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HIV Prevention in the Third Decade

Activities of CDC's Divisions of HIV/AIDS Prevention

Updated October 2005

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HIV/AIDS Prevention**

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Message from the Director



The third decade of the HIV/AIDS epidemic is a time to reflect on the successes of HIV/AIDS prevention—and there are many—and to plan for the future. Studies performed by CDC and others have scientifically proven that HIV/AIDS prevention interventions can protect people by helping them reduce the behaviors that put them at risk for HIV infection. These effective interventions are being disseminated through CDC’s programs, and many people have avoided HIV infection as a result of prevention efforts.

Despite the availability of effective prevention interventions, CDC estimates that 40,000 people—too many—become infected with HIV each year in the United States. Although this estimate has remained the same for the past decade, the epidemic has not. Advances in treatment are helping more and more HIV-infected people live healthier and longer lives. And with more people living with HIV than ever before, it is increasingly important that people know their HIV status so they can receive treatment for themselves and avoid transmitting their infection to others. Even the treatments themselves pose challenges, as they potentially encourage an attitude of complacency. And each new generation of young people presents an audience in need of new or reinforced HIV/AIDS prevention messages.

We hope that this booklet helps you better appreciate the HIV/AIDS prevention challenges of the third decade and CDC’s efforts to meet them. Its primary focus is the epidemic in the United States and the work of CDC’s Divisions of HIV/AIDS Prevention. Coverage of all HIV/AIDS prevention work at CDC would be too extensive for this booklet.

We begin in the past, with a brief history of accomplishments since 1981. Then we focus on the present: the current status of the epidemic in the United States and CDC’s responses.

We conclude by looking into the future. CDC’s HIV Prevention Strategic Plan is the overarching force behind our approach to the third decade of HIV prevention. *Advancing HIV Prevention: New Strategies for a Changing Epidemic* is a new initiative specifically intended to reduce barriers to early diagnosis of HIV infection and increase access to quality medical care, treatment, and ongoing prevention services for people who are living with HIV. Finally, CDC continues to review and

improve its surveillance, research, and prevention programs to have a greater impact on the HIV epidemic. For example, CDC will be revising its guidance to better facilitate HIV screening in health care settings. It is also conducting state-of-the-art prevention trials, using antiretroviral drugs to develop new methods to prevent transmission of HIV. Throughout the third decade of the HIV/AIDS epidemic, CDC will continue to adapt to changing trends to prevent new HIV infections and improve the quality of life for those living with HIV.



Robert S. Janssen, MD
Director, Division of HIV/AIDS Prevention–Surveillance and Epidemiology
Acting Director, Division of HIV/AIDS Prevention–Intervention Research and Support
National Center for HIV, STD, and TB Prevention
Coordinating Center for Infectious Diseases
Centers for Disease Control and Prevention

About this document

Abbreviations, acronyms, and initialisms

The following are used commonly throughout the document. Those not listed here are explained at first mention on each page.

AIDS	acquired immune deficiency syndrome
CBOs	community-based organizations
CDC	Centers for Disease Control and Prevention
HAART	highly active antiretroviral therapy
HIV	human immunodeficiency virus
IDUs	injection drug users
MSM	men who have sex with men
STD	sexually transmitted disease

Data

The data presented in this document are estimates derived from HIV/AIDS surveillance data reported to CDC. The data are statistically adjusted for reporting delays and for the redistribution of cases initially reported without risk information.

Data from states that have required HIV reporting since 1994 are referred to as the 25 states with long-standing HIV reporting. These 25 states are Alabama, Arizona, Arkansas, Colorado, Idaho, Indiana, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

Mission Statements

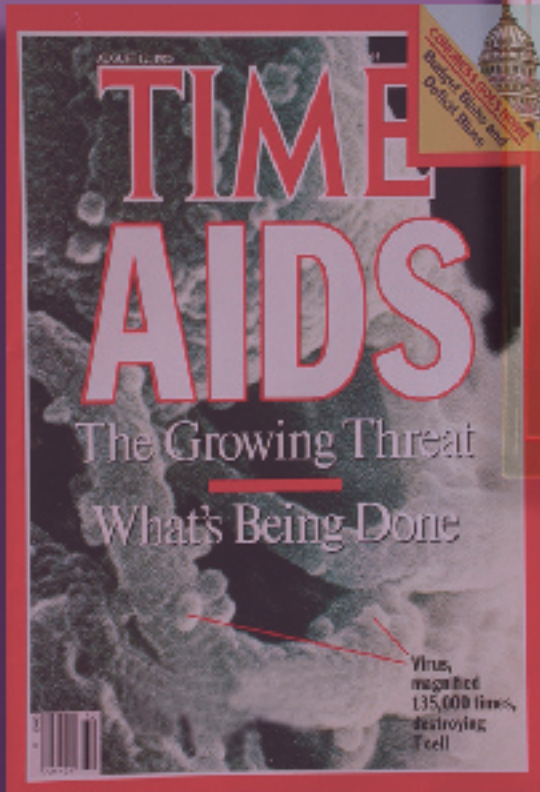
Division of HIV/AIDS Prevention–Surveillance and Epidemiology

Provide national leadership for HIV prevention research and surveillance and the development and testing of effective biomedical interventions to reduce HIV transmission and HIV disease progression in the United States and internationally. The purpose of these activities is to guide the development, implementation, and evaluation of evidence-based HIV prevention programs serving persons affected by, or at risk for, HIV infection.

Division of HIV/AIDS Prevention–Intervention Research and Support

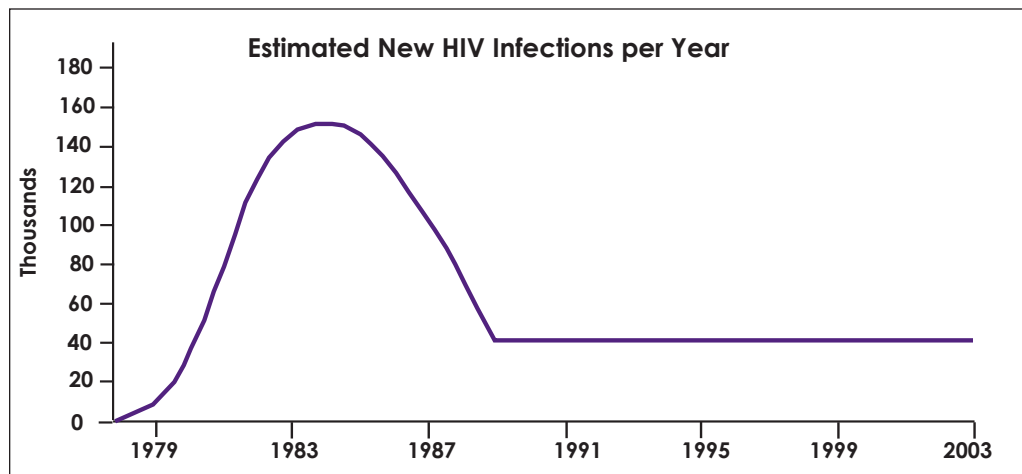
Provide national leadership and support for HIV prevention research and the development, implementation, and evaluation of evidence-based HIV prevention programs serving persons affected by, or at risk for, HIV infection.





ONE
THE PAST 2 DECADES
HOW FAR HAVE WE COME?

During the early 1980s, as many as 150,000 people became infected with HIV each year. By the early 1990s, this rate had dropped to approximately 40,000 each year, where it remains today.



Advances in Prevention and Treatment

- ▲ Drastic reductions in mother-to-child HIV transmission
- ▲ New drug combinations to treat HIV and delay the onset of AIDS
- ▲ Increased community involvement in HIV prevention efforts
- ▲ Better understanding of which communities are at high risk for HIV infection
- ▲ Behavioral interventions shown to be effective through randomized, controlled clinical trials

Well-designed and well-delivered HIV prevention programs have contributed to safer behaviors and have helped reduce the number of new infections.

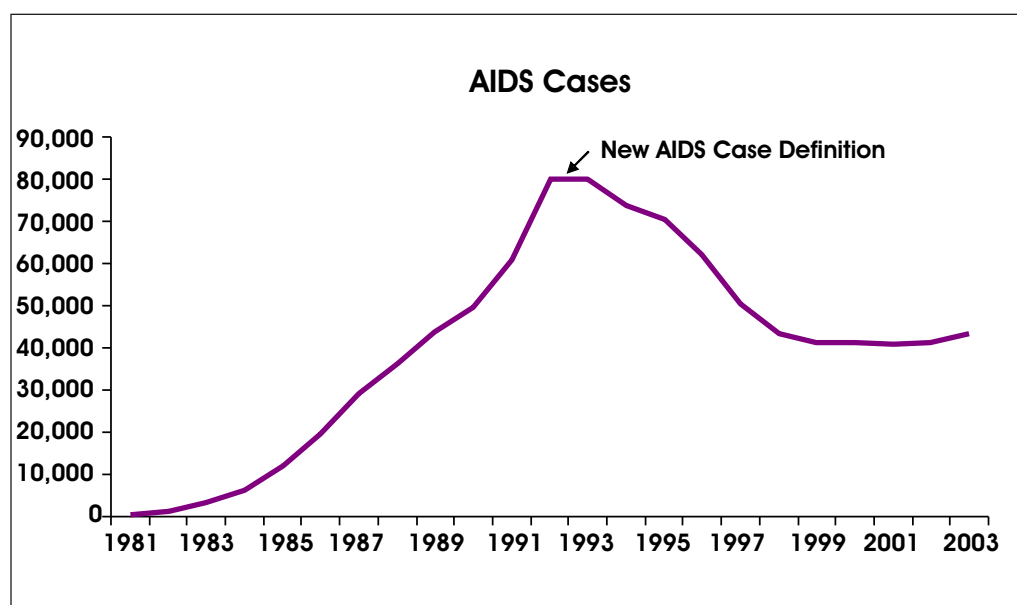
Prevention effectiveness has been proven scientifically. Among those who have benefited are MSM, IDUs, heterosexual men and women at high risk, youth at high risk, and children born to HIV-infected mothers. These results reflect sustained, focused, and collaborative efforts among CBOs, federal agencies, foundations, prevention scientists, and state and local health departments.

Well-designed and well-delivered HIV prevention programs have contributed to safer behaviors and have helped reduce the number of new infections.

How Far Have We Come?

Overall Decline in AIDS Cases

AIDS cases have declined dramatically in certain populations and regions. New AIDS cases in the United States increased rapidly during the 1980s, peaked in the early 1990s, and then began to decline dramatically in 1996. The peak in 1993 was associated with expansion of the AIDS case definition. Subsequent declines are most likely the result of improved HIV treatment.



AIDS cases have declined dramatically in certain populations and regions.

Declines in AIDS Cases in Certain Risk Groups

MSM

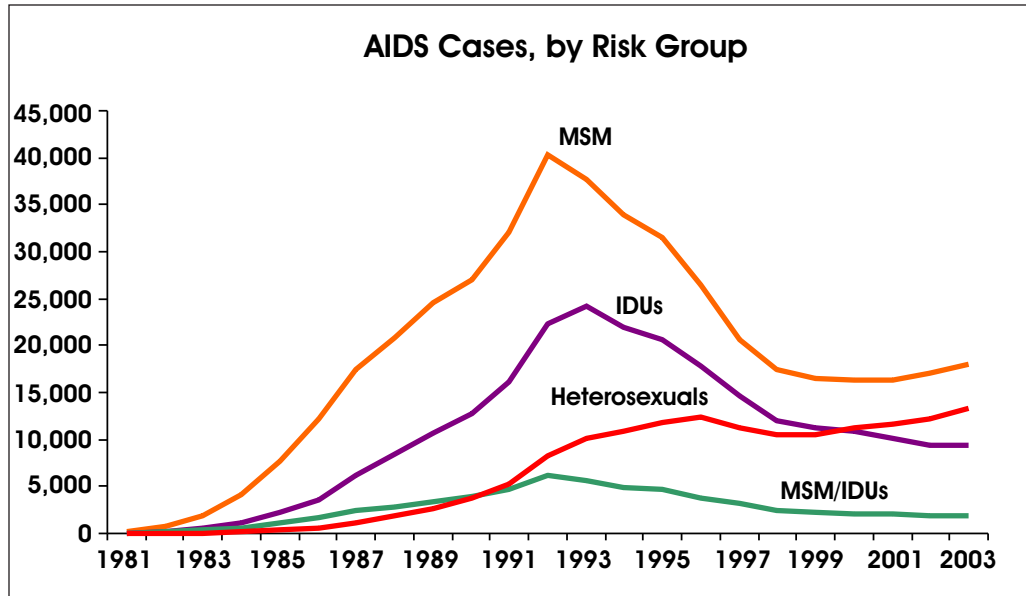
It has been estimated that during the mid 1980s, nearly 50% of MSM in some major urban gay communities in the United States were infected with HIV. Although MSM continue to account for the largest number of people for whom a diagnosis of AIDS is made each year, new AIDS cases in this population declined dramatically before stabilizing and then increasing slightly.

IDUs

During the 1980s, injection drug use was another major route for HIV transmission in the United States. After more than a decade of prevention interventions—drug treatment programs, needle

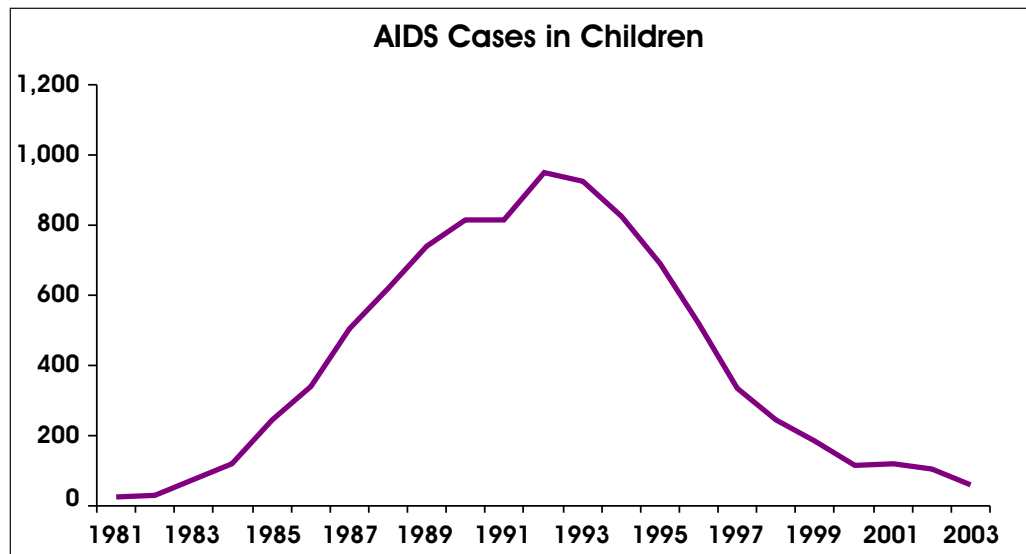
The Past 2 Decades

exchange programs, safer injection practices, peer support, street outreach, and counseling—new AIDS cases in IDUs declined.



Declines in AIDS Cases in Children

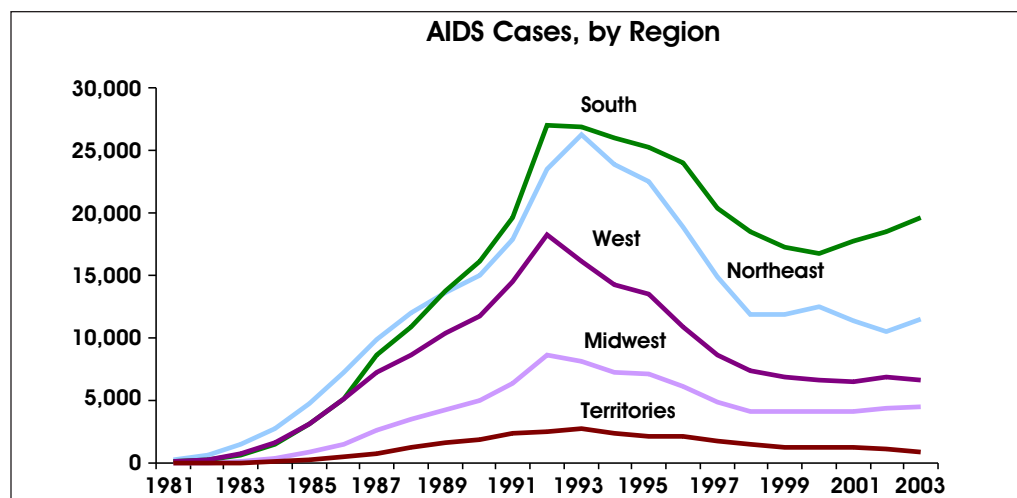
The estimated number of US children with AIDS declined 94% from 1992 (when the number of cases peaked) through 2003. This decline reflects the use of antiretroviral therapy to prevent HIV transmission from mother to child.



How Far Have We Come?

Declines in AIDS Cases in Geographic Regions

In most US regions, new AIDS cases were first observed to decline in 1996. More recently, from 2002 through 2003, the number of AIDS cases increased in the Northeast, South, and Midwest and decreased in the West.





TWO

THE HIV/AIDS EPIDEMIC

WHAT IS THE MAGNITUDE?

The HIV/AIDS Epidemic

How Serious Is It?

The HIV/AIDS epidemic has taken a tremendous toll on people in the United States. From the beginning of the epidemic in 1981 through 2003, an estimated 1.3–1.4 million people in this country have been infected with HIV/AIDS. Of these, about one third (more than 500,000) have died.

Despite declines in new infections in the early 1990s, more people are living with HIV/AIDS than ever before. CDC estimates that about 1 million people in the United States are living with HIV or AIDS. About one quarter of these people are unaware of their infection, which puts them and others at risk. Those who do not know that they are infected cannot take advantage of treatment and may unknowingly transmit HIV to others. And even of the three quarters who know that they are HIV-infected, one third may not be receiving ongoing care. About half of all HIV-infected people may be untested, untreated, or both.

AIDS

New AIDS cases and deaths have declined dramatically since the beginning of the epidemic. However, this decline began to stabilize in 1999 and may not drop further unless new HIV infections also decrease or new treatments are developed. The decline in AIDS cases should not be confused with a decline in new HIV infections or an end to the epidemic. It can mean that fewer HIV infections are progressing to AIDS.

Despite declines in new infections in the early 1990s, more people are living with HIV/AIDS than ever before.

HIV

New HIV infections have also declined but have remained stable for several years. At an estimated 40,000 new HIV infections per year, this number is unacceptably high. It represents the spreading of the epidemic into new, vulnerable populations.

Although effective treatment will ensure that fewer HIV infections progress to AIDS, it means that more and more people will be living with HIV, producing a wellspring of potential new infections. It is also important to note that treatment does not cure HIV infection. And no one knows



What Is the Magnitude?

whether treatment may produce long-term adverse effects or whether the drugs will remain effective. These realities underscore the importance of tracking the epidemic and using scientifically proven prevention programs to protect the people who are most at risk.

How Is It Changing?

The epidemic is changing in terms of how many people are living with HIV, where they are living, who is most vulnerable, and how we track the epidemic.

- ▲ **More people are living with HIV.** Because of treatment advances, people with HIV are living longer. As a result, more people are living with HIV today than at any other time during the history of the epidemic. Along with this growing population of HIV-infected persons, chances for transmission are increasing.
- ▲ **The epidemic keeps moving.** The HIV/AIDS epidemic varies considerably across the country, not only by region, but within regions and states, and even within communities. Currently (as well as for the past several years), many people with AIDS live in rural areas or small cities in the South.
- ▲ **Populations affected are changing.** In addition to the groups who have been at highest risk since the beginning of the epidemic—MSM and IDUs—other groups are also at risk for HIV.
 - **Racial and ethnic minorities.** The epidemic has expanded from primarily affecting white people to primarily affecting people of color.
 - **Women.** More than half of heterosexually acquired HIV infections occur in women.
 - **Youth.** New generations are replacing those who benefited from early prevention strategies.
- ▲ **Tracking the epidemic is more complex.** Early on, CDC tracked the epidemic by monitoring new AIDS cases. Today, trends in the epidemic are better reflected by new HIV infections, which are more difficult to track. New HIV infections cannot be measured directly because many newly infected people do not get tested and because a positive test result alone does not indicate whether the infection is recent.

The epidemic is changing in terms of how many people are living with HIV, where they are living, who is most vulnerable, and how we track the epidemic.



THREE

THE CHANGING EPIDEMIC

HOW IS CDC RESPONDING?

Surveillance

CDC'S HIV/AIDS surveillance system is the nation's source for key information used to track the epidemic. CDC funds and assists state and local health departments, which collect the information. Health departments in turn report their data to CDC so that information from around the country can be analyzed to determine who is being affected and why.

The ultimate surveillance goal is a nationwide system that combines information on AIDS cases, new HIV infections, and behaviors and characteristics of people at high risk so that CDC can track the epidemic and direct HIV prevention funding to where it is needed the most.

Tracking AIDS Trends

During the 1980s, AIDS cases alone provided an adequate picture of HIV trends because the time between infection with HIV and progression to AIDS was predictable. This predictability, however, has diminished since 1996, when HAART became available. Access, adherence, and response to HAART affect whether or when HIV progresses to AIDS. Thus, trends in AIDS cases alone no longer accurately reflect trends in HIV infection. AIDS trends do, however, continue to provide important information about where care and treatment resources are most needed.

Tracking HIV Trends

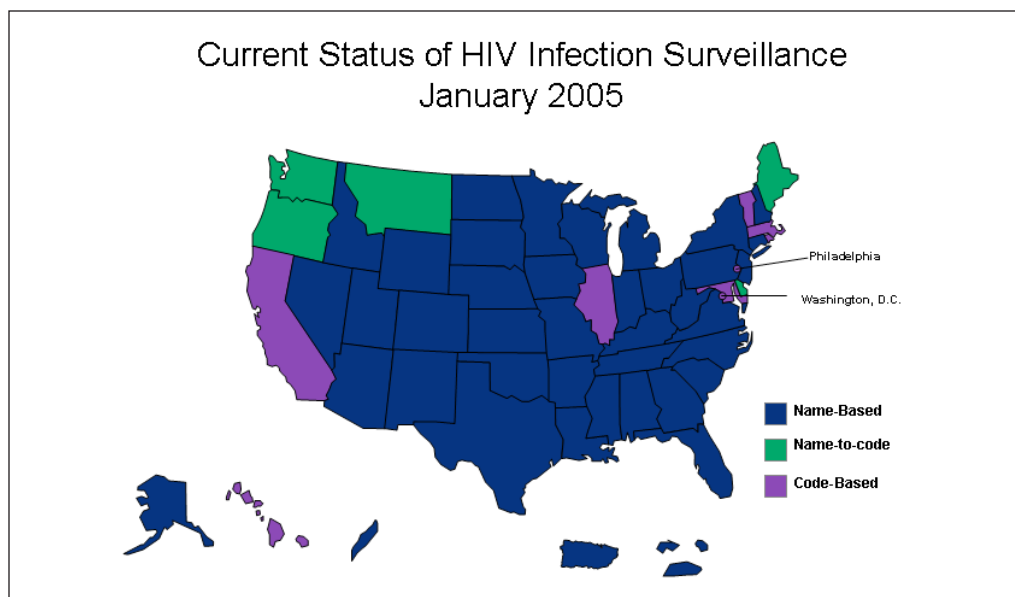
By April 2004, all states had adopted some type of system for reporting HIV diagnoses to CDC. Tracking HIV trends is challenging and depends on several factors, such as how often people are tested, when during the course of their infection they are tested, whether and how test results are reported to health departments, and how case reports (with personal identifiers removed) are forwarded to CDC.

A major advance has been the development of the serologic testing algorithm for recent HIV seroconversion (STARHS). STARHS is a way of analyzing HIV-positive blood samples to determine whether an HIV infection is recent or has been ongoing. In 2001, an expert panel agreed that STARHS is the best method available

The ultimate surveillance goal is a nationwide system that combines information on AIDS cases, new HIV infections, and behaviors and characteristics of people at high risk so that CDC can track the epidemic and direct HIV prevention funding to where it is needed the most.

How Is CDC Responding?

for measuring new HIV infections. After funding 5 areas to pilot test this method, CDC has now funded a total of 34 areas to include STARHS in their HIV incidence surveillance activities.



Monitoring HIV Risk Behavior

Behaviors are monitored with regard to risk taking, HIV testing, care seeking, and adhering to treatment for HIV. CDC obtains behavioral information from several different populations.

General population

Several federally supported surveys collect information about HIV-related behaviors of the general population. They are conducted periodically so that trends can be evaluated. Here are a few examples.

- ▲ CDC conducts the Behavioral Risk Factor Surveillance System, the National Survey of Family Growth, and the National Health Interview Study.
- ▲ The National Opinion Research Center (University of Chicago) conducts the General Social Survey, with indirect support from CDC.
- ▲ The Substance Abuse and Mental Health Services Administration conducts the National Survey on Drug Use and Health.

People who are HIV-infected

MMP (Morbidity Monitoring Project) is a new surveillance system designed to collect information from HIV/AIDS patients who received care from randomly selected HIV care providers. In 2004, CDC awarded funds to 20 states and 6 cities for this project. MMP collects information about access to and use of HIV care, treatment, and prevention services and prevalence of behaviors that can result in HIV transmission and affect disease outcomes (like adherence to therapy). Information is collected from medical records and patient interviews. Patients are selected in a way that will make the data nationally representative for persons who are living with HIV/AIDS and receiving care. Data for planning, evaluation, monitoring, and allocation of resources will be available by the end of 2006.



People who are at high risk for HIV

The NHBS (National HIV Behavioral Surveillance System), for populations at high risk, began in 2003. NHBS conducts surveys in cities with high levels of AIDS among MSM, IDUs, and heterosexuals at high risk to determine their risk behavior, testing behavior, and use of prevention services. In the first cycle,

MSM were interviewed in 17 cities. The second cycle will interview IDUs in 25 cities. In 2006, CDC will expand the system to include heterosexuals at high risk. For states with medium and low levels of AIDS, CDC provides technical assistance and support for behavioral surveys among MSM at specified events, such as gay pride.

HITS (HIV Testing Survey) primarily interviewed adults who were not HIV-infected but were at high risk for HIV infection. HITS collected information about what motivates people to get tested for HIV and what behaviors place people at risk for HIV. HITS was conducted in 24 states during 1995–2003. Data analyses from HITS are ongoing.

How Is CDC Responding?

Monitoring HIV Counseling and Testing Behavior

The HIV Counseling and Testing System (CTS) has been used since 1989 to monitor CDC-funded HIV counseling and testing services. Through this system, each CDC-funded HIV counseling and testing episode is reported to CDC and includes information about demographics, self-reported behavior, and HIV test results. Data from this system are used to guide the development of HIV prevention programs in response to the needs of the community. Beginning in 2005, CTS will be replaced by the Counseling, Testing, and Referral (CTR) module of the Program Evaluation and Monitoring System (PEMS). Data collected by CTR have been updated to include information on new testing technologies and client referrals to medical care and other services and to be consistent with other PEMS data collection and reporting requirements.

Prevention Programs

The primary component in CDC's fight against HIV/AIDS is HIV prevention programs. Programs consist of interventions intended to change risky behavior and improve the health of the people served. Interventions include encouraging early HIV diagnosis; delivering counseling, testing, and referral services; providing educational programs and materials; and training peers to be role models. They are delivered to individuals, groups, and communities in places such as storefronts, gay bars, health centers, housing communities, faith-based organizations, and schools. Street outreach techniques such as using mobile testing vans, offering incentives for participation or referral, and recruiting peers are some of the ways to reach as many people as possible.

CDC provides leadership, capacity building assistance, and funding for programs at the state, local, and community levels. CDC funding supports staffing, program infrastructure, implementation and evaluation of interventions. In many instances, CDC requires that those who receive funding for programs (grantees) have a proven track record of providing effective programs. CDC also strives to ensure that interventions meet local needs. Specifically, CDC asks that interventions be science based and culturally proficient; that

The primary component in CDC's fight against HIV/AIDS is HIV prevention programs.

The Changing Epidemic

is, they should meet the cultural needs, expectations, and values of the populations they serve. Community planning helps ensure that priorities for HIV prevention are determined locally with input from affected communities and that they are consistent with scientific findings about what interventions are most effective for decreasing HIV transmission.

Evaluation (to measure program effectiveness) is an important part of prevention programs. Programs funded by CDC are required to collect and submit evaluation data so that CDC can track and identify the most effective programs. CDC's evaluation efforts take several forms.

- ▲ Evaluation guidance outlining the types of data each funded health department must collect from its grantees
- ▲ Regular reviews of each funded health department to evaluate effectiveness in community planning
- ▲ Ongoing reviews of funded CBOs

In addition, CDC researches the effectiveness of HIV prevention interventions and the diffusion of these interventions. CDC's Prevention Research Synthesis Project identifies interventions that have proven effective with various groups. The Replicating Effective Programs (REP) project takes proven interventions and packages them in a tool kit for distribution. CDC's Diffusion of Effective Behavioral Interventions (DEBI) project then looks at ways to get these effective interventions to a broader audience.

Health Departments

CDC funds and works with 65 state, local, and territorial health departments to support prevention efforts and programs for people living with HIV and people at risk for HIV. All 65 health departments provide HIV counseling and testing services, which include referral and partner notification. A requirement for CDC funding is the development of a community planning process, which unites health departments and community members in developing an HIV prevention plan that reflects their local epidemic and guides HIV prevention efforts in their local area. Health departments also use CDC funds to support CBOs (indirect funding).



How Is CDC Responding?

Nongovernment Organizations

CDC supports community-based, faith-based, and other nongovernment organizations in building partnerships for HIV prevention. These efforts provide interventions for populations at high risk, including people of color, MSM, substance abusers, and correctional facility inmates. To help people living with HIV/AIDS access prevention and treatment services, these organizations also provide HIV counseling and testing services and programs.

Public-Private Partnerships

CDC works with business and labor groups to enhance the health, productivity, and well-being of workers and their families living with, affected by, or at risk for HIV/AIDS. The Business Responds to AIDS (BRTA) and Labor Responds to AIDS (LRTA) programs are worldwide public-private partnerships that serve as a resource to business and labor on a full range of HIV/AIDS issues. These partnerships set up workplace and related programs that combat complacency and stigma and support community activism, volunteerism, and corporate philanthropy.

Another CDC partnership is AIDS: Act Now! This public-private effort has a council of 50 members from business, faith-based, public health, and HIV communities, and the media. In addition, 5 alliances focus on issues such as leadership, youth, media, HIV testing and clinical care, and Internet technology. In total, CDC has obtained the support of more than 100 partners who volunteer their time to explore how they can use their resources, influence, and outreach capabilities to enhance HIV prevention efforts in communities most affected by HIV and AIDS. As communities of color disproportionately bear the effects of the epidemic, most activities under AIDS: Act Now! are directed toward these groups.

Prevention Strategies

Among CDC's strategies for HIV prevention are

- ▲ providing up-to-date scientific information through guidelines
- ▲ promoting early diagnosis of HIV infection
- ▲ addressing the unique prevention needs of HIV-infected persons
- ▲ building the capacity of health departments and CBOs to

The Changing Epidemic

deliver effective prevention programs that reduce risk for HIV transmission

- ▲ increasing the quality of HIV prevention programs through evaluation

Guidelines

Guidelines are written recommendations for health care providers in the public and private sectors. They are developed after consultations with health care providers, public health officials, patient advocates, and policy experts. They are based on available scientific evidence; where evidence is incomplete, the “best practices” opinions of specialists in the field are used.

Revised Guidelines for HIV Counseling, Testing, and Referral (2001)

Guidelines for HIV counseling, testing, and referral (CTR) were published in 1986 and revised in 1994. After a massive effort to review all current scientific evidence, obtain recommendations, and reach agreement on recommendations, CDC published the Revised Guidelines for HIV Counseling, Testing, and Referral in 2001. Using an evidence-based approach, these guidelines advise providers of voluntary HIV CTR how to improve the quality and delivery of HIV CTR. They underscore the importance of early knowledge of HIV status and of testing that is more accessible and available.

Revised Recommendations for HIV Screening of Pregnant Women

In 1995, the US Public Health Service issued guidelines recommending universal counseling and voluntary HIV testing of all pregnant women and treatment for those infected to prevent mother-to-child HIV transmission. Subsequently, mother-to-child HIV transmission declined dramatically. In 2001, the Revised Recommendations for HIV Screening of Pregnant Women were published. These guidelines strengthen the recommendation that all pregnant women be tested for HIV as part of routine perinatal care, while preserving a woman’s right to make her own decisions about testing.



How Is CDC Responding?

Recommendations for Incorporating HIV Prevention into the Medical Care of Persons Living with HIV

In 2003, CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America developed recommendations to help clinicians incorporate HIV prevention into the medical care of HIV-infected individuals. These recommendations include

- ▲ screening for HIV transmission risk behaviors and sexually transmitted diseases
- ▲ providing behavioral risk-reduction messages in the office and referral for other prevention interventions and related services
- ▲ facilitating the notification and counseling of sex partners and needle-sharing partners

Procedural Guidance for Selected Strategies and Interventions for Community-based Organizations Funded Under Program Announcement 04064

The Procedural Guidance provides information to CBOs about the interventions that are allowable under Program Announcement 04064. It is available at www.cdc.gov/HIV/partners/pa04064_cbo.htm.

HIV Prevention Community Planning Guidance

This guidance, revised in July 2003, defines CDC's expectations for health departments and HIV prevention community planning groups involved in HIV prevention community planning. These and other CDC recommendations and guidelines are available at www.cdc.gov/HIV/pubs/guidelines.htm.

Advancing HIV Prevention: New Strategies for a Changing Epidemic

Advancing HIV Prevention (AHP) is a combined effort of CDC and other agencies (government and nongovernment). It is designed to reduce barriers to early diagnosis of HIV infection and increase access to quality medical care, treatment, and ongoing prevention services for people living with HIV. It emphasizes the use of public health approaches proven effective at reducing new infections

Guidelines are written recommendations for health care providers in the public or private sector.

Advancing HIV Prevention is designed to reduce barriers to early diagnosis of HIV.

and spread of disease, such as appropriate routine HIV testing; identification of new cases; partner counseling, testing, and referral services; and increased availability of treatment and prevention services for HIV-infected persons and their partners. AHP is described in more detail in Section 5, The Future.

Other CDC-funded projects help communities improve referrals to care and prevention services.

- ▲ **Project HEART (Helping Enhance Adherence to Antiretroviral Therapy)**, a clinic-based behavioral intervention for patients who have not previously received HAART
- ▲ **Partnership for Health (Safer Sex and Adherence Intervention for HIV Outpatient Clinics)**, an intervention encouraging health care providers to promote safer sex and adherence to therapy
- ▲ **INSPIRE (Interventions for HIV-Positive Intravenous Drug Users: Research and Evaluation)**, a behavioral intervention to help IDUs decrease their risk for HIV, increase access to care, and increase adherence to HAART

Capacity Building

CDC recognizes that organizations funded to conduct HIV prevention, such as health departments and CBOs, often face challenges to meeting the increased prevention needs of populations at high risk for HIV and other sexually transmitted infections. Examples of these challenges are the need

- ▲ to diversify the funding base to help sustain prevention services
- ▲ for effective behavioral interventions that are based on science and are culturally competent
- ▲ for competent staff
- ▲ for effective strategies to link HIV-negative and HIV-infected persons at high risk to services (testing, prevention, and care)

The goal of CDC's HIV prevention capacity building program is to ensure that health departments and CBOs receive scientifically sound and culturally appropriate capacity building assistance through the following:

- ▲ technology transfer—translating scientific research into programs and practice

How Is CDC Responding?

- ▲ technical assistance—providing expert programmatic, scientific, and technical consultation and support to health department and CBO staff
- ▲ training—building the knowledge, skills, and abilities that health department and CBO staff need to deliver effective HIV prevention interventions and to effectively sustain the organizational infrastructure needed to support HIV prevention services
- ▲ information dissemination—sharing information through print materials, meetings, Web sites, and mass media

Diffusion of Effective Behavioral Interventions (DEBI) is an example of capacity building using technology transfer to disseminate science-based behavioral interventions. DEBI endorses the interventions that are identified by CDC's Prevention Research Synthesis Project.

These interventions are

- ▲ **Community PROMISE (Peers Reaching Out and Modeling Intervention Strategies for HIV/AIDS Risk Reduction in their Community)**, a community-level intervention based on behavior change theories
- ▲ **Healthy Relationships**, a small-group intervention for people living with HIV and AIDS
- ▲ **Holistic Health Recovery Program**, a group-level program to reduce harm and promote health for HIV-infected IDUs
- ▲ **3MV (Many Men, Many Voices)**, a group-level STD/HIV prevention intervention for MSM of color
- ▲ **Mpowerment**, a community-level intervention for young MSM
- ▲ **Partnerships for Health**, a provider-delivered counseling program for people living with HIV/AIDS
- ▲ **POL (Popular Opinion Leader)**, an intervention to identify, enlist, and train key opinion leaders to encourage safe behaviors in their social networks
- ▲ **RAPP (Real AIDS Prevention Project)**, a program to involve the community in reducing HIV risk and unintended pregnancy by increasing condom use

The goal of CDC's HIV prevention capacity building is to help individuals, organizations, and communities enhance and sustain their HIV prevention efforts.



The Changing Epidemic

- ▲ **Safety Counts**, an intervention for active injection drug and crack cocaine users, aimed at reducing high-risk drug use and sexual behaviors
- ▲ **SISTA (Sisters Informing Sisters About Topics on AIDS)**, a group intervention for African American women, to help them increase condom use
- ▲ **Street Smart**, a skills-building program to help runaway and homeless youth practice safer sexual behaviors and reduce substance abuse
- ▲ **TLC (Together Learning Choices)**, an intervention for young people, 13–29 years old, who are living with HIV
- ▲ **VOICES/VOCES (Video Opportunities for Innovative Condom Education and Safer Sex)**, a video-based intervention to increase condom use among heterosexual African American and Hispanic men and women who visit STD clinics

A second group of interventions will follow. Plans call for diffusion of more behavioral interventions as well as structural and biomedical interventions.

Evaluation

Evaluation activities focus on results by

- ▲ managing and measuring program performance
- ▲ improving the quality of HIV prevention programs
- ▲ promoting accountability

Program Performance Indicators

As specified in the President's Management Agenda, CDC has incorporated program performance indicators into its cooperative agreements with HIV prevention providers. The purpose is to improve performance and accountability of programs. Beginning in 2005 all directly funded health departments and CBOs will report on measures of HIV prevention planning, service delivery, and evaluation activities. The performance indicators will be used to monitor progress in critical areas of HIV prevention. The specific components of HIV prevention programs addressed by the indicators include

- ▲ HIV infections
- ▲ community planning



How Is CDC Responding?

- ▲ prevention activities
 - Counseling, testing, and referral services
 - Partner counseling and referral services
 - Prevention for HIV-infected persons
 - Health education and risk-reduction activities
 - Prevention of mother-to-child HIV transmission
- ▲ evaluation of reporting compliance
- ▲ capacity building activities

PEMS (Program Evaluation and Monitoring System)

CDC has developed PEMS to strengthen monitoring and evaluation of HIV prevention programs. PEMS is to be used by health departments and CBOs funded through CDC HIV prevention cooperative agreements. PEMS is a secure Internet browser-based software program for data entry and reporting. PEMS software was first released in the fall of 2004 to 42 health departments and 27 CBOs. It allows grantees to collect agency, community planning, and program plan data. The next release, scheduled for fall 2005, will enable grantees to enter client-level data and report to CDC. By the end of 2005, PEMS will be available to over 200 agencies nationwide. PEMS will ensure that CDC receives standardized, accurate, and thorough program data from health department and CBO grantees. The data include

- ▲ agency information
- ▲ program plan details
- ▲ client demographics
- ▲ referral outcomes
- ▲ HIV test results
- ▲ partner elicitation and notification
- ▲ client use of services
- ▲ behavioral outcomes
- ▲ community planning priority populations and interventions

These data will allow more comprehensive reporting of HIV prevention activities, fiscal information, and community planning information. These data will help HIV prevention stakeholders examine program fidelity, monitor use of key program services and behavioral outcomes, and calculate and report the program performance indicators.

To improve the quality of HIV prevention programs, CDC is focusing on results.

The Changing Epidemic

PEMS will help CDC monitor, evaluate, and coordinate HIV prevention programs and support the rapid set-up of special studies and evaluation projects.

Research

Among its many HIV research activities, CDC is involved in research related to

- ▲ diagnostic tests
- ▲ microbicides
- ▲ vaccines

Diagnostic Tests

Since November 2002, the Food and Drug Administration has approved 4 rapid HIV tests. These tests offer many advantages over conventional HIV blood tests. Sample collection is easier (for example, from a finger prick or oral fluid), and they are easy to use outside of traditional laboratories so they are suitable for doctors' offices and community and outreach settings. Perhaps the biggest benefit of rapid tests is their ability to give results in 30 minutes or less. Because test results are available quickly, rapid HIV tests dramatically increase the number of people who get tested and find out their results that day. This represents a significant public health achievement because those who know they are infected with HIV can get treatment.

Evidence also shows that persons who know they are infected adopt changes that dramatically reduce their risk of transmitting the virus to others.

Rapid HIV tests also help further reduce the number of infected infants born to HIV-infected mothers. HIV transmission from mother to infant can be decreased by almost half if antiretroviral treatment is started during labor.

CDC is involved in many areas of rapid HIV testing, such as the following:

- ▲ Evaluating the accuracy of rapid tests
- ▲ Providing training on rapid tests



How Is CDC Responding?

- ▲ Publishing information in the scientific literature
- ▲ Maintaining an updated Web site
- ▲ Helping other federal agencies introduce rapid HIV testing into their projects
- ▲ Funding demonstration projects

In 2003, CDC funded 21 health departments and CBOs for 2-year demonstration projects for rapid HIV tests. These awards are used for incorporating rapid testing into routine medical care, partner counseling and referral services, short-stay correctional facilities, nonclinical settings, and social networks. These projects have shown that rapid tests are an important part of HIV prevention efforts.

Microbicides

CDC is actively involved in research to identify and test potential HIV microbicides. Microbicides are gels, creams, or suppositories that can kill or neutralize viruses and bacteria. When applied in the vagina before sexual intercourse, they can protect against some sexually transmitted diseases. A safe, effective, and affordable microbicide against HIV could help to prevent many new infections.

Thailand

CDC collaborated with the Thailand Ministry of Health and the Population Council to conduct Phases I and II (safety and efficacy) clinical trials of Carraguard, a candidate vaginal gel microbicide, in HIV-negative women and heterosexual couples. Testing of other compounds will begin in 2005.

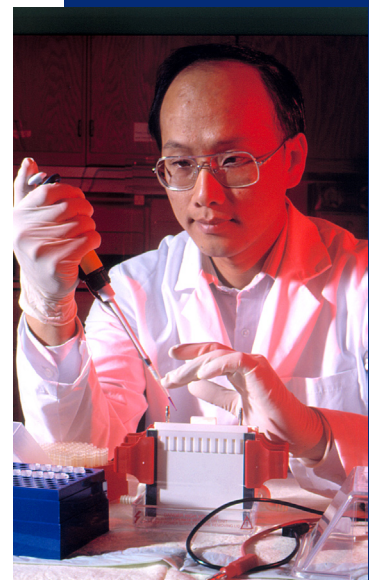
Botswana

CDC is collaborating with the Botswana Ministry of Health to develop a site for Phases I, II, and III (safety and efficacy) testing of microbicide candidates. Plans are under way to begin Phase I studies in 2006.

United States

CDC is conducting preclinical (animals and laboratory) and Phases I and II clinical trials of potential new HIV microbicides. In its own laboratories, CDC is also examining the toxicity and efficacy of some microbicides against HIV.

In November 2002, the Food and Drug Administration approved a simple, rapid HIV test.



Drugs to Prevent HIV (chemoprophylaxis)

CDC is conducting studies to test an antiretroviral agent, tenofovir disoproxil fumarate. Tenofovir will be tested for safety, tolerance, and effectiveness when used by people at risk before exposure to HIV. Clinical trials began in 2005. Finding a drug that effectively prevents HIV without increasing drug resistance could significantly affect HIV prevention strategies.

Botswana

CDC is collaborating with the Botswana Ministry of Health to conduct safety and efficacy trials of tenofovir among heterosexual persons at risk for HIV infection.

Thailand

CDC is collaborating with the Thailand Ministry of Health to conduct safety and efficacy trials of tenofovir among IDUs.

United States

CDC is conducting clinical trials among MSM to test for the safety of tenofovir.

Vaccines

The intervention most anticipated by everyone working to stop the HIV/AIDS epidemic is a vaccine to prevent infection. CDC is no stranger to vaccine development (considering its experience with other vaccines such as measles, hepatitis B, polio, and smallpox), but developing an HIV vaccine presents unique challenges. For example, it is critical that no one (whether involved in the studies or not) abandon safer sexual and drug-related behaviors proven to prevent HIV infection. Overall, vaccine development must not endanger progress already made in HIV prevention.

Until a vaccine is available, and even afterwards, we must continue to reinforce the already proven methods of HIV prevention.

CDC's HIV vaccine research focuses on conducting and evaluating HIV vaccine trials in the United States and elsewhere. CDC played an important role in the world's first 2 efficacy trials of HIV vaccine candidates. Although the results indicated that the vaccines were not effective in reducing the risk for HIV infection, the trials

CDC is actively involved in research to identify and test potential HIV microbicides.

provided critical information that will guide future research on HIV vaccines. Through an agreement with the National Institutes of Health and through membership in the Partnership for AIDS Vaccine Evaluation, CDC is currently contributing to the US government's effort to develop a safe and effective HIV vaccine.

United States

CDC collaborated with a US vaccine developer, VaxGen, in the world's first efficacy trial of an HIV vaccine (AIDSVAX B/B gp 120). At 6 sites, CDC also sponsored extensive substudies on how the vaccine affected risk behavior.



Thailand

CDC collaborated with VaxGen, the Bangkok Metropolitan Administration, and Mahidol University to test the efficacy of a vaccine (AIDSVAX B/E gp 120) in Bangkok. CDC helped develop counseling, educational, and prevention materials. CDC and the Thai government also identified persons willing to participate and to be followed up to evaluate risk behaviors and infection. CDC also worked with the community to build the understanding and support necessary for such a trial. CDC, Thai health officials, and VaxGen ensured that participants received appropriate risk-reduction counseling and were fully informed about how the trial worked, the potential risks and benefits, and the importance of maintaining good risk-reduction behaviors during the trial. CDC also evaluated the clinical care and disease progression of participants who become HIV-infected during the trial.

Africa

Along with Emory University and the National Institutes of Health, CDC helped develop a prototype vaccine (HIV-1 subtype A/G DNA+MVA) for people in West/Central Africa. CDC is also helping with preparations for HIV vaccine clinical trials in West/Central and East Africa. In Cameroon and Kenya, CDC is collaborating with Ministries of Health to help develop the capacity to conduct HIV vaccine clinical trials.

Until a vaccine is available, and even afterwards, we must continue to reinforce the already proven methods of HIV prevention.



FOUR

SPECIFIC POPULATIONS
HOW ARE THEY AFFECTED?

HIV-related illness and death have had a devastating effect on MSM.

Trends among MSM

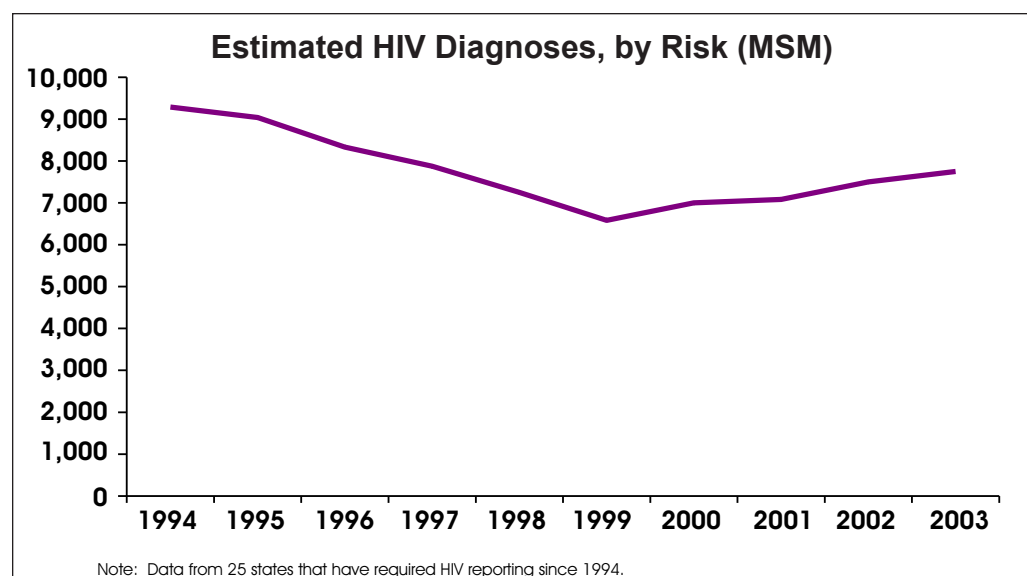
HIV-related illness and death have had a devastating effect on MSM. Despite dramatic decreases in AIDS incidence in this population, MSM continue to account for the largest number of people for whom AIDS is diagnosed each year. Research suggests that some MSM are less concerned now than in the past about becoming infected and may be inclined to take more risks. This trend is backed up by reported increases in other STDs among MSM in several large US cities and elsewhere.

AIDS

MSM accounted for nearly half (42%) of all estimated AIDS cases in men and women (including adolescents) diagnosed in 2003. In that year alone, 17,969 AIDS cases in MSM were diagnosed, compared with 6,353 cases in men who acquired their infection through injection drug use, 5,133 through sex with women, and 1,877 through having sex with men and injecting drugs.

HIV

Data from the 25 states with long-standing HIV reporting show that estimated new HIV diagnoses in MSM declined from 1994 through 1999 and then began to rise. The increase since 1999 may be the result of more people being tested, or it may represent new infections. More data are needed to help explain this increase.



How Are They Affected?

Data reported in 2003 from 41 areas with confidential HIV reporting indicate that MSM still represent the largest proportion of new HIV cases among men for which risk is known (46%), compared with IDUs (11%), men who have sex with women (9%), and MSM who inject drugs (3%).

Data from the 2004 National HIV Behavioral Surveillance (NHBS) system among young MSM surveyed in 5 US cities show that

- ▲ prevalence (number living with HIV at a given point in time) and incidence (number of new infections over a period of time) of HIV are high
- ▲ many HIV-infected MSM, especially younger and black MSM, are unaware of their infection
- ▲ among MSM with unrecognized infection
 - nearly half probably became infected during the past year
 - many had not recently been tested because they feared positive test results

These findings suggest that the HIV epidemic among MSM is continuing well into the third decade and underscore the need to increase testing and improve primary prevention practices for MSM.

Examples of CDC Programs and Research for MSM

Programs for MSM face the challenge of cultural barriers, including stigma, especially in communities where black, Hispanic, and other men of color live.

Interventions found to be effective for MSM include

- ▲ small-group lectures on HIV transmission
- ▲ training on negotiating condom use and communicating about safer sex
- ▲ training popular MSM opinion leaders to promote safer sex

One of CDC's HIV Prevention Strategic Plan objectives for this population is to increase among MSM the proportion who consistently engage in behaviors that reduce risk for HIV acquisition or transmission.

CDC activities that address these objectives include

- ▲ **Strategies to Address Sexually Transmitted Diseases and HIV Transmission among MSM.** In July 2005, CDC held a meeting to consult with leaders of gay men's organizations. The key questions addressed related to how gay organizations and CDC could increase awareness of and actions in response to increasing rates of syphilis and HIV transmission.
- ▲ **Joint Internal CDC Workgroup.** This group developed a Nine-Point MSM Plan, which focuses on prevention strategies for reaching MSM.
- ▲ **Behavioral Surveillance.** National HIV Behavioral Surveillance (NHBS) assesses HIV risk behaviors and trends in behaviors among MSM in 25 metropolitan areas.

Programs

CDC provides 40 awards to directly funded CBOs that focus primarily on MSM and provides indirect funding through state, territorial, and local health departments to organizations serving MSM. Of these 40 awards, 68% focus on blacks; 23%, Hispanics; 2%, Asians and Pacific Islanders; and 7%, whites. In terms of age groups, 28% focus on adults; 65%, youth; 3%, elderly people; and 4% are not reported.

One of CDC's HIV Prevention Strategic Plan objectives for this population is to increase among MSM the proportion who consistently engage in behaviors that reduce risk for HIV acquisition or transmission.

Research

Brothers y Hermanos

This 4-year study will examine psychological, social, cultural, and environmental factors associated with HIV risk behavior among black and Hispanic MSM in 3 US cities. The results should shed light on how these factors differ between men who become infected with HIV and those who remain free of infection.

Development of prevention messages for MSM

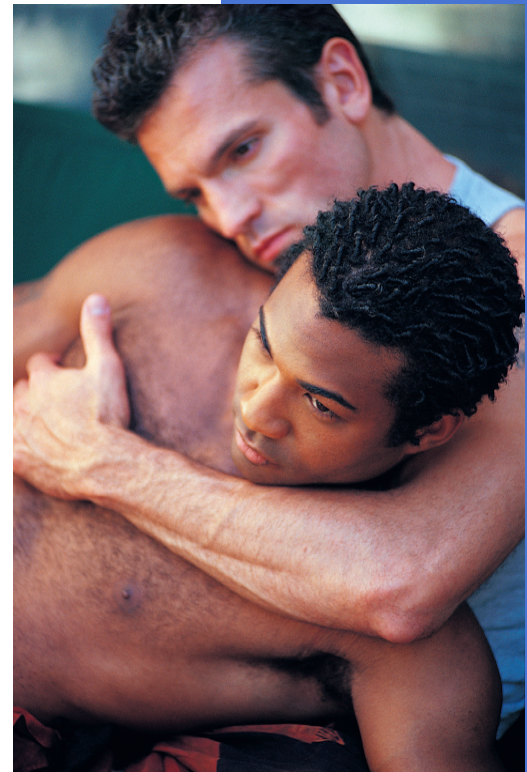
Two research activities have focused on the design of prevention messages for MSM. The first studies assessed attitudes toward potential HIV risk-reduction practices, knowledge of scientific developments, and potential effectiveness of prevention measures focused on risk perceptions and behavioral intentions. The second studies evaluate message effectiveness and different methods for communicating the relative risk of specific sexual practices, appeals to protect oneself compared with appeals to protect one's partner, and variations in the directness of visual materials and language.

Project Mix

Project Mix tests a behavioral intervention to reduce sexual risk associated with substance use among MSM who use alcohol and other noninjection drugs. The activities and discussions aim to help the men reduce sexual risk behavior and substance use. Participant groups are diverse in terms of HIV status, race and ethnicity, sexual orientation identification, socioeconomic status, substance use of choice, and pattern of substance use. The intervention is being tested in 4 US cities.

Rapid HIV Testing at Minority Gay Pride Events

In 2004, CDC and collaborating state and local health departments assessed the feasibility of rapid HIV testing at 5 minority gay pride events in 4 US cities. Rapid HIV testing at these events was determined to be feasible, accepted by clients and staff, and effective at identifying persons with previously undiagnosed HIV infection. During the summer and fall of 2005, CDC will provide funds to set up rapid testing programs at approximately 4 minority gay pride or similar events for minority populations.



Trends among IDUs

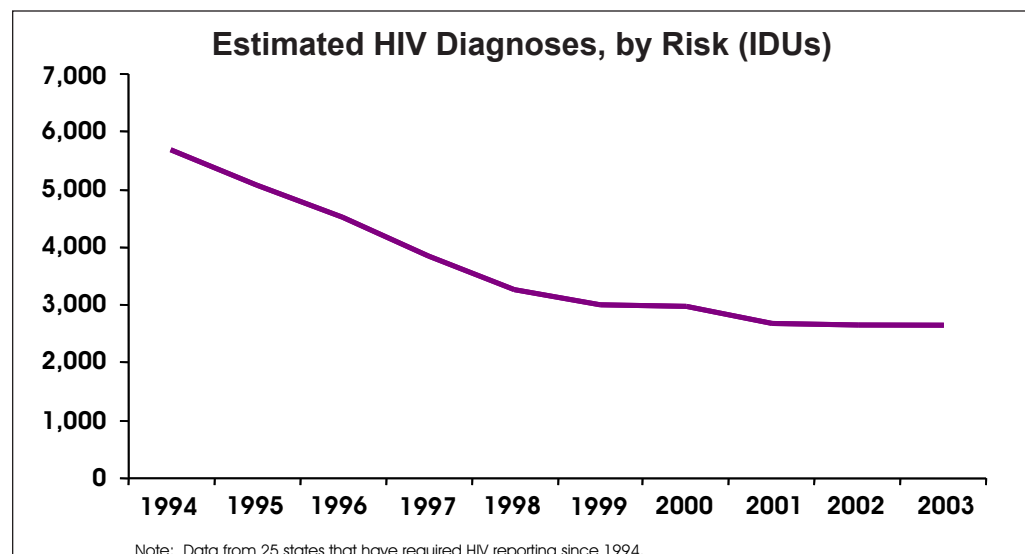
Drug injection was identified as a risk factor for HIV/AIDS early in the epidemic. HIV is transmitted among IDUs who share injection drug equipment or have unprotected sex with an infected partner.

AIDS

Since the beginning of the epidemic, injection drug use has directly or indirectly accounted for more than one third (38%) of estimated AIDS cases diagnosed in the United States. This association appears to be continuing. Of all new cases of AIDS diagnosed in 2003, nearly one quarter (22%) were in IDUs.

Racial and ethnic minority populations are most heavily affected. In 2003, injection drug use alone accounted for 25% of all AIDS cases diagnosed in black men and women and 24% of all AIDS cases diagnosed in Hispanic men and women, compared with only 16% in white men and women.

Among women, injection drug use accounts for a larger proportion of AIDS cases than it does among men. Since the epidemic began, 58% of all AIDS cases in women have been attributed to injection drug use or sex with partners who inject drugs, compared with 34% in men.



Since the beginning of the epidemic, injection drug use has directly or indirectly accounted for more than one-third (36%) of AIDS cases in the United States.

How Are They Affected?

HIV

The good news is that new HIV diagnoses seem to be declining overall among IDUs, with a 53% decrease in estimated new HIV diagnoses from 1994 through 2003 in the 25 states with long-standing HIV reporting.

In 2003, data reported from 41 areas with confidential HIV infection reporting showed that among IDUs, blacks accounted for 40% of HIV infections, compared with Hispanics, 33%, and whites, 25%.

Specific Populations

Examples of CDC Programs and Research for IDUs

Preventing the spread of HIV through injection drug use requires several approaches, including programs to prevent initiation of drug use, substance abuse treatment programs, education about HIV prevention, and access to sterile needles and syringes for those who are unwilling or unable to stop injecting.

Interventions found to be effective for IDUs include

- ▲ skills building for heterosexual women receiving methadone treatment
- ▲ problem-solving therapy models for incarcerated male adolescent IDUs
- ▲ training to reduce sexual and drug-related HIV risk behaviors for IDUs receiving treatment for substance abuse

One of CDC's HIV Prevention Strategic Plan objectives for this population is to increase among IDUs the proportion who abstain from drug use or, for those who do not abstain, increase the proportion who use a clean, sterile syringe for each injection to reduce risk for HIV acquisition or transmission.

CDC activities that address these objectives include

- ▲ **Behavioral Surveillance.** National HIV Behavioral Surveillance (NHBS) assesses HIV risk behaviors and trends in behaviors among IDUs in 25 metropolitan areas.
- ▲ **REP (Replicating Effective Programs).** These “prevention in a box” projects take interventions proven effective with specific populations, including IDUs, and package them into kits for use by local HIV prevention agencies. Examples of interventions that have proven effective in reducing HIV risk behaviors among IDUs include Holistic Health Recovery, Street Smart, and Safety Counts.

Programs

CDC provides 4 awards to directly funded CBOs that focus primarily on IDUs. Of these 4 awards, 25% focus on blacks; 25%, Hispanics; 25%, whites; and 25%, American Indians and Alaska Natives. In terms of age groups, 100% focus on adults.

One of CDC's HIV Prevention Strategic Plan objectives for this population is to increase among IDUs the proportion who abstain from drug use or, for those who do not abstain, increase the proportion who use a clean, sterile syringe for each injection to reduce risk for HIV acquisition or transmission.

How Are They Affected?

Research

INSPIRE (Interventions for HIV-Seropositive IDUs—Research and Evaluation)

CDC and the Health Resources and Services Administration jointly funded INSPIRE in late 1999 as a 5-year study to link prevention and treatment in each of 4 cities (Baltimore, Miami, New York, and San Francisco). The intervention consists of 10 sessions that focus on building cognitive-behavioral skills and encouraging participants to mentor their peers. The results from this study are pending. A description of the study design, methods, and baseline data was published in the *Journal of Acquired Immune Deficiency Syndromes* in 2004.

DUIT (Drug Users Intervention Trial)

CDC supports and collaborates on a behavioral intervention trial that has been found effective for lowering the risk for HIV and hepatitis C infections in IDUs in Baltimore, Chicago, Los Angeles, New York, and Seattle.



Since 1985 the proportion of AIDS cases diagnosed among women has more than tripled, from 8% in 1985 to 27% in 2003.

Trends among Heterosexual Adults

Historically, the HIV/AIDS epidemic has affected more men than women, but women are being increasingly affected. Since 1985 the proportion of estimated AIDS cases diagnosed among women has more than tripled, from 8% in 1985 to 27% in 2003.

AIDS

The epidemic has increased most dramatically among women of color. Although black and Hispanic women together represent about one fourth of all US women, they account for more than three fourths of estimated AIDS cases diagnosed to date among US women. In 2003, black and Hispanic women represented an even greater proportion (83%) of diagnosed cases in women.

Despite continuing decreases in HIV/AIDS-related deaths in men and women, HIV/AIDS remains the fifth leading cause of death in the United States for men and women aged 35–44 years and one of the top 10 leading causes of death for men and women aged 20–54. For blacks in these age groups, HIV/AIDS ranks even higher as a cause of death.

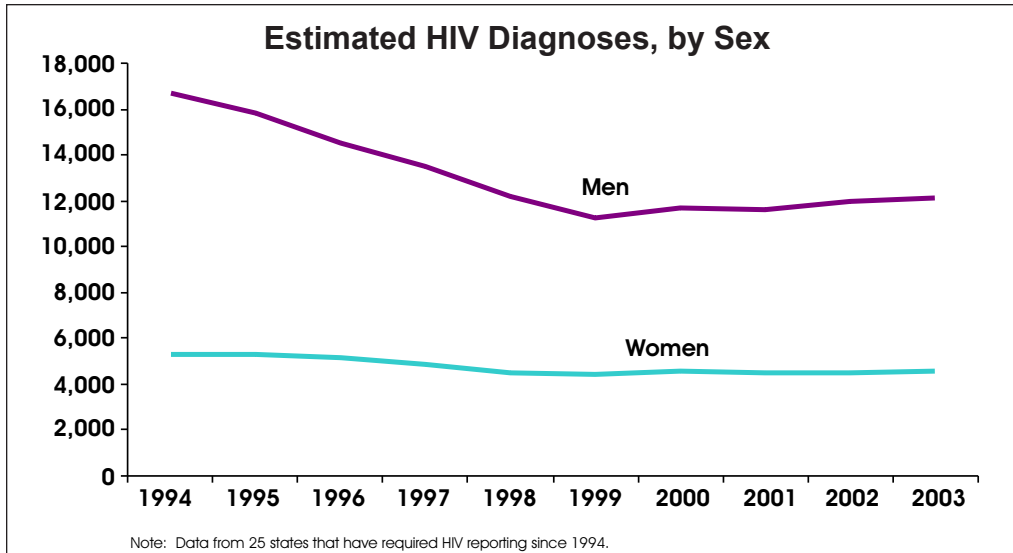
HIV

Although each year more men than women become infected with HIV, this gap is slowly closing. Data from the 25 states with long-standing HIV reporting show that new HIV diagnoses in men declined 27% from 1994 through 2003.

Transmission routes differ by gender. Data from 2003 show that

- ▲ among men, HIV transmission is estimated to occur 63% through sexual contact with men, 14% through injection drug use, and 17% through sexual contact with women.
- ▲ among women, HIV transmission is estimated to occur 79% through sexual contact with men (many of whom are IDUs or also have sexual contact with men) and 19% through injection drug use.

How Are They Affected?



Specific Populations

Examples of CDC Programs and Research for Heterosexual Adults

Research has shown that women, as well as men, benefit from HIV prevention programs. Women benefit from programs aimed at increasing their awareness of their own risk, assertiveness in sexual situations, and coping skills.

In its funding of prevention programs for women, CDC emphasizes

- ▲ prevention and treatment services for young women and women of color
- ▲ better integrated prevention and treatment services for all women
- ▲ recognition of the intersection of drug use and sexual HIV transmission, especially among women who trade sex for drugs or money
- ▲ research on effective female-controlled prevention methods for women who are unwilling or unable to negotiate condom use with a male partner
- ▲ programs with a proven record of effectiveness for changing risky behaviors and sustaining those changes over time

Interventions found to be effective include

- ▲ teaching young heterosexual black women about assertiveness, negotiation, and condom use
- ▲ teaching male and female low-income, urban patients at high risk about expectations of outcome, skills, and the belief that one's words and actions will be effective at preventing HIV transmission
- ▲ showing videos on assertiveness, negotiation, and planning skills to promote abstinence and safer behaviors among single, inner-city pregnant women

One of CDC's HIV Prevention Strategic Plan objectives for this population is to increase among at-risk sexually active women and at-risk heterosexual men the proportions who consistently engage in behaviors that reduce risk for HIV acquisition or transmission.

One of CDC's Strategic Plan objectives for this population is to increase among at-risk sexually active women and at-risk heterosexual men the proportions who consistently engage in behaviors that reduce risk for HIV acquisition or transmission.

How Are They Affected?

CDC activities and strategies that address these objectives include

- ▲ **The Revised Recommendations for HIV Screening of Pregnant Women**
- ▲ **Behavioral Surveillance.** National HIV Behavioral Surveillance (NHBS) will assess HIV risk behaviors and trends in behaviors among high-risk heterosexuals in 25 metropolitan areas. Currently, NHBS sites are conducting pilot studies to determine the best definition of high-risk heterosexual and places to recruit this population for the behavioral surveys.

Programs

CDC provides 22 awards to directly funded CBOs that focus primarily on women. Of these 22 awards, 54% focus on blacks; 41%, Hispanics; and 4%, whites. In terms of age groups, 45% focus on adults; 45%, youth; and 10% are not reported.

Using Social Network Strategies for Reaching Persons at High Risk for HIV Infection in Communities of Color

In October 2003, funding was awarded to 9 CBOs in 7 cities to demonstrate the feasibility of using social network strategies to reach persons at high risk for HIV infection and provide them HIV counseling, testing, and referral services. As of September 2004, the 133 enlisted recruiters had referred 814 persons from their social, sexual, or drug-using networks to get tested for HIV. For the 46 (6%) who received positive test results, this was the first time they learned that they were HIV-infected.

Research

Safe City Project

The Safe City Project, which began in October 2001, was designed to develop and evaluate a video-based prevention intervention for patients in STD clinics. The primary goals are to assess whether showing a brief 23-minute educational video to male and female patients in the waiting room can reduce risky sexual behaviors and new STDs for these patients. After 3 months, researchers will compare levels of high-risk sexual behavior between the 900 patients who saw the video and another 900 who did not. After 1 year, they will compare number of new STDs diagnosed for each group.

Trends among People of Color

People of color are disproportionately affected by the HIV/AIDS epidemic. In the early 1980s, most AIDS cases occurred in whites. However, cases in blacks increased steadily, and by 1996 more cases occurred in blacks than in any other racial or ethnic population. AIDS cases have also increased in Hispanics, Asians, Pacific Islanders, American Indians, and Alaska Natives.

AIDS

Although blacks represent a small proportion (13%) of the US population, they accounted for a large proportion of the estimated cumulative AIDS cases (40%) and AIDS deaths (37%) through 2003. Likewise, Hispanics represent about 12% of the US population, but they accounted for an estimated 19% of AIDS cases and 18% of AIDS deaths through 2003.

In terms of risk groups for black men for whom AIDS was diagnosed in 2003, MSM represent 46%; IDUs, 25%; and heterosexuals, 23%. Of risk groups for Hispanic men with AIDS, MSM represent 53%; IDUs, 23%; and heterosexuals, 17%.

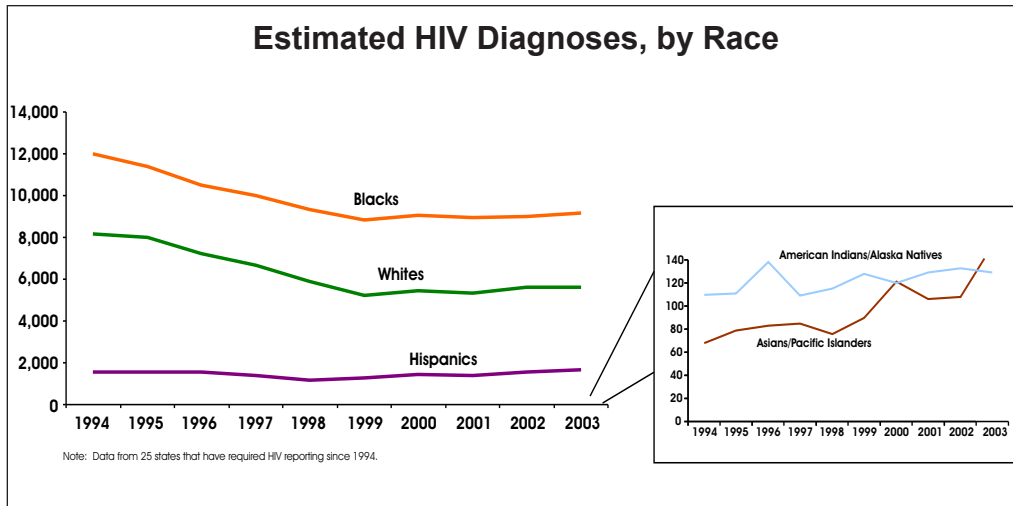
Among black women for whom AIDS was diagnosed in 2003, injection drug use accounted for an estimated 25% of all cases and heterosexual contact for 72%. Among Hispanic women with AIDS, heterosexual contact accounted for an estimated 71% of cases and injection drug use for 27%.

HIV

The disparity between black and white people continues. Data from the 25 states with long-standing HIV reporting from 1994 through 2003 indicate that an estimated 55% of people with a new diagnosis of HIV were black (and not Hispanic), compared with 35% who were white (and not Hispanic). New HIV diagnoses from 1994 through 2003 declined more sharply among whites (31%) than among blacks (24%). Of the roughly 1 million people estimated to be living with HIV at the end of 2003, 46% were black.

People of color are disproportionately affected by the HIV/AIDS epidemic.

How Are They Affected?



Specific Populations

Examples of CDC Programs and Research for People of Color

CDC is committed to working with communities of color to ensure that those who have been disproportionately affected by HIV/AIDS have access to early testing, treatment, and prevention services and programs that work.

Interventions found to be effective for people of color include

- ▲ using culturally appropriate videos to teach small groups of sexually active black and Hispanic men and women about condom use, negotiation skills, and safer sex
- ▲ teaching health care providers how to work with young black and Hispanic MSM and heterosexuals in prevention activities
- ▲ providing risk-reduction activities; access to HIV counseling, testing, and referral services; and prevention information to black youth
- ▲ training black youth as peer educators in their communities
- ▲ offering HIV counseling and testing services and outreach activities to black churches and offering outreach, discharge planning, community case management, and education services to correctional institutions

The CDC HIV Prevention Strategic Plan's overarching national goal focuses on eliminating racial and ethnic disparities in new HIV infections.

CDC activities that address this goal include

- ▲ **Supplemental Funding for Community-based Strategies to Increase HIV Testing of Persons at High Risk in Communities of Color.** These funds support a social network model to increase HIV counseling and testing among high-risk minority communities.
- ▲ **Research Fellowship on HIV Prevention in Communities of Color.** This program supports the training of scientists researching sociocultural, structural, psychological, and behavioral factors in minority health and HIV.
- ▲ **MARI (Minority HIV/AIDS Research Initiative).** This capacity-building initiative funds investigators working on HIV/AIDS research gaps in black and Hispanic communities.

The CDC HIV Prevention Strategic Plan's overarching national goal focuses on eliminating racial and ethnic disparities in new HIV infections.

How Are They Affected?

Programs

CDC provides more than \$300 million to help communities build and sustain sound, innovative HIV prevention programs. In addition, the Minority AIDS Initiative provides funding to state and local health departments for HIV prevention resources for minority populations at high risk. CDC provides 179 awards to directly funded CBOs that focus primarily on people of color. Of these 179 awards, 59% focus on blacks; 25%, Hispanics; 13%, Asians and Pacific Islanders; and 1% American Indians and Alaska Natives. In terms of age groups, 69% focus on adults; 25%, youth; and 6%, elderly people.

Using Social Network Strategies for Reaching Persons at High Risk for HIV Infection in Communities of Color

In October 2003, funding was awarded to 9 CBOs in 7 cities to demonstrate the feasibility of using social network strategies to reach persons at high risk for HIV infection and provide them HIV counseling, testing, and referral services. As of September 2004, the 133 enlisted recruiters had referred 814 persons from their social, sexual, or drug-using networks to get tested for HIV. For the 46 (6%) who had positive HIV test results, this was the first time they learned that they were HIV-infected.

Research

Project START

Conducted at 4 sites from 1998 through 2003, this HIV and STD prevention project is for young men being released from prison. At 24 weeks after release, men who received an enhanced intervention (before and after release) were significantly less likely to report having had unprotected sex during their most recent sexual encounter (59%) than were men who received a 1-session intervention (69%) before release.

Brothers y Hermanos

This 4-year study will examine psychological, social, cultural, and environmental factors associated with HIV risk behavior among black and Hispanic MSM in 3 US cities. The results should shed light on how these factors differ between men who become infected with HIV and those who remain free of infection.



The HIV/AIDS epidemic has taken a heavy toll on young people in the United States.

Trends among Youth

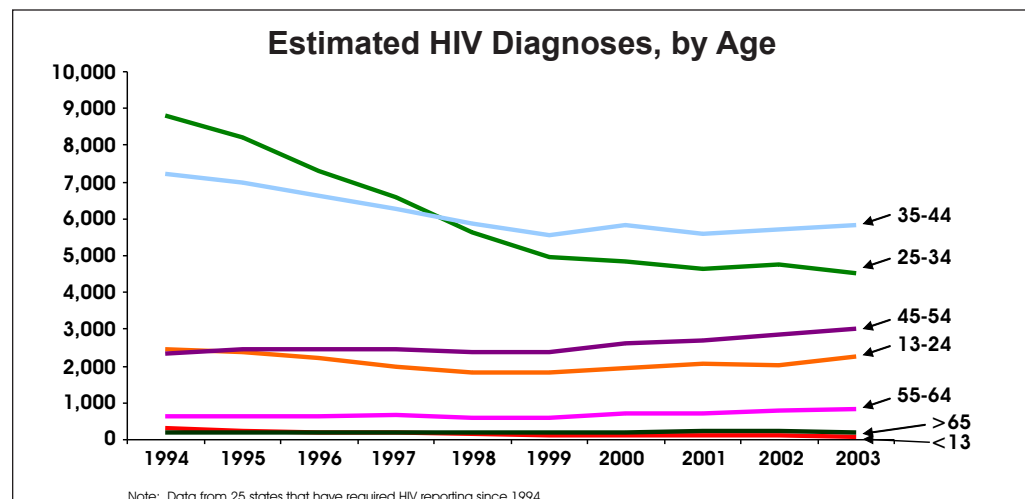
The HIV/AIDS epidemic has taken a heavy toll on young people in the United States. Because it is presumed that young people with HIV were infected fairly recently, scientists believe that HIV infections among youth may indicate trends in the overall HIV/AIDS epidemic. Trends in STDs other than HIV among young persons serve as indicators of risk behaviors for HIV.

AIDS

From the beginning of the epidemic through 2003, an estimated 9,789 young people (aged 15–24 years) with AIDS have died. Fortunately, since the late 1980s (from 1989 through 2003), deaths from AIDS have declined 71% for people in this age group. However, the challenges of addressing disparities in care, preventing secondary transmission of HIV, and meeting the social and medical needs of persons living with HIV or AIDS are especially critical for youth, considering their long-term needs.

HIV

Data from the 25 states with long-standing HIV reporting show that among people aged 25–34 years, the estimated number of new diagnoses from 1994 through 2003 declined by a remarkable 49%. However, in youth aged 13–24, new HIV diagnoses remained stable during this time period.



How Are They Affected?

Young women and young black men and women are being increasingly affected by HIV. In 2003, data reported from 41 areas with confidential HIV reporting showed that young women account for nearly half (40%) of HIV infections in those aged 13–24 years. Black youth have been most heavily affected, accounting for 55% of all HIV infections reported among those aged 13–24 in areas with confidential HIV reporting.

Young MSM, especially those of color, are also at high risk for HIV infection. The CDC Young Men's Survey showed that from 1994 through 1998, 14% of black MSM and 7% of Hispanic MSM aged 15–22 years were HIV-infected.



Specific Populations

Examples of CDC Programs and Research for Youth

Prevention research has identified many interventions that help young people adopt healthier behaviors. Parents have been shown to be powerful resources. CDC's primary message for youth is abstinence.

Interventions CDC has found effective with youth include

- ▲ holding small-group discussions among young MSM about reducing unsafe sexual behaviors, training others to conduct informal outreach, and conducting a publicity campaign
- ▲ teaching runaway youth safer behaviors through role-playing and problem-solving exercises to help them identify triggers and decrease harmful behavior
- ▲ teaching students to postpone sex and reduce unsafe sexual and drug-using behaviors

One of CDC's HIV Prevention Strategic Plan objectives for this population is to increase among adolescents the proportion who consistently engage in behaviors that reduce risk for HIV acquisition or transmission.

CDC activities that address this goal include

- ▲ **HIV Prevention Projects for Community-based Organizations Targeting Young Men of Color Who Have Sex with Men.** These programs create, put into place, and sustain services to help prevent HIV in young MSM of color, their sex partners, and transgendered youth.
- ▲ **Pregnancy in Perinatally Infected Youth.** This study looks at teenagers who had acquired HIV from their mothers and are now pregnant and having their own children.
- ▲ **REP (Replicating Effective Programs).** This "prevention in a box" project takes interventions proven effective with specific populations and packages them into kits for use by local HIV prevention agencies. Of 10 interventions, 3 serve youth only and 2 others include youth in their populations served.
- ▲ **School-based HIV Prevention.** These programs support 48 state education agencies, 18 large city education agencies, 7 territorial agencies, and 37 national nongovernment organizations to help set up school health programs that provide

One of CDC's HIV Prevention Strategic Plan objectives for this population is to increase among adolescents the proportion who consistently engage in behaviors that reduce risk for HIV acquisition or transmission.

How Are They Affected?

young people with skills and information to avoid or reduce behaviors that put them at risk for HIV infection. In 2003, 88% of all high school students reported receiving HIV prevention education.

Programs

CDC provides 36 awards to directly funded CBOS that focus primarily on youth and provides indirect funding through state, territorial, and local health departments to organizations serving youth. Of these 36 awards, 75% focus on blacks; 19%, Hispanics; 3%, Asians and Pacific Islanders; and 3%, whites.

Parents Matter!

This community-based intervention promotes effective parenting and parent-child communication to reduce sexual risk. Although parents are in a unique position to provide early and continuous HIV prevention messages, many lack the information, skills, comfort, or confidence to do so.

Partnership for Adolescent Wellness Study (PAWS)

PAWS is a formative research study of black youth (aged 12–17 years) whose mothers use crack cocaine. Conducted in 2 cities in North Carolina, the study explores what influences HIV-related risk behaviors of these young people.

Research

CITY (Community Intervention Trials for Youth)

CITY evaluated approaches for encouraging young men who engage in HIV-risk behaviors, especially racial and ethnic minorities aged 15–25, to change these behaviors.

YMS (Young Men's Survey)

This study, conducted in 2 phases (1994–1998 and 1998–2000), measured HIV infection (and hepatitis and syphilis) and related risk behaviors of young MSM.

YWS (Young Women's Survey)

This survey, conducted in 1999, examined sexual behaviors and HIV risk behaviors of young black women at clinics in New York City and Dallas.

Trends among Pregnant Women and their Infants

HIV transmission from mother to child (also called perinatal transmission) can occur during pregnancy, labor, delivery, or breast-feeding. Mother-to-child HIV transmission accounts for over 90% of all AIDS cases in US children.

During the early to mid 1990s, 6,000 to 7,000 HIV-infected women gave birth each year. An estimated 1 in 4 of these newborns acquired the mother's HIV infection. Had this transmission rate continued, an estimated 1,750 HIV-infected infants would have been born in the United States each year, and lifetime medical costs for these infants may have reached \$282 million. Fortunately, this trend was successfully interrupted. With current estimates being 280 to 370 perinatal infections each year and costs per individual \$185,000, lifetime costs are closer to \$60 million.

This decline in the number of HIV-infected infants occurred after the 1994 and 1995 US Public Health Service recommendations for preventing mother-to-child HIV transmission.

The recommendations include

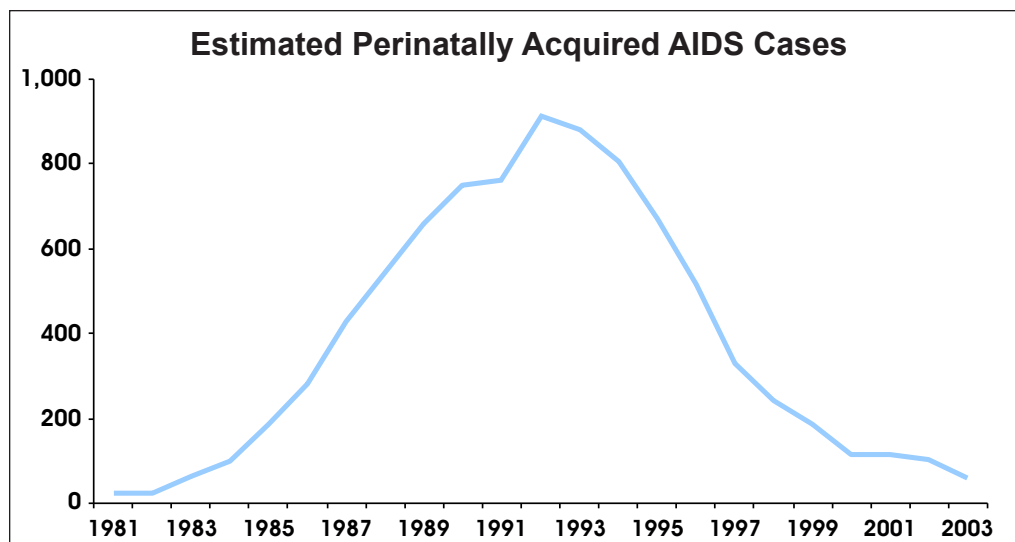
- ▲ routinely offering counseling and voluntary HIV testing to pregnant women
- ▲ offering zidovudine (also called ZDV or AZT) treatment to HIV-infected women during pregnancy and delivery
- ▲ treating the infant with zidovudine after birth

Most pregnant women voluntarily accept HIV testing if it is offered by their health care provider. Testing rates are higher in areas with voluntary opt-out policies (in which testing is routine unless a woman chooses to not be tested) and mandatory testing of newborns.

Between 1992 and 2003, estimated cases of perinatally acquired AIDS declined 94% in the United States, from 912 cases to 58 cases.

Between 1992 and 2003, estimated cases of perinatally acquired AIDS declined 94% in the United States.

How Are They Affected?



However, children of color—especially black children—continue to be disproportionately affected by AIDS. Although only 16% of US children are black, 67% of US children with a diagnosis of perinatally acquired AIDS in 2003 were black.

HIV exposure risks for mothers of children with AIDS have changed over time. In the early 1980s, most women were exposed to HIV through injection drug use and a smaller proportion through sex with men. However, during the 1990s, these proportions reversed; the mother's exposure through sex with men now plays a larger role than the mother's injection drug use.

Examples of CDC Programs and Research for Pregnant Women and their Infants

Efforts to prevent mother-to-child HIV transmission must focus on preventing new HIV infections in women; providing timely prenatal care and HIV testing during pregnancy (including rapid HIV testing during labor); and making sure all HIV-infected pregnant women receive care, prevention case management, and treatment.

One of CDC's HIV Prevention Strategic Plan objectives is to increase the proportion of pregnant women who are tested for HIV and, if infected, choose to take medication to interrupt mother-to-child transmission of HIV. One of the goals of CDC's recently launched initiative, Advancing HIV Prevention, is to further decrease mother-to-child transmission of HIV.

Program

Perinatal Elimination Efforts

Since 1999, Congress has provided \$10 million a year to reduce mother-to-child transmission of HIV in the United States. CDC distributes these funds to

- ▲ 10 state and city jurisdictions for enhanced perinatal surveillance
- ▲ 16 state prevention programs serving pregnant women at high risk for HIV
- ▲ 5 national health care provider organizations to develop training materials for health care providers and educational materials for pregnant women

Research

EPS (Enhanced Perinatal Surveillance)

EPS is one of CDC's activities to further reduce mother-to-child transmission of HIV in areas with high levels of HIV. EPS is an extension of routine surveillance activities. Its goals are to

- ▲ monitor
 - o adherence to US Public Health Service recommendations for HIV counseling and voluntary testing of pregnant women
 - o use of medication regimens recommended by the US Public Health Service to prevent mother-to-child transmission of HIV
 - o effect of the recommendations on trends of HIV disease in children

One of CDC's HIV Prevention Strategic Plan objectives is to increase the proportion of pregnant women who are tested for HIV and, if infected, choose to take medication to interrupt mother-to-child HIV transmission.

How Are They Affected?

- ▲ establish a surveillance system that collects data to help states respond to certain requirements of the Ryan White CARE Act
- ▲ assist in timely evaluation of efforts to prevent mother-to-child transmission of HIV

EPS data from 24 sites from 1999 through 2001 show that 1 in 8 (12%) HIV-infected women did not receive prenatal care, and 1 in 10 (10%) did not get tested for HIV before giving birth.

MIRIAD (Mother Infant Rapid Intervention at Delivery)

The MIRIAD project has shown that rapid HIV testing during labor for women whose HIV status is unknown is acceptable, effective, and feasible. CDC has a national plan for rapid HIV testing of pregnant women. CDC published a model protocol for hospitals, updates the protocol as new rapid HIV tests become licensed, and funds regional trainings for several US hospitals.

LEGACY (Longitudinal Epidemiologic Study to Gain Insight into HIV and AIDS in Children and Youth)

LEGACY is a new study of HIV-infected children and adolescents, from birth through 24 years, who are receiving care from a pediatrician or specialist in adolescent medicine. The study is being conducted at approximately 20 sites throughout the United States. The study will monitor trends in

- ▲ illness and death in HIV-infected children and adolescents, including how their disease is progressing, how well their immune system is working, any long-term complications from the disease or its treatment, and how long they are living
- ▲ use of antiretroviral drugs and any side effects or viral resistance from long-term treatment with these drugs
- ▲ factors that may be related to the risk for secondary transmission of HIV from young people



Trends among Correctional Facility Inmates

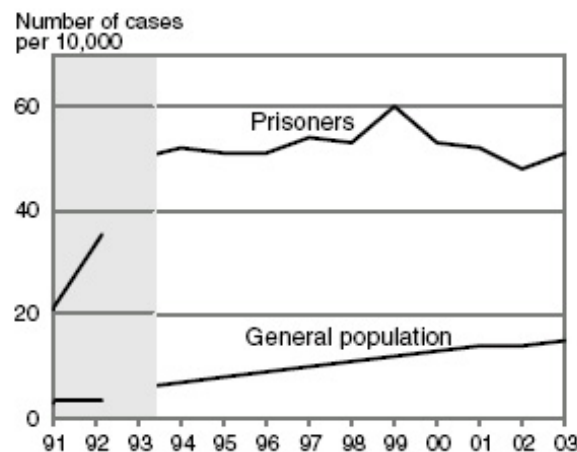
Rates of HIV and AIDS are high among correctional facility inmates; similarly, rates of incarceration are high among HIV-infected people. Many inmates (12% according to a 2002 Supplement to HIV/AIDS Surveillance study) receive their diagnosis of HIV while incarcerated.

AIDS

The rate of confirmed AIDS cases for state and federal inmates (48/10,000) is more than 3 times the rate for the general US population (14/10,000). In 2002, the prevalence of AIDS was 0.5% for inmates in state prisons and 0.4% for inmates in federal prisons. About 20% of inmates known to be HIV-infected also had a diagnosis of AIDS.

Fortunately, effective therapies have led to marked increases in the survival of inmates with AIDS. The number of AIDS-related deaths of inmates has been decreasing dramatically since it peaked in 1995; by 2002, the number of AIDS-related deaths in state prisons had declined 72%. In 2002, the reported number of AIDS-related deaths was 215 for state inmates and 17 for federal inmates. AIDS-related deaths accounted for 5% of all deaths in federal prisons.

People Living with AIDS, Inmates and General Population



Note: The shaded area covers the period prior to the 1993 expansion of the classification system for HIV infection and the case definition for AIDS. This expansion improved estimates of the number and the characteristics of persons with HIV disease but complicated interpretation of AIDS trends. The increase in reported AIDS cases in 1993 was largely the consequence of the added surveillance criteria.

Adapted from *Bureau of Justice Statistics Bulletin*, September 2005.

How Are They Affected?

HIV

At the end of 2002, 2.0% of state prison inmates and 1.1% of federal prison inmates were known to be HIV-infected. The total number of inmates known to be HIV-infected was 23,864. In 2002, the highest rates of HIV infection for inmates occurred in the Northeast, where 4.6% of the prison population was HIV-infected, followed by 2.2% in the South, 1.0% in the Midwest, and 0.7% in the West. In state prisons, a higher percentage of female (3.0%) than male (1.9%) inmates were HIV-infected.

Rates of HIV and AIDS are high among correctional facility inmates; similarly, rates of incarceration are high among HIV-infected people.

Examples of CDC Programs and Research for Correctional Facility Inmates

Trends in HIV and AIDS in correctional facilities affect not only inmates but the general public because many inmates (approximately 7.5 million per year) are released back into the community. However, most correctional facilities have inadequate or no discharge planning (plans for linking released inmates with community-based health care, substance abuse treatment, and other services). CDC uses a community approach to improve the health of inmates by collaborating with correctional facilities, public health agencies, and community health care and social service providers. Because approximately 80% of prisoners have a history of substance use, some HIV prevention programs for inmates focus on IDUs.

Program

CDC/HRSA Corrections Demonstration Project

CDC and the Health Resources and Services Administration (HRSA) jointly funded 7 states for this project. The project's purpose was to develop, set up, and evaluate models for innovative programs to provide continuity of care (follow-up care after release). Using outreach, HIV education, and HIV/AIDS counseling and testing, the project served inmates, especially racial and ethnic minorities, who were HIV-infected or at risk for HIV infection. The project encouraged collaborations between correctional facilities, public health agencies, CBOs, and health care providers. Evaluations will focus on whether health outcomes were improved by linking discharged inmates to services and keeping them in services.

Routine Rapid HIV Testing of Inmates in Short-stay Correctional Facilities

State health departments in Florida, Louisiana, New York, and Wisconsin have been funded to offer HIV rapid testing and prevention counseling as a standalone procedure to male and female inmates. All inmates are confidentially notified of their test results at the time of rapid testing. Inmates with preliminary positive HIV rapid test results are offered confirmatory HIV testing. Inmates with a positive confirmatory result are referred to appropriate care, treatment, and prevention services. From January 2004 through

How Are They Affected?

March 2005, a total of 16,676 rapid tests have been conducted. Of these, 256 (1.5%) were reactive. Of the 236 persons who consented to confirmatory HIV testing, 200 had confirmed positive test results; of these, 121 (61%) were newly identified infections. Routinely offering voluntary rapid HIV testing with other STD screening as a component of the medical evaluation may increase use. Provision of consistent, high-quality counseling and testing services could potentially build trust between inmates and staff and improve program acceptance and success. A comprehensive guidance document on implementing HIV rapid testing in jails will be developed after project activities have been completed.



Research

CDC Corrections Discharge Planning Study

CDC funded this study of discharge planning and continuity of care for HIV-infected releasees in 10 states. Questionnaires and follow-up phone interviews identified state-of-the-art practices and factors that help or hinder discharge planning and continuity of care. The findings indicated that

- ▲ discharge planning should be holistic and tailored to the individual
- ▲ continuity of medical care is most likely when releasees receive
 - medication at the time of release
 - a printed summary of their prison medical records
 - a medical appointment in the community
 - help applying for medical and cash benefits (eg, Medicaid, AIDS Drug Assistance Program)

Project START

Conducted at 4 sites from 1998 through 2003, this HIV/STD prevention project is for young men being released from prison. It compared sexual risk after a 1-session intervention (before release) to that after an enhanced intervention (before and after release). At 24 weeks after release, men who received the enhanced intervention were significantly less likely to report having had unprotected sex during their most recent sexual encounter (59%) than were men who received the 1-session intervention (69%).

Trends among People Worldwide

HIV and AIDS pose one of the greatest challenges to global public health. Worldwide in 2004, more than 3 million people died from AIDS. During that same year, an estimated 5 million people acquired HIV, bringing the number of people living with HIV to 39 million. Especially vulnerable are disadvantaged, marginalized, and unempowered populations such as commercial sex workers, IDUs, MSM, women and girls, and people living in poverty. Many people do not know that they carry the virus. Millions more know nothing or too little about HIV to protect themselves against it. Even those who do know about HIV prevention may not have the power to act on it, especially women and girls, who are often unable to say no to unprotected sex or to negotiate safer behaviors.

Sub-Saharan Africa

Approximately 25.4 million people are living with HIV/AIDS; an estimated 3.1 million were newly infected with HIV in 2004. HIV/AIDS is the leading cause of death in sub-Saharan Africa. In 2004 alone, AIDS killed 2.3 million African people. Without adequate treatment and care, most of those living with HIV will not survive the next decade.

Asia and the Pacific

Approximately 8.2 million people are living with HIV/AIDS; an estimated 1.2 million were newly infected in 2004. New infections increased 8% since 2002. The epidemic claimed over 540,000 lives in 2004. High HIV infection rates in the region are being discovered among IDUs, MSM, and sex workers.

Latin America and the Caribbean

Approximately 2.1 million people are living with HIV/AIDS; an estimated 293,000 were newly infected in 2004. Driving the spread of HIV are unequal socioeconomic development and a highly mobile population. The region, however, has made admirable progress in providing treatment and care.

HIV and AIDS pose one of the greatest challenges to global public health.

How Are They Affected?

Western Europe, North America, Australia, and New Zealand

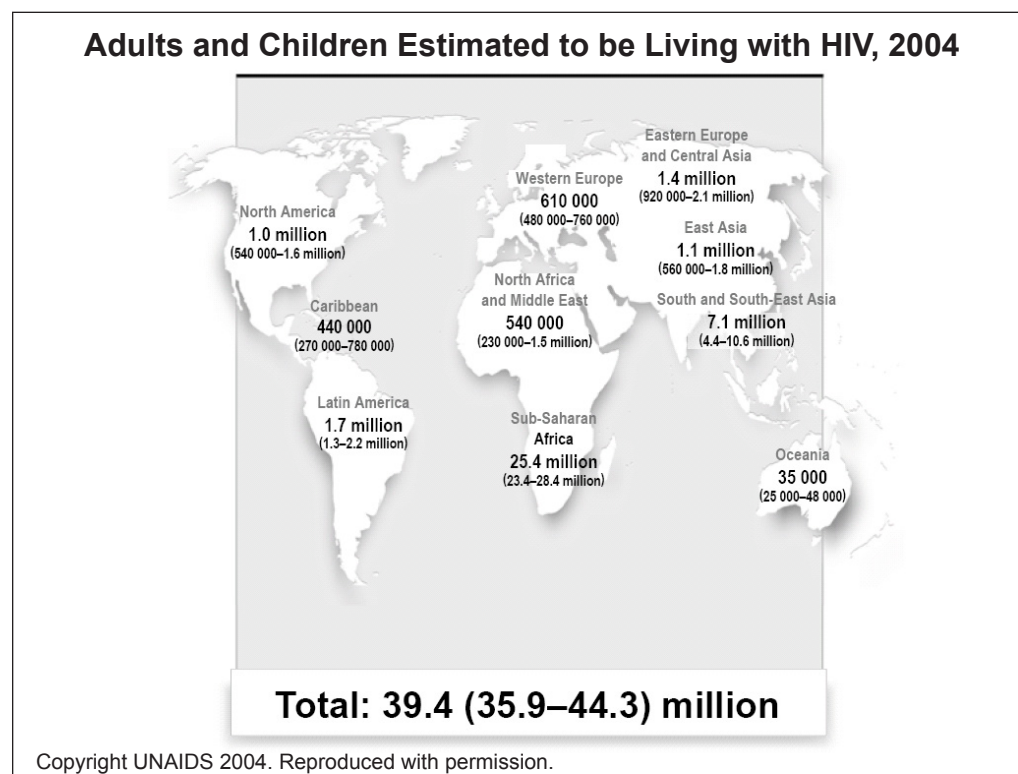
Approximately 1.6 million people are living with HIV/AIDS; an estimated 70,000 were newly infected in 2004. A larger epidemic threatens to develop in high-income countries. Unsafe sex and widespread injection drug use are propelling these epidemics, which are shifting more toward underprivileged communities.

Eastern Europe and Central Asia

Approximately 1.4 million people are living with HIV/AIDS; an estimated 210,000 were newly infected in 2004. Eastern Europe—especially the Russian Federation—continues to experience the fastest growing epidemic in the world. Because of high levels of other STDs and injection drug use among young people, the epidemic may grow considerably.

The Middle East and North Africa

Approximately 540,000 people are living with HIV/AIDS; an estimated 92,000 were newly infected in 2004. Poor surveillance systems in several countries hinder accurate assessment of and response to the epidemic.



Specific Populations

Examples of CDC Programs and Research for People Worldwide

For many years, CDC has been working with others to fight HIV/AIDS around the world. The international goal of CDC's HIV Prevention Strategic Plan is to assist in reducing HIV transmission and improving HIV/AIDS care and support in partnership with resource-constrained countries.

Program

CDC's Global AIDS Program (GAP)

CDC'S Divisions of HIV/AIDS Prevention provide support and technical assistance for GAP. Under the direction of the US Global AIDS Coordinator's Office, CDC's Global AIDS Program (GAP) is a major partner in the effort to address the Emergency Plan for AIDS Relief, announced by President Bush in his 2003 State of the Union address. The goals of the Plan are to

- ▲ treat 2 million HIV-infected people
- ▲ prevent 7 million new HIV infections
- ▲ care for 10 million people (people living with HIV and children orphaned because of HIV) in 15 of the world's most affected countries

As of 2004, GAP has programs in 25 countries and 4 regional programs in Africa, Asia, Latin America, and the Caribbean. GAP provides assistance directly through its own staff and through partnerships with governments, communities, and other national and international groups.

GAP's mission is to

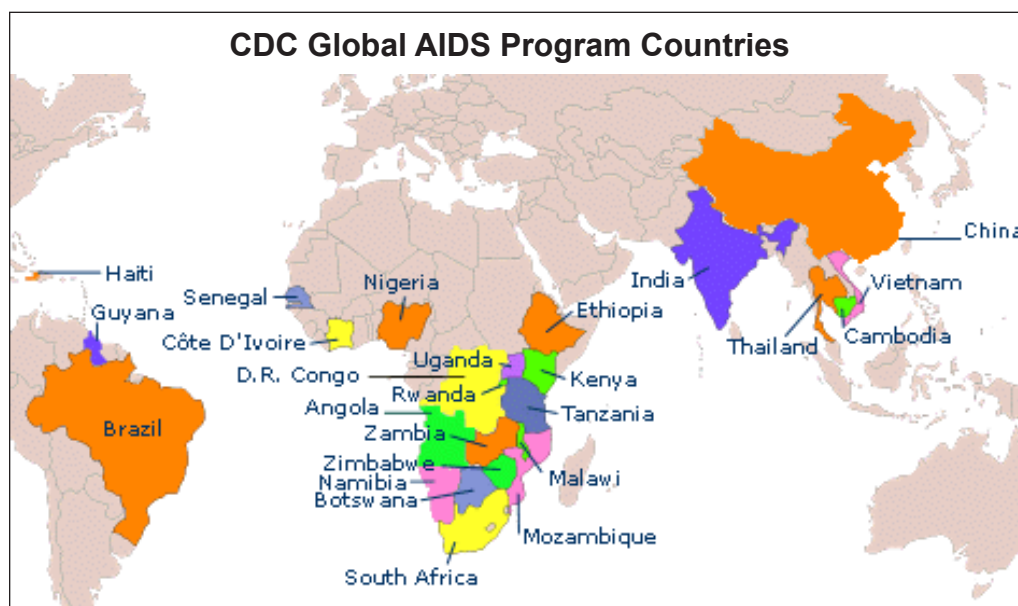
- ▲ prevent HIV infection
- ▲ improve care, support, and treatment for people living with HIV/AIDS
- ▲ strengthen the capacity of countries to address the global HIV/AIDS epidemic

The international goal of CDC's HIV Prevention Strategic Plan is to assist in reducing HIV transmission and improving HIV/AIDS care and support in partnership with resource-constrained countries.

How Are They Affected?

GAP's priority areas include

- ▲ providing support for HIV/AIDS surveillance systems
- ▲ enhancing voluntary counseling and testing programs and services
- ▲ strengthening laboratory capacities and systems
- ▲ providing care, support, and treatment for people living with HIV/AIDS
- ▲ reducing mother-to-child transmission of HIV
- ▲ training program staff



Research

The focus of CDC's international HIV research is developing and testing potential HIV vaccines and microbicides as well as looking for new ways to reduce mother-to-child HIV transmission. CDC is also involved in providing technical support for programs working with drugs for HIV treatment; these programs aim to improve care for people with HIV and to prevent HIV transmission from mother to child. CDC's international HIV/AIDS research is mostly conducted in GAP field stations with staff assigned to Botswana, Kenya, and Thailand. In addition, CDC is involved in collaborative research projects in Cameroon, Malawi, Russia, South Africa, Uganda, and Zimbabwe.



FIVE

THE FUTURE

WHAT ARE CDC'S PLANS?

Advancing HIV Prevention: New Strategies for a Changing Epidemic

Advancing HIV Prevention (AHP) is an initiative to reduce barriers to early diagnosis of HIV infection and increase access to quality medical care, treatment, and ongoing prevention services for people living with HIV.

This initiative was created in response to several factors.

- ▲ Declines in new HIV infections have leveled off.
- ▲ Increases in sexually transmitted diseases and risk behaviors have led to a possible increase in new HIV infections.
- ▲ Not enough people know their HIV status.
- ▲ People who know their HIV status can protect themselves and their partners.
- ▲ A simple, rapid HIV test is available.
- ▲ Opportunities for preventing mother-to-child HIV transmission are being missed.

Four strategies are used to advance HIV prevention.

1. Make voluntary HIV testing a routine part of medical care. CDC is working with medical associations to ensure that all health care providers include HIV testing, when indicated, as part of routine medical care.
2. Use new models for diagnosing HIV infections outside medical settings. The use of rapid HIV tests can increase access to early diagnosis and referral for treatment and prevention services.
3. Prevent new infections by working with HIV-infected persons and their partners. CDC published the Recommendations for Incorporating HIV Prevention into the Medical Care of Persons with HIV Infection.
4. Further decrease mother-to-child HIV transmission. CDC promotes routine HIV testing of pregnant women and routine screening of any infant whose mother was not tested.

What Are CDC's Plans?

Although AHP emphasizes voluntary HIV testing, it does not endorse mandatory testing. AHP capitalizes on rapid test technologies, interventions that bring persons who are unaware of their HIV status to HIV testing, and behavioral interventions that provide prevention skills to persons living with HIV.

Overall, 9 health departments and 16 CBOs have been awarded \$23 million over 2 years to develop models and demonstrate feasibility of putting the 4 AHP strategies into practice. As the first round of projects comes to a close, lessons learned are being used to develop tools for widespread use. The following demonstration projects are under way.

AHP Demonstration Projects for State and Local Health Departments

HIV Rapid Testing to Improve Outcomes for Partner Counseling, Testing, and Referral Services (PCTRS).

For this project, health departments in Colorado, Chicago, Los Angeles, Louisiana, San Francisco, and Wisconsin have been awarded contracts totaling \$2.7 million. As of June 2004, all 6 health departments had incorporated HIV rapid testing into their PCTRS activities. By March 2005, they had tested 279 partners of persons with a diagnosis of HIV and found that 25 (9%) of these partners were HIV-infected.

Routinely Recommending HIV Testing as Part of Regular Medical Care Services.

In 4 health department jurisdictions, 12 facilities in urban areas with high prevalence of HIV have been funded to evaluate the feasibility and sustainability of offering HIV testing to eligible clients as a routine part of medical care in clinical settings. The facilities, which include emergency departments, outpatient clinics, and a dental clinic, are in Wisconsin, Massachusetts, Los Angeles, and New York State. All facilities started testing by June 2004. Each will test at least 1,500 persons per year and will facilitate access to care for at least 80% of those whose test results are positive. As of March 2005, 9,578 people had been tested and results were positive for 83 (0.9%).

Routine Rapid HIV Testing of Inmates in Short-Stay Correctional Facilities.

State health departments in Florida, Louisiana, New York, and Wisconsin have been funded to offer HIV rapid testing and prevention counseling as a standalone procedure to male and female inmates. All inmates are confidentially notified of their test results at the time of rapid testing. Inmates with preliminary positive HIV rapid test results are offered confirmatory HIV testing and result notification. Inmates with a positive confirmatory result are referred to appropriate care, treatment, and prevention services. From January 2004 through March 2005, a total of 16,676 rapid tests have been conducted. Of these, 256 (1.5%) were reactive. Of the 236 persons who consented to confirmatory HIV testing, 200 had confirmed positive test results; of these, 121 (61%) were newly identified infections. Routinely offering voluntary rapid HIV testing with other STD screening as a component of the medical evaluation may increase use. Provision of consistent, high-quality counseling and testing services could potentially build trust between inmates and staff and improve program acceptance and success. A comprehensive guidance document on implementing HIV rapid testing in jails will be developed after project activities have been completed.

***AHP Demonstration Projects for CBOs
Prevention Case Management for Persons Living with HIV/AIDS
(now called Comprehensive Risk Counseling and Services).***

Funding has been awarded to 9 CBOs to provide prevention case management (PCM) to HIV-infected persons who have many and complex needs for HIV risk reduction. The CBOs are in Maryland; Massachusetts; Michigan; Missouri; California; Pennsylvania; New York; and Washington, DC. As of April 2005, 719 HIV-infected persons had been screened. Of the 546 HIV-infected persons who were eligible for PCM because of continuing risk behaviors, 402 had enrolled in PCM and attended an average of 4 to 7 sessions. HIV-infected persons may need a variety of services, such as substance abuse counseling, to help them reduce and eventually eliminate their high-risk behaviors. It is important for such services to be readily available to clients in PCM.

Rapid HIV Testing in Nonclinical Settings.

Funding has been awarded to 8 CBOs to provide rapid HIV testing in nonclinical settings, such as parks, shelters, and night clubs. The settings are in Los Angeles; San Francisco; Detroit; Washington, DC; Kansas City, Missouri; Boston; and Chicago. As of March 2005, 180 (1.5%) of the 12,334 persons tested were HIV-infected.

Using Social Network Strategies for Reaching Persons at High Risk for HIV Infection in Communities of Color.

Funding has been awarded to 9 CBOs in 7 cities to demonstrate the feasibility of using social network strategies to reach persons at high risk for HIV infection and provide them HIV counseling, testing, and referral services. The CBOs are in Philadelphia (2); Orlando; San Francisco (2); New York; Boston; Lafayette, Louisiana; and Washington, DC. In October 2003, funding was awarded to 9 CBOs in 7 cities to demonstrate the feasibility of using social network strategies to reach persons at high risk for HIV infection and provide them HIV counseling, testing, and referral services. As of September 2004, the 133 enlisted recruiters had referred 814 persons from their social, sexual, or drug-using networks to get tested for HIV. For the 46 (6%) who received positive test results, this was the first time they learned that they were HIV-infected. Preliminary findings indicate that social network strategies are effective for reaching people and accepted by a variety of people, regardless of gender, age, race and ethnicity, and HIV risk category.

AHP Demonstration Projects for Primary Care Providers Incorporating HIV Prevention into Medical Care Settings.

Funding has been awarded at 6 sites to help providers incorporate HIV prevention into medical care. The sites are in Chapel Hill; Denver; Atlanta; Nashville; Brooklyn; and Kansas City, Missouri. Of an anticipated 1,200 patients, 1,124 were recruited in 2004. All sites completed provider training and have started a patient intervention called Positive STEPs (Striving to Engage People). Follow-up interviews are in progress and will end by December 2005. HIV prevention materials developed for the project have been well received by participating clinics and may be suitable for future use in other HIV clinics.

Other Demonstration Projects***HIV Testing in Historically Black Colleges and Universities and Alternative Venues and Populations.***

New models for diagnosing HIV infection by providing greater access to HIV testing and prevention and care services are being tested in sites that serve migrant and seasonal farm workers, communities with transgendered persons, communities with Native Americans, and historically black colleges and universities. These people are among those less often reached by health promotion efforts. Information from this project can be used to reduce the barriers that make it difficult for communities to access HIV testing and services.

Antiretroviral Treatment and Access Study II (ARTAS II).

To improve access to HAART for people who have just received a diagnosis of HIV, linkage case management is being explored at 11 sites: 5 health departments and 6 CBOs. Whereas the first ARTAS study showed linkage case management to be effective, ARTAS II will compare rates of linkage to HIV care providers before and after instituting linkage case management. Findings will strengthen our understanding of how well linkage case management works in typical HIV program settings in the United States.



What Are CDC's Plans?

CDC's HIV Prevention Strategic Plan

The HIV Prevention Strategic Plan is CDC's original approach to the challenges of the third decade. Published in 2001, it became a blueprint for actions to reduce HIV and AIDS in the United States and around the world. Although it is a CDC plan, its success depends on collaboration with many organizations and agencies, each of which is essential to achieving the plan's goals, objectives, and strategies.

Overarching Goal

Decrease new HIV infections in the United States by half (from 40,000 to 20,000 new infections per year), focusing particularly on eliminating racial and ethnic disparities.

Four national goals have been set to accomplish this in the United States.

- ▲ Decrease by at least 50% the number of persons at high risk of acquiring or transmitting HIV infection by delivering targeted, sustained, and evidence-based HIV prevention **interventions**. The top 5 priority populations are
 - **HIV-infected people**
 - **MSM**
 - **Adolescents**
 - **IDUs**
 - **Sexually active women and heterosexual men who are at risk for HIV**
- ▲ Through **voluntary counseling and testing**, increase from the current estimated 75% to 95% the proportion of HIV-infected persons who know they are infected.
- ▲ Increase from the current estimated 50% to 80% the proportion of HIV-infected persons who are **linked** to appropriate prevention, care, and treatment services.
- ▲ Strengthen the **capacity** nationwide to monitor the epidemic, develop and implement effective HIV prevention interventions, and evaluate prevention programs.

International Goal

To assist in reducing HIV transmission and improving HIV/AIDS care and support in partnership with resource-constrained countries.

The HIV Prevention Strategic Plan is CDC's original approach to the challenges of the third decade.



SIX

MORE ABOUT HIV PREVENTION
WHERE IS INFORMATION AVAILABLE?

Glossary

adherence to therapy—Taking medications as prescribed.

AIDS (acquired immunodeficiency syndrome)—A specific group of diseases or conditions that indicate severe suppression of the immune system related to infection with the human immunodeficiency virus (HIV).

AIDS case definition—A standard definition of the physical and laboratory findings that make up an AIDS case. In 1993, the AIDS case definition was expanded to include a broader range of diseases and conditions and the results of immunologic testing, such as CD4+ T-cell counts. Consequently, the number of AIDS cases in 1993 was transiently elevated by the rapid reporting of cases not previously reported using the old definition.

antibody—An infection-fighting protein molecule in blood that attaches to and neutralizes viruses.

clinical trials—Studies conducted among volunteer participants; clinical trials test the safety and efficacy of new drugs. *Controlled* means that some participants actually receive the drug being tested while others receive placebo (an inactive substance). *Randomized* means that assignment to a group is random. *Double-blind* means that neither participants nor researchers know until after the study is completed who was assigned to which group; that is, who received the drug being tested and who received placebo.

All new vaccines must pass 3 phases of clinical trials before they can be considered for regulatory licensure.

Phase I—Tests for safety and dosage.

Phase II—Tests for efficacy and further tests for safety.

Phase III—Large-scale studies for efficacy. For HIV vaccines, these tests must be performed in thousands of individuals who are HIV-negative but at high risk for HIV.

Where Is Information Available?

efficacy—Ability of a drug or product to produce the desired outcome under ideal (experimental) conditions, as opposed to under average (real-world) conditions.

epidemic—The occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy.

HAART (highly active antiretroviral therapy)—HIV treatment regimens, consisting of combinations of drugs that have been shown to reduce the amount of HIV virus in a patient's blood.

HIV (human immunodeficiency virus)—The virus that causes AIDS. Not all people infected with HIV have AIDS, but all people with AIDS are infected with HIV.

HIV counseling, testing, and referral

counseling—An HIV-prevention intervention. The counseling approach used is critical to the success of HIV prevention efforts. A client-centered HIV prevention counseling model has been shown to be especially effective. This model focuses on helping clients identify HIV risk behaviors and commit to personalized steps to reduce their HIV-related risks.

testing—Laboratory determination of HIV status. Voluntary testing can be obtained in medical care settings such as doctors' offices, hospitals, managed care organizations, and public health clinics or can be performed using home-collection kits. HIV testing may be required as part of screening programs for military personnel, blood donors, correctional facility inmates, and insurance applicants.

anonymous testing—People who choose anonymous HIV testing are not required to provide their names; therefore, test results are not linked to any records with an identifying name (including the request for tests or test results).

confidential testing—People who choose confidential testing provide their names, and testing information is documented in their record.

referral—The process by which immediate client needs for medical, prevention, and social support services are assessed, prioritized, and addressed (in the context of HIV prevention counseling and testing).

incidence—The number of new events, such as HIV infections, over time (usually a year).

intervention—An action intended to modify an outcome. Examples of HIV prevention interventions include counseling, educational messages, and discussion groups intended to help reduce HIV transmission.

outreach—Extending services to a wider section of the population than are currently receiving the services.

preclinical trials—Laboratory and animal studies designed to test the mechanisms, safety, and efficacy of a drug or medical device before, if ever, testing it in people.

prevalence—The number of people affected by a condition, such as HIV infection, at a given point in time.

surveillance—An ongoing, systematic process of collecting, analyzing, interpreting, disseminating, and evaluating data. Surveillance data are used to track disease and provide information for action to protect the public health.

AIDS surveillance—AIDS diagnoses are reported to CDC from all US states and territories.

HIV surveillance—All states have some form of HIV infection reporting. As of January 2005, 42 states and territories have confidential, name-based HIV reporting systems and forward this information to CDC. However, it is not possible to examine trends in HIV diagnoses in all 42 states because many have just recently begun HIV reporting. Therefore, most of the HIV trends reported in this document come from data from 25 states that have required HIV reporting since 1993 (longstanding HIV reporting).

vaccine—A preparation that stimulates the body's immune system to protect itself from an invading virus.

virus—A microorganism made of either DNA or RNA with a protein coat. Viruses invade healthy cells and then use those host cells to replicate, spreading disease or infection. HIV, the virus that causes AIDS, is particularly dangerous because it attacks the body's immune system cells.

zidovudine—One of the drugs used to treat AIDS. May be abbreviated as ZDV or AZT.

Resources

The CDC National Prevention Information Network (NPIN)
Phone 1-800-458-5231 or 1-800-243-7012 (TTY) or go to
www.cdcnpin.org

The following CDC publications can be obtained through NPIN:

2002 National Center for HIV, STD & TB Prevention Program Review
Also available at www.cdc.gov/nchstp/od/program%20review/2002%20prog%20rev%20book%20FINAL.htm

Compendium of HIV Prevention Interventions with Evidence of Effectiveness
Also available at www.cdc.gov/hiv/pubs/hivcompendium/hivcompendium.htm

HIV Counseling and Testing in Publicly Funded Sites: Annual Report (all years)
Also available at www.nchstp.cdc.gov/dhap/pubs.htm

HIV Prevention Strategic Plan Through 2005
Also available at www.cdc.gov/nchstp/od/hiv_plan/default.htm

HIV/AIDS Surveillance Report (all issues)
Also available at www.cdc.gov/hiv/stats/hasrlink.htm

Additional websites

www.cdc.gov/hiv
(CDC's HIV/AIDS home page)

www.cdc.gov/nchstp/od/nchstp.html
(CDC's National Center for HIV, STD, & TB Prevention)

www.cdc.gov/hiv/dhap.htm
(CDC's Divisions of HIV/AIDS Prevention)

www.cdc.gov/mmwr

(listing of all *Morbidity and Mortality Weekly Reports* [MMWRs])

www.cdc.gov/hiv/pubs/mmwr.htm

(compilation of all MMWR issues on HIV and AIDS since 1981)

www.effectiveinterventions.org

(list of science-based HIV prevention interventions that work)

Guidelines

CDC. Revised guidelines for HIV counseling, testing, and referral. MMWR 2001;50(RR-19):1–58.

Also available at www.cdc.gov/MMWR/preview/MMWRhtml/rr5019a1.htm

CDC. Revised recommendations for HIV screening of pregnant women. MMWR 2001;50(RR-19):59–86.

Also available at www.cdc.gov/MMWR/preview/MMWRhtml/rr5019a2.htm

CDC. Guidelines for national human immunodeficiency virus case surveillance, including monitoring for human immunodeficiency virus infection and acquired immune deficiency syndrome. MMWR 1999;48(RR-13):1–31.

Also available at www.cdc.gov/MMWR/preview/MMWRhtml/rr4813a1.htm

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