIV transmission (they make it
21 easier both to get and to give HIV infection); and treating other STDs reduces HIV spread in communities.
22 In the United States, STD rates are high and STD clinical services are inadequate in the face of a changing
23 HIV epidemic.

24
25 Vaccines minimize the probability of infection. While vaccines for some STDs are in various stages of
26 development, there is an effective and widely available vaccine for hepatitis B. Unfortunately, hepatitis B
27 vaccine coverage remains low, especially in high-risk groups, mainly because of a lack of awareness
28 among health care providers, limited opportunity to reach high-risk youth in traditional health care settings,
29 and limited financial support for wide-scale implementation of this intervention. Many persons requesting
30 HIV counseling and testing, while not HIV infected, are nevertheless at high risk for acquiring sexually
31 transmitted infections. Offering hepatitis B vaccine at these sites would take advantage of reaching high-
32 risk persons who otherwise may not access immunization services.

33
34 *Knowledge of HIV Serostatus*

- 35
36 **5. (Developmental) Increase to __ percent the proportion of persons entering treatment for**
37 **injecting drug use who are also offered HIV counseling and voluntary testing.**

38
39 **Potential Data Source:** Information on injecting drug users who are in treatment was collected in
40 1996 by the National Household Survey on Drug Abuse (NHSDA).

- 41
42 **6. (Developmental) Increase to __ percent the proportion of inmates in Federal and State prison**
43 **systems who receive HIV counseling and testing during incarceration.**

44
45 **Potential Data Source:** Biannual Survey of HIV, STD, and TB Prevention in Correctional Facilities,
46 CDC/National Institute of Justice (NIJ).

1 **7. Increase to 85 percent the proportion of 25- to 44-year-olds with reported tuberculosis (TB) who**
2 **also have knowledge of their HIV serostatus.** (Baseline: 56 percent if reported adult 25- to 44-year-

3 old TB cases)
4
5 **Target Setting Method:** 50 percent improvement.

6
7 **Data Source:** National TB Surveillance System, CDC, Division of Tuberculosis Elimination (DTBE).

8
9 Persons at risk for HIV infection should know their serostatus. Knowledge of serostatus is important to
10 understand individual behavioral risks and to enable people to take responsibility for their own actions,
11 including participating in programs that promote behavioral change and healthier lifestyles. This is a
12 primary step for persons whose drug use or high-risk sexual behaviors place them at risk of HIV infection
13 or transmission. Identification of infection and access to medical care can improve health outcomes and
14 also reduce the chances of HIV transmission.

15
16 The objectives in this section highlight three areas where people may be able to access HIV counseling and
17 voluntary testing.

18
19 *Adults with Reported Tuberculosis*

20
21 The rapid rate of progression to active TB disease among HIV-positive patients after infection with *M.*
22 *tuberculosis* has been well documented. A TB/AIDS case register match for 1993-94 showed that 22
23 percent of U.S. TB cases in the 25 to 44 age group had HIV infection. (This is likely a minimum estimate
24 due to case register matching methodologies.)

25
26 Early detection of HIV in TB patients also allows for early intervention and treatment that may prevent or
27 delay the development of other HIV-related illnesses and AIDS. In fact, many individuals who are
28 diagnosed with TB related to compromised immunity caused by HIV are unaware of their HIV status. TB
29 patients receive HIV testing only after counseling and informed consent from the patient. Because testing
30 is voluntary, some patients may decline HIV testing. CDC collects data on reported TB cases that have
31 information on HIV status.

32
33 *Injecting Drug Users*

34
35 To date, more than a third of all reported AIDS cases in the United States occur among injecting drug
36 users, their heterosexual sex partners, and children whose mothers were injecting drug users or sex partners
37 of injecting drug users. Drug treatment services and risk reduction programs should offer and promote
38 HIV counseling and voluntary testing of injecting drug users.

39
40 Injecting drug users may continue to use drugs and engage in high-risk sexual behavior that place them at
41 risk of HIV infection. Treatment approaches must include persistent efforts to counsel injecting drug users
42 about both high-risk behaviors and the risk of HIV infection. Many children with AIDS who were infected
43 with HIV perinatally come from families where one or both parents are injecting drug users. A
44 disproportionate number of the babies affected are African American and Hispanic. Drug treatment
45 services should encourage education, counseling, and testing to reduce risk and to prevent HIV
46 transmission. Drug treatment models targeted toward this population should be culturally appropriate and
47 gender specific and include HIV prevention and intervention strategies to reverse the trends of the HIV
48 epidemic.

1 *Inmates in Federal and State Prison Systems*
2

3 Incarceration provides an environment in which early interventions and risk reduction behaviors can be
4 taught and reinforced over time. It also provides an opportunity to provide the support and continuity of
5 care when the individual is released and returns to his or her home community. Early access to care
6 reduces both immediate and long-term health care costs for correctional institutions and the community.
7 Although not standardized, Federal and State prison systems provide access to treatment and care to those
8 individuals identified as infected with HIV.
9

10 *Classroom Education*
11

12 **8. (Former 18.10) Increase the proportion of schoolchildren who receive classroom education on**
13 **HIV and STDs.**
14

School	Baseline	2010 Target
Middle junior high school (5 or more classes)	24%	30%
High school (5 or more classes)	43%	50%

15
16 **Target Setting Method:** 15 percent improvement.
17

18 **Data Source:** School Health Policies and Programs Study (SHPPS), CDC, NCCDPHP.
19

20 Effective dosages of HIV-related classroom instruction vary. Experts argue that effective interventions
21 need to last for 14 or more sessions to cover important educational activities, but may be effective in fewer
22 sessions if conducted in a small group setting with a leader for each group. This would suggest that in
23 classroom settings, higher numbers of class sessions are needed for effective behavioral change. Since 46
24 percent of health education teachers spend only one or two class sessions on HIV, increasing the number of
25 class sessions is likely to increase the effectiveness of instruction and increase the commitment with which
26 efficacious interventions are delivered.
27

1 **HIV Treatment**

2
3 **9. Increase the percentage of HIV-infected adolescents and adults in care who receive treatment**
4 **consistent with current Public Health Service treatment guidelines.**
5

Treatment/Prophylaxis	1996	2010 Target
CD4 testing	93%	95%
Viral load testing	31%	90%
Any antiretroviral therapy	74%	90%
Tuberculin skin testing (TST)	Not available	
<i>Pneumocystis carinii</i> pneumonia (PCP)	80%	90%
<i>Mycobacterium avium</i> complex (MAC)	48%	90%
Pneumococcal vaccination	Not available	

6
7 **Target Setting Method:** Targets of 95 percent and 90 percent allow reasonable flexibility to account
8 for those who do not access care, who refuse these services, or whose medical records are incomplete
9 and do not document such services.

10
11 **Data Source:** Adult Spectrum of Disease (ASD) surveillance project, CDC, NCHSTP.

12
13 AIDS incidence in adults and adolescents declined 6 percent from 1995 to 1996. In addition, in the first 6
14 months of 1997, AIDS deaths declined 44 percent compared to the first 6 months of 1996. As new
15 therapies continue to be developed and people with HIV/AIDS live longer, it is important to ensure access
16 to these life-enhancing treatments. One way to do this is to ensure that people treated for HIV/AIDS are
17 receiving the most beneficial treatment possible. The survival benefits of antiretroviral therapy, PCP and
18 MAC prophylaxis, and TB prophylaxis have been demonstrated for people with HIV/AIDS for those who
19 meet the criteria for these preventive therapies.

20
21 Currently, these and other preventative interventions are monitored through CDC's ASD surveillance
22 project. ASD is a national surveillance project that collects demographic, clinical, laboratory, surveillance,
23 and other related data on HIV-infected persons 13 years of age and over through a broad range of
24 participating facilities in 11 U.S. cities. Since ASD's inception in 1990, over 40,000 persons have been
25 observed. The treatments and interventions measured in this survey are likely to change as research and
26 treatment advances are made. Therefore, it may be advisable to adjust this objective in the near future.

27
28 The preventive interventions listed in this objective should be the standard of care for all eligible persons
29 with HIV/AIDS. Data for tuberculin skin testing and pneumococcal vaccination are being collected by
30 ASD, but these are relatively new data. Baselines and targets will be set for these two items after more
31 reliable data have been collected.
32

HIV Mortality

10. Reduce mortality due to HIV infection to no more than 6 per 100,000 population.

Select Populations	1996	2010 Target
African American	41	6
American Indian/Alaska Native	4	3
Asian/Pacific Islander	2	2
Hispanic	16	6
White	7	6
Male	18	11
African American male	68	11
American Indian/Alaska Native male	7	6
Asian/Pacific Islander male	4	3
Hispanic male	26	11
White male	13	11
Female	4	2
African American female	21	2
American Indian/Alaska Native female	*	Not available
Asian/Pacific Islander female	1	1
Hispanic female	6	2
White female	2	2

* Data not available because of low number of deaths.

Target Setting Method: Targets are a 15 percent reduction in the lowest mortality rate due to HIV infection among whites, African Americans, and Hispanics in 1996. These three groups were chosen as the base because they comprised 98.5 percent of all adult and adolescent AIDS cases in 1996. Targets for Asian/Pacific Islanders and American Indian/Alaska Natives are based on a 15 percent reduction from their 1996 baseline rates.

Data Source: National Vital Statistics System (NVSS), CDC, NCHS.

11. (Developmental) Increase years of healthy life of an individual infected with HIV by extending the interval of time between an initial diagnosis of HIV infection and AIDS diagnosis and between AIDS diagnosis and death.

Potential Data Source: HIV/AIDS Surveillance System, CDC, NCHSTP.

The impact of new combination drug therapies was first reported in 1997, when AIDS deaths dropped for the first time. This decline has continued, with deaths attributable to AIDS down 44 percent from the first 6 months of 1996 compared to the first 6 months of 1997. These surveillance data suggest that not only are new therapies delaying progression from AIDS to death, but with early diagnosis and treatment, these therapies also are helping to delay the progression from HIV infection to an AIDS diagnosis for many individuals.

These objectives provide insight into which population groups are not receiving treatment. In an effort to sustain reductions in mortality due to HIV infection, it is important not only to continue to reduce the number of deaths by increasing access to treatment and care, but also to target prevention efforts at groups disproportionately affected.

1
2 Data from these objectives can be used to target resources to populations who are not benefiting from
3 current treatment therapies. HIV-infected individuals should be identified at the earliest possible
4 opportunity and referred to appropriate medical, social, and preventive services that may preserve their
5 health, help them avoid opportunistic illnesses, reduce sexual and drug-use behaviors that may spread HIV,
6 and generally extend the quality of their lives. To enable HIV-infected persons to benefit from treatment
7 advances, HIV counseling and testing programs must better facilitate early diagnosis of HIV infection and
8 ensure that HIV-infected persons have access to such services.
9

10 Counseling and testing programs seek, at the earliest opportunity, to encourage voluntary testing of persons
11 whose circumstances or behaviors may have exposed them to HIV. If an individual is determined to be
12 HIV infected, counseling can assist him or her in modifying personal behaviors that may infect others or
13 detract from physical well-being and in providing referrals to appropriate medical followup and possible
14 treatment. For many individuals, early treatment has been shown to forestall opportunistic illnesses that
15 are routinely seen in individuals with compromised immune systems.
16

17 *Perinatal HIV Infection*

18 19 **12. (Developmental) Reduce the annual incidence of perinatally acquired HIV infection to no more** 20 **than __ cases per 100,000 population.** 21

22 **Potential Data Source:** HIV/AIDS Surveillance System, CDC, NCHSTP.
23

24 CDC recently reported substantial declines in perinatal AIDS cases. However, due to advances in
25 treatment, children may be living longer with HIV before they develop AIDS. While all States conduct
26 AIDS surveillance, only 30 States conducted surveillance for HIV infection among children in 1997. This
27 objective will remain developmental until a more representative sample of HIV infection among children is
28 available on a national basis. The following reflects the information reported by all States:
29

30 Perinatal transmission of HIV accounts for virtually all new HIV infections in children.

31 Through 1993, an estimated 15,000 HIV-infected children were born to HIV-positive women
32 in the United States. As of September 1997, perinatal HIV transmission accounted for 7,310
33 (1 percent) of the 626,334 total AIDS cases in adults and children reported to CDC by State
34 and territorial health departments. Perinatally acquired AIDS cases have been reported from
35 48 States, the District of Columbia, Puerto Rico, and the Virgin Islands.¹⁴
36

37 The National Institutes of Health sponsored an AIDS clinical trial, ACTG-076, that was stopped early in
38 1994 after it showed that the risk of perinatal HIV transmission could be reduced by as much as two-thirds
39 with the use of zidovudine (formerly called azidothymidine [AZT]) therapy for HIV-positive pregnant
40 women during pregnancy and childbirth and for their newborns for 6 weeks after birth.¹⁵ Additional
41 research data confirmed what earlier research indicated—that routine and universal counseling and
42 voluntary testing, combined with AZT therapy, are highly effective in preventing HIV.
43

44 Even though these prevention efforts are proving to be effective in reducing perinatal HIV transmission,
45 the continued incidence of perinatally acquired HIV infection among infants documents ongoing perinatal
46 transmission and underscores the need for strategies to ensure that HIV-infected women (1) receive
47 adequate prenatal care and timely HIV counseling and voluntary testing, (2) gain access to HIV-related
48 care and services, (3) receive chemoprophylaxis to reduce perinatal transmission, and (4) avoid
49 breastfeeding.
50

1 **Drug Treatment**
2

3 **13. (Developmental /Former 18.5) Increase the estimated percentage of individuals who engaged in**
4 **injecting drug use during the past year who are enrolled in drug abuse treatment programs.**
5

6 **Potential Data Source:** National Household Survey on Drug Abuse (NHSDA), SAMHSA.
7

8 NHSDA reports that only 30 percent of females and 35 percent of males 12 years of age and older get the
9 drug treatment they need. A recent study conducted by the Office of Applied Studies at SAMHSA
10 concluded that approximately 3.5 million persons who had drug abuse problems in 1996 did not receive
11 treatment. This number has increased by 33 percent in the total population since 1994. In 1996, 55
12 percent of those in need of substance abuse treatment were between 12 and 25 years old.
13

14 Injecting drug users are a high-priority subpopulation of those in need of substance abuse
15 treatment because of the additional consequences associated with HIV/AIDS. HIV infection among
16 women and infants in the United States primarily can be traced to contaminated injecting drug “works”
17 and to sexual relations with infected drug users. Pediatric AIDS is a particularly virulent problem among
18 the children of African American and Hispanic women involved in drug-related lifestyles. To address
19 these problems, substance abuse treatment must be provided for injecting drug users. Such treatment will
20 be most effective against HIV if it includes information, counseling, and other help on how to prevent both
21 HIV and unintended pregnancy.
22

23 **Related Objectives From Other Focus Areas**
24

25 **Family Planning**

- 26 9 Adolescent sexual intercourse
27 10 Pregnancy and STD preventive methods
28 12 School requirement for classes on human sexuality, pregnancy prevention, etc.
29

30 **Sexually Transmitted Diseases**

- 31 10 Heterosexually transmitted HIV
32 16 Television messages
33 18 Screening of pregnant women
34 23 Provider counseling during initial visits
35

36 **Substance Abuse**

- 37 16 Treatment gap for illicit drugs
38

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