CDC

CENTERS FOR DISEASE CONTROL AND PREVENTION

HIV/AIDS PREVENTION

1994 Fact Book

U.S. Department of Health and Human Services
Public Health Service

HIV/OAD/7-94/046

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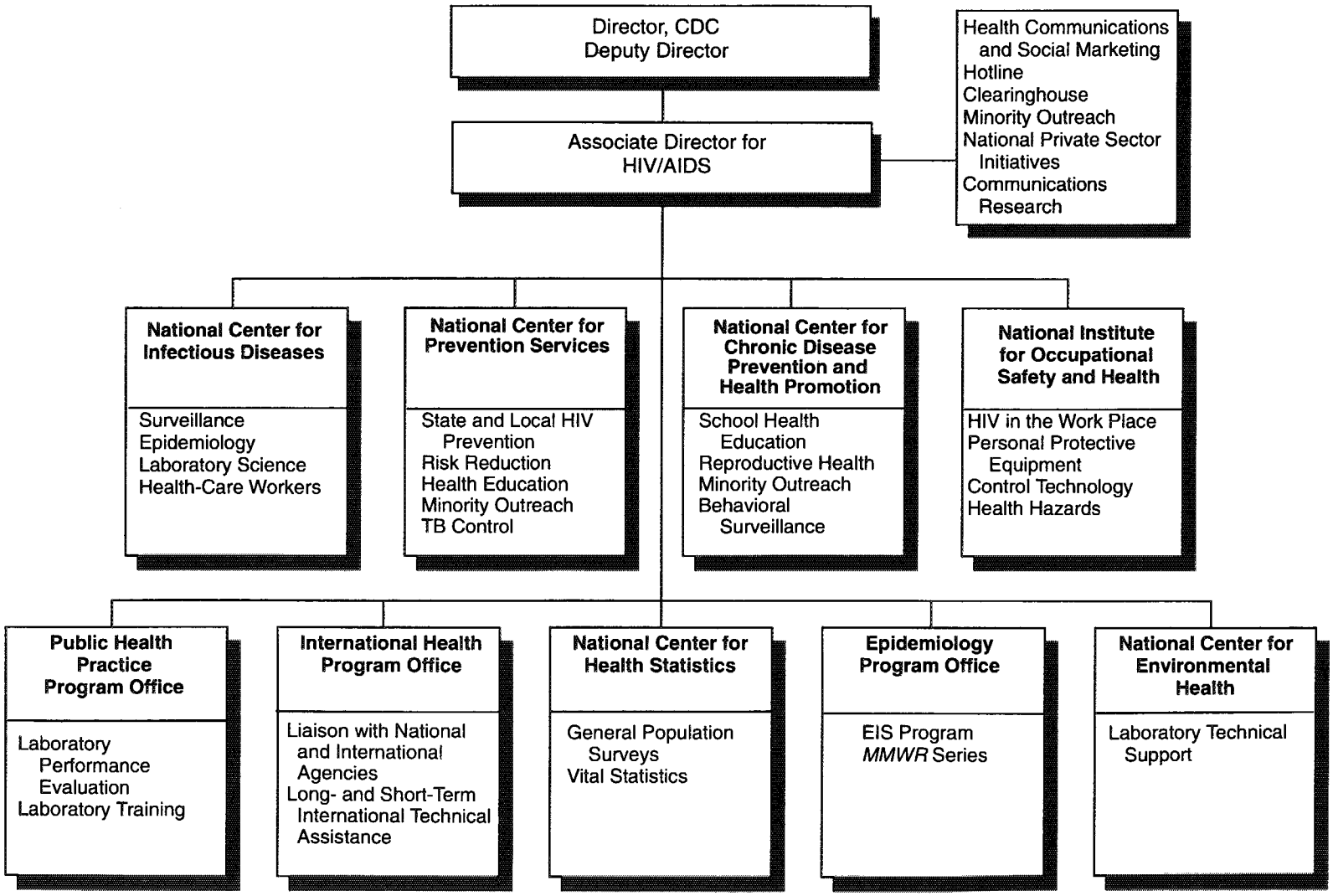
HIV Mission

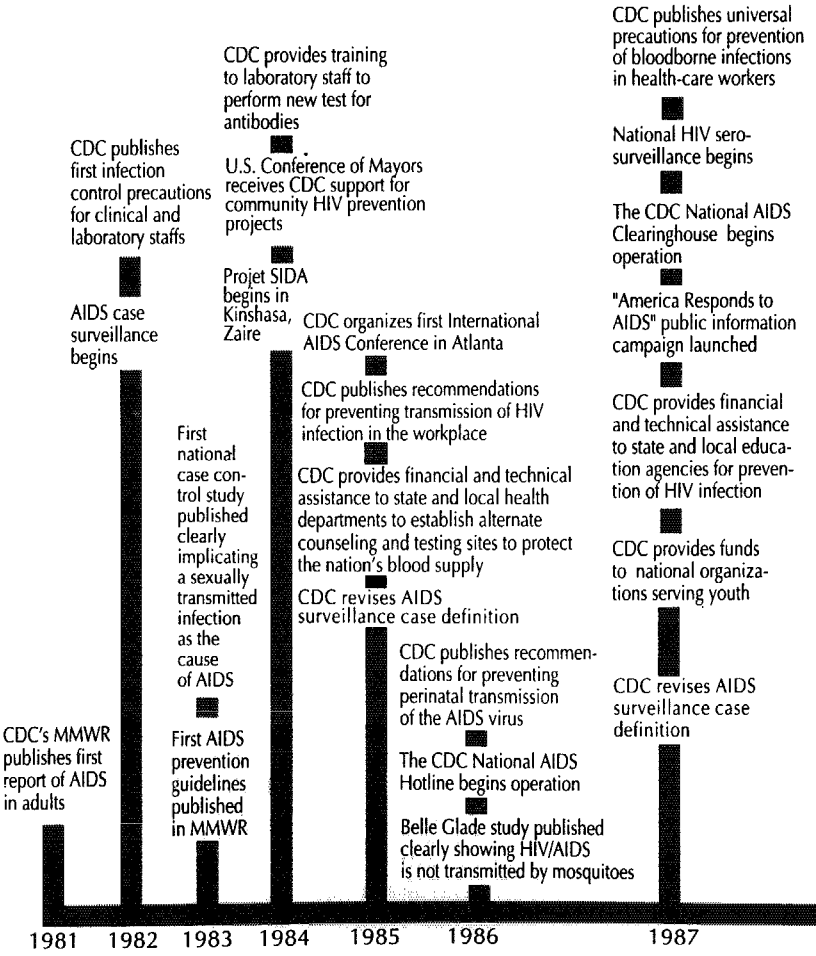
CDC's HIV mission is to prevent HIV infection and reduce the incidence of HIV-related illness and death, in collaboration with community, state, national, and international partners.

CDC HIV Prevention Functions

(by Centers, Institutes, and Offices)

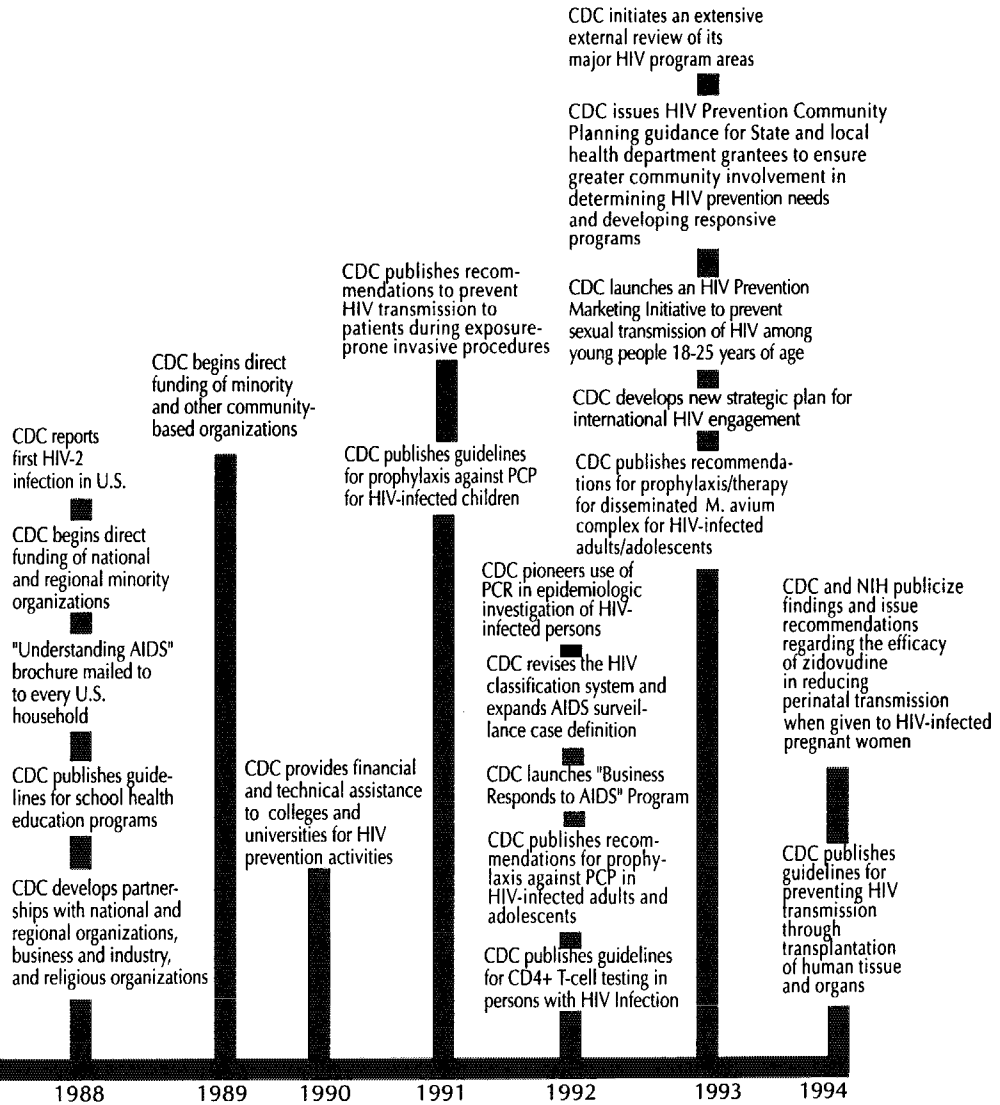


HIV Prevention Milestones

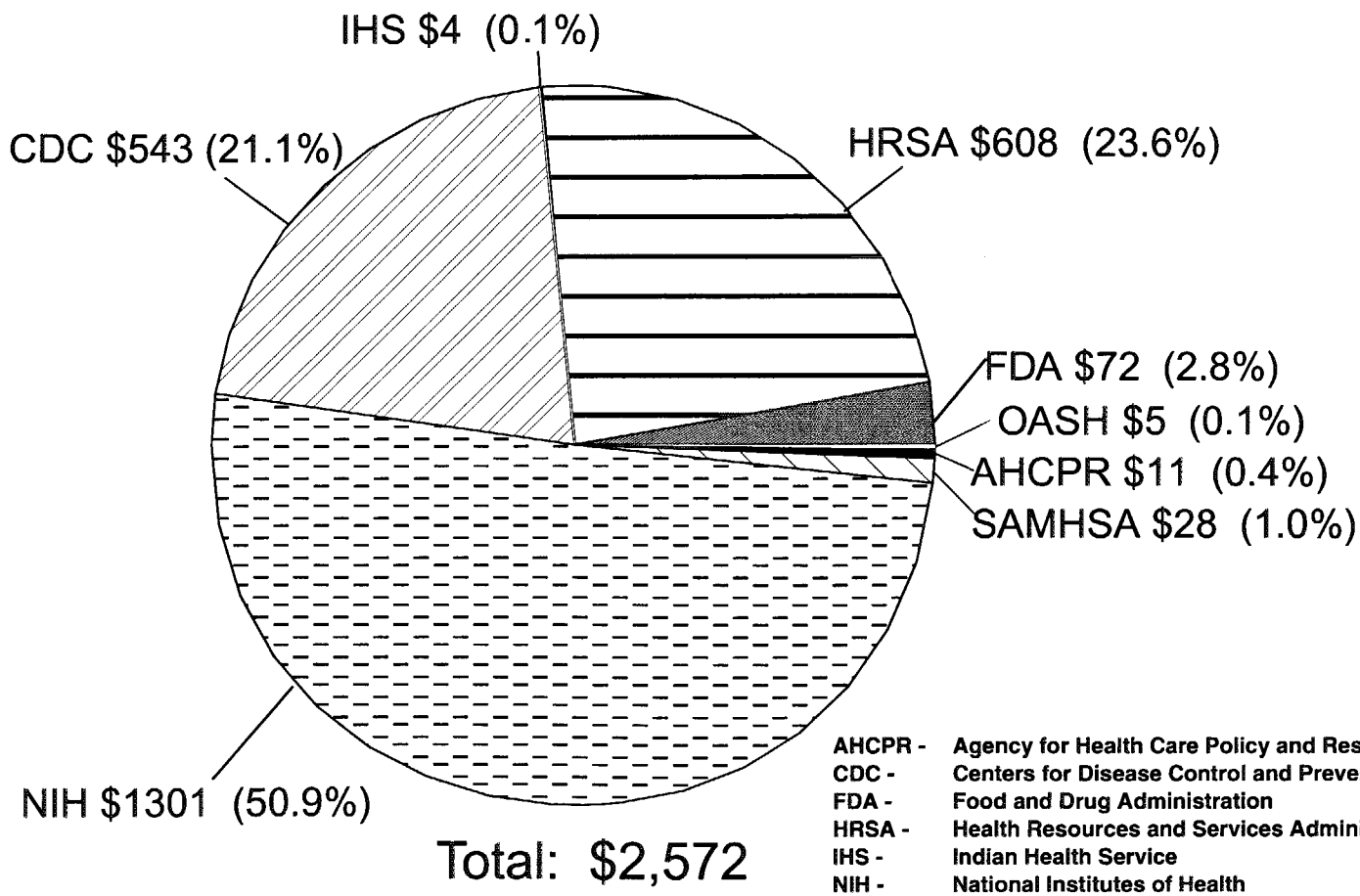


CDC CENTERS FOR DISEASE CONTROL AND PREVENTION

HIV/AIDS PREVENTION


CDC initiates an extensive external review of its major HIV program areas
CDC issues HIV Prevention Community Planning guidance for State and local health department grantees to ensure greater community involvement in determining HIV prevention needs and developing responsive programs
CDC launches an HIV Prevention Marketing Initiative to prevent sexual transmission of HIV among young people 18-25 years of age
CDC develops new strategic plan for international HIV engagement
CDC publishes recommendations for prophylaxis/therapy for disseminated M. avium complex for HIV-infected adults/adolescents
CDC publishes recommendations to prevent HIV transmission to patients during exposure-prone invasive procedures
CDC begins direct funding of minority and other community-based organizations
CDC reports first HIV-2 infection in U.S.
CDC publishes guidelines for prophylaxis against PCP for HIV-infected children
CDC begins direct funding of national and regional minority organizations
CDC pioneers use of PCR in epidemiologic investigation of HIV-infected persons
"Understanding AIDS" brochure mailed to to every U.S. household
CDC revises the HIV classification system and expands AIDS surveillance case definition
CDC and NIH publicize findings and issue recommendations regarding the efficacy of zidovudine in reducing perinatal transmission when given to HIV-infected pregnant women
CDC publishes guidelines for school health education programs
CDC launches "Business Responds to AIDS" Program
CDC provides financial and technical assistance to colleges and universities for HIV prevention activities
CDC publishes recommendations for prophylaxis against PCP in HIV-infected adults and adolescents
CDC publishes guidelines for preventing HIV transmission through transplantation of human tissue and organs
CDC develops partnerships with national and regional organizations, business and industry, and religious organizations
CDC publishes guidelines for CD4+ T-cell testing in persons with HIV Infection
1988
1989
1990
1991
1992
1993
1994

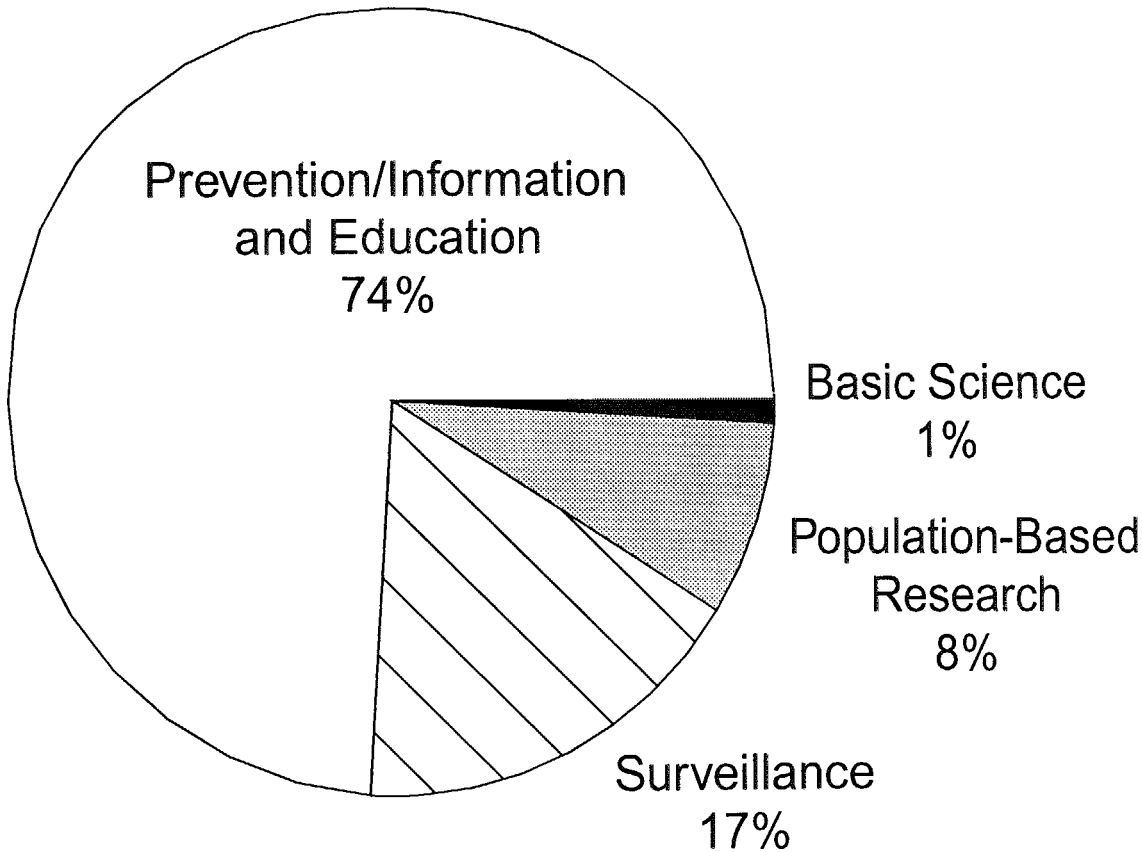
PHS HIV Budget
Fiscal Year 1994
(in Millions of Dollars)



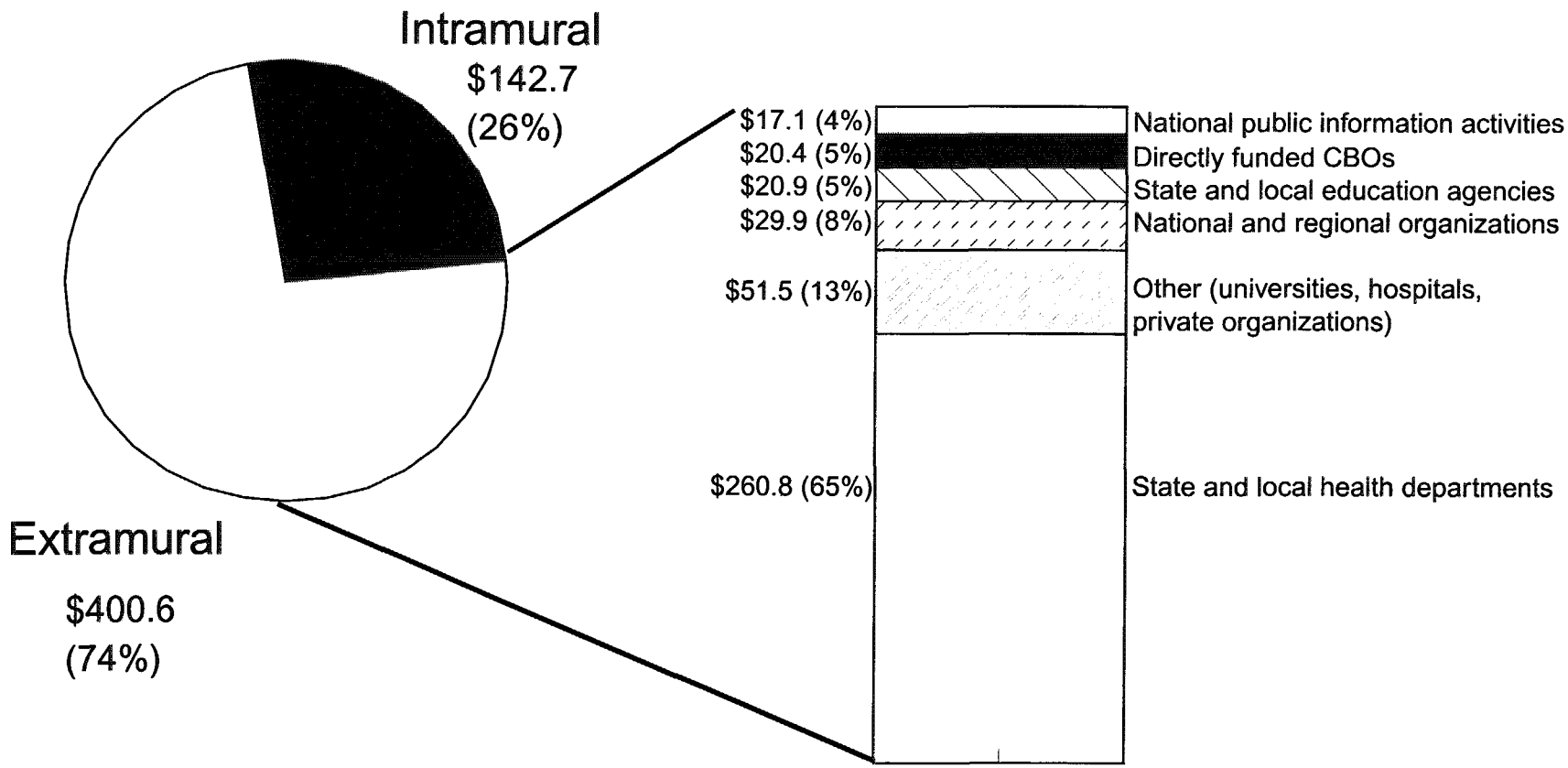
Total: $2,572

AHCPR - Agency for Health Care Policy and Research
CDC - Centers for Disease Control and Prevention
FDA - Food and Drug Administration
HRSA - Health Resources and Services Administration
IHS - Indian Health Service
NIH - National Institutes of Health
OASH - Office of the Assistant Secretary for Health
SAMHSA - Substance Abuse and Mental Health Services Administration

CDC HIV/AIDS Prevention Fiscal Year 1994 Appropriations By Major Budget Categories

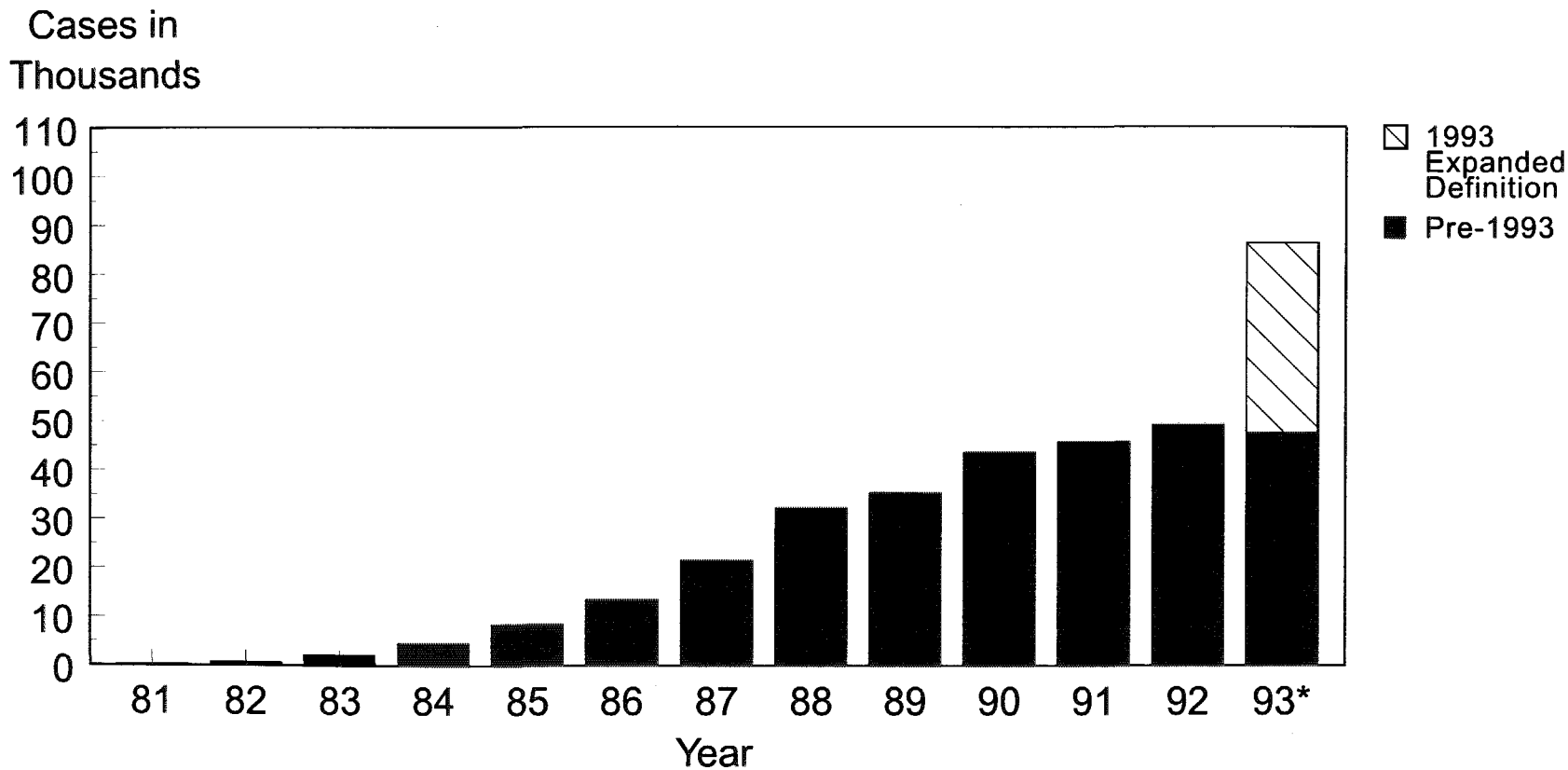


CDC HIV Prevention Budget
Fiscal Year 1994, Extramural Funding



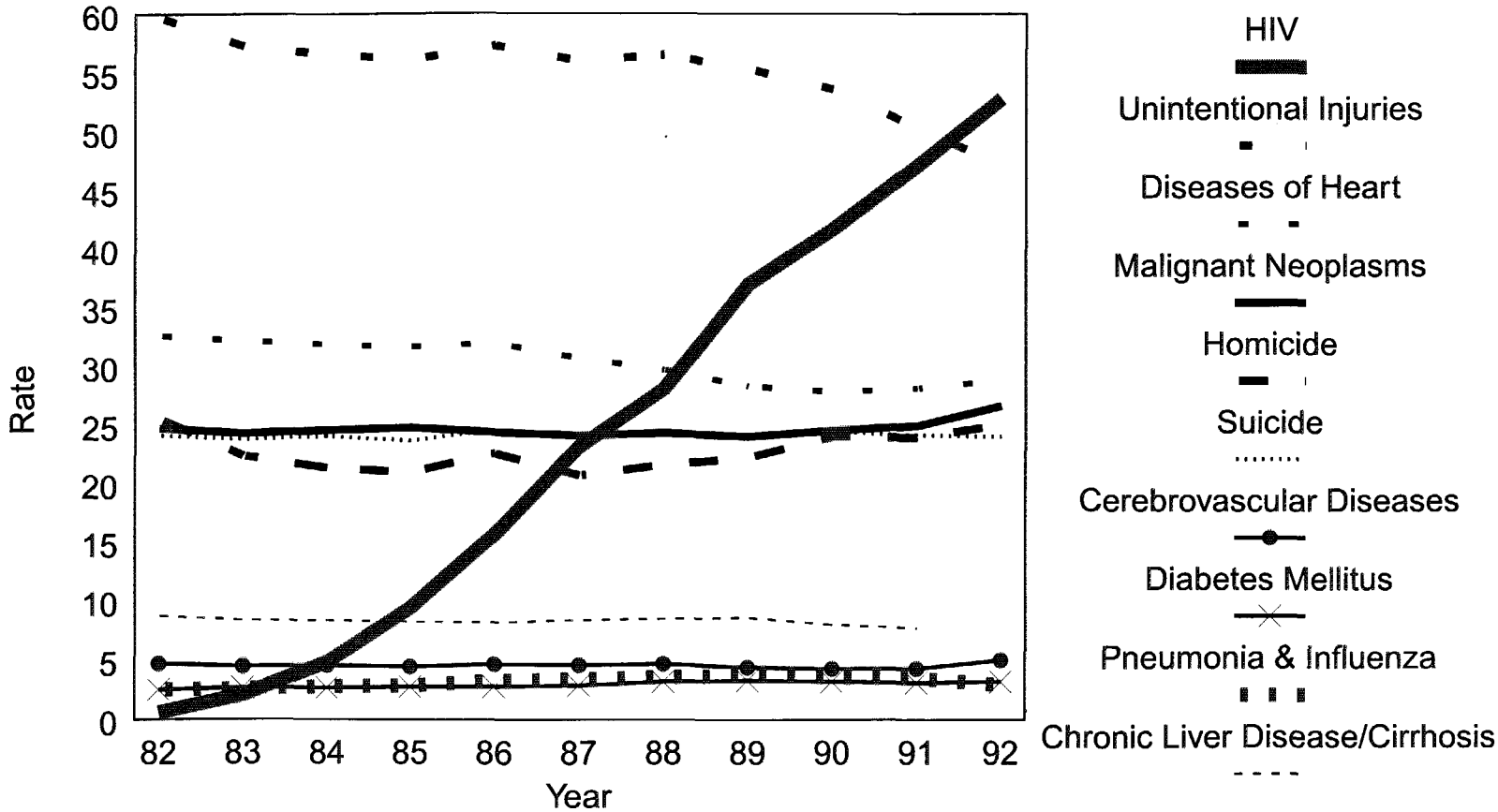
Total: $543.3

Annual AIDS Cases, by Year of Report
United States, 1981 - 1993



* In 1993, the AIDS surveillance case definition for adolescents and adults was expanded beyond the definition published in 1987 to include all HIV-infected persons with severe immunosuppression (<200 CD4+ T-lymphocytes/µL or a CD4+ T-lymphocyte percentage of total lymphocytes of <14), pulmonary tuberculosis, recurrent pneumonia, or invasive cervical cancer.

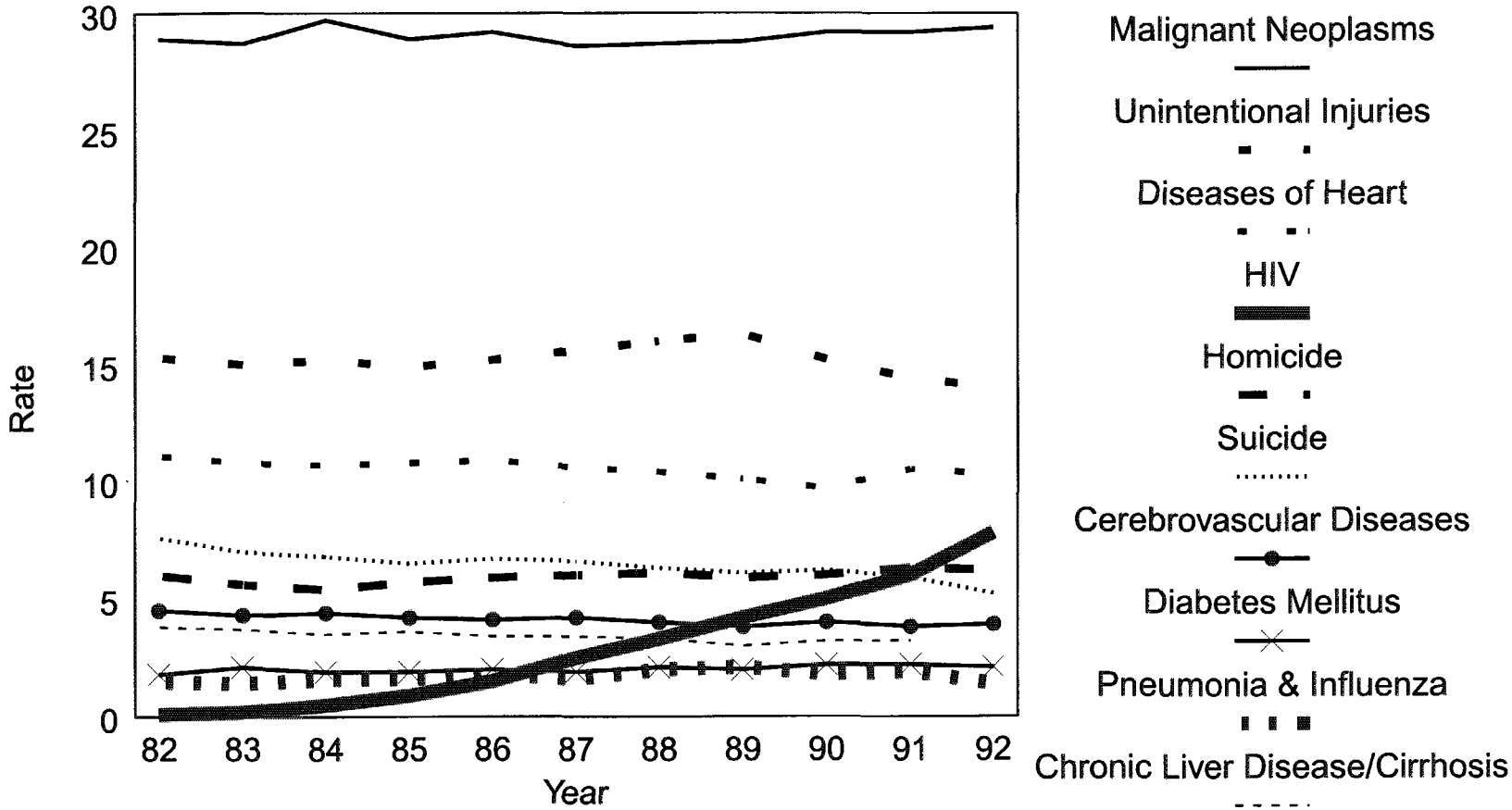
Death Rates* for Leading Causes of Death Among Men 25-44 Years, by Year--- United States, 1982-1992†



* Per 100,000 population.

† National vital statistics based on underlying cause of death, using final data for 1982-1991 and provisional data for 1992. Data for liver disease in 1992 were unavailable.

Death Rates* for Leading Causes of Death Among Women 25-44 Years, by Year--- United States, 1982-1992†

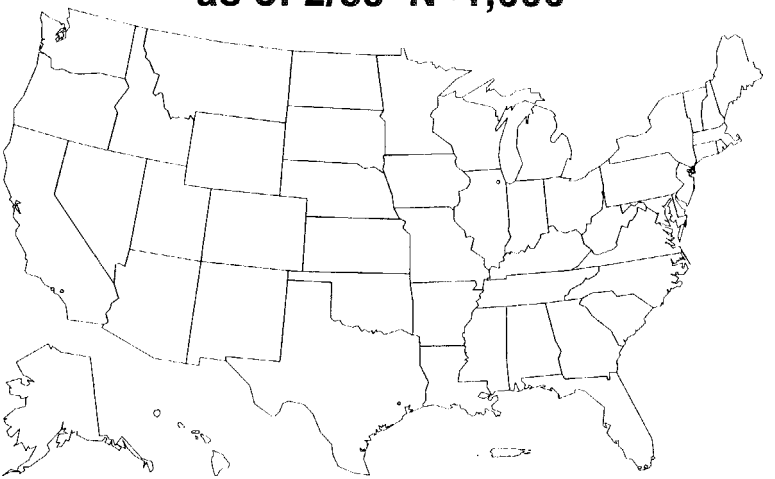


* Per 100,000 population.

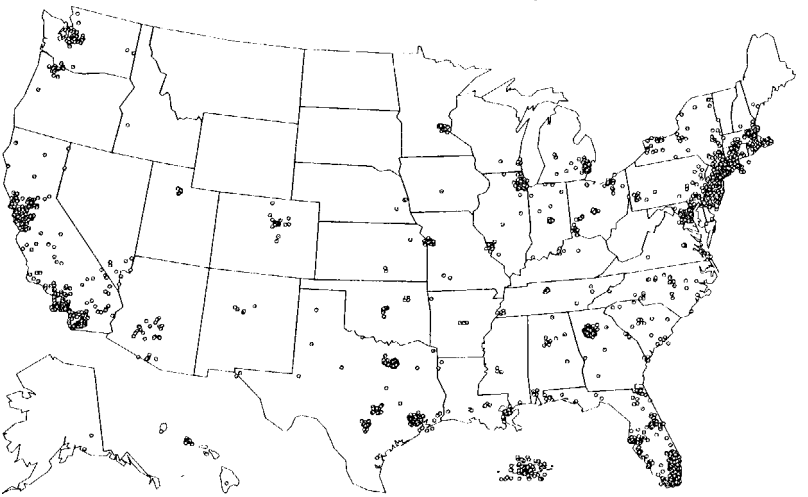
† National vital statistics based on underlying cause of death, using final data for 1982-1991 and provisional data for 1992. Data for liver disease in 1992 were unavailable.

HIV/AIDS Trends

Cumulative U.S. AIDS Cases as of 2/83 N~1,000

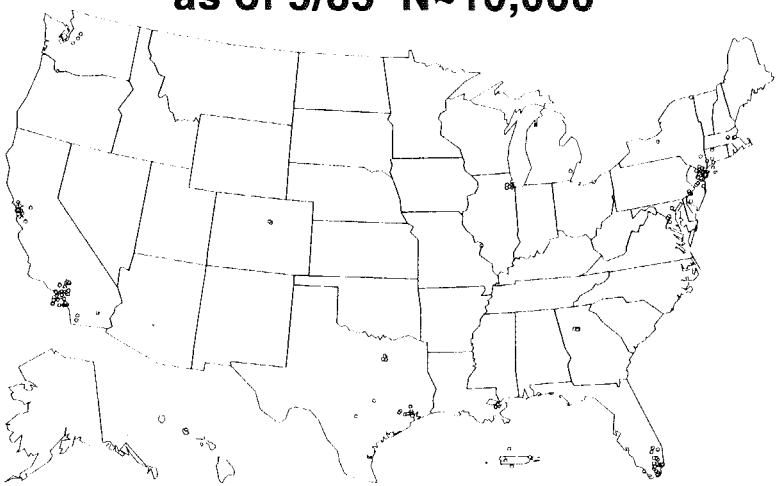


Cumulative U.S. AIDS Cases as of 7/89 N~100,000

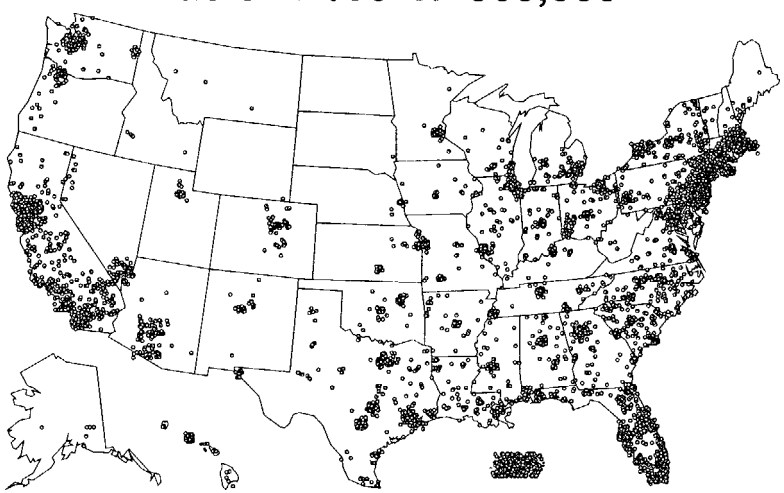


CDC CENTERS FOR DISEASE CONTROL AND PREVENTION
HIV/AIDS PREVENTION

Cumulative U.S. AIDS Cases as of 5/85 N~10,000

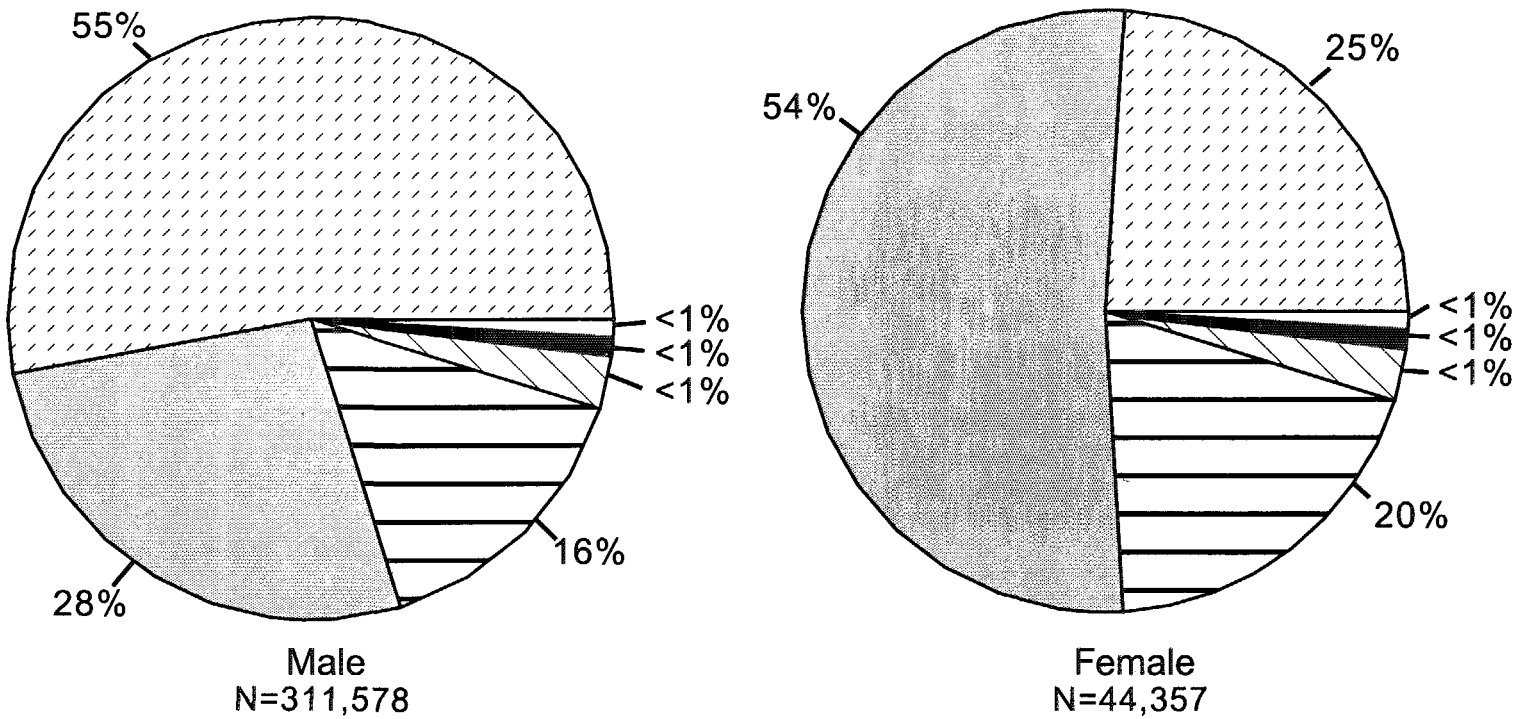


Cumulative U.S. AIDS Cases as of 12/93 N~360,000



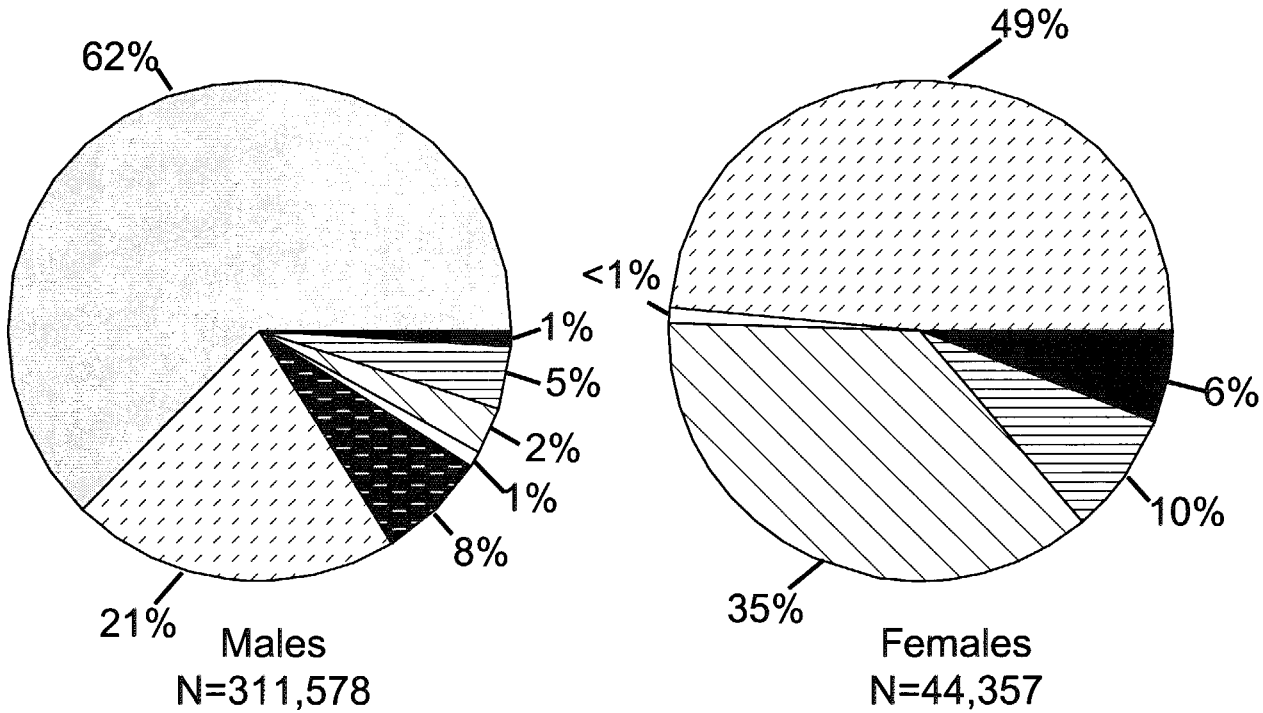
Each point = 30 cases

U.S. AIDS Cases Among Adults/Adolescents, by Sex and Race/Ethnicity*, Reported through December 1993

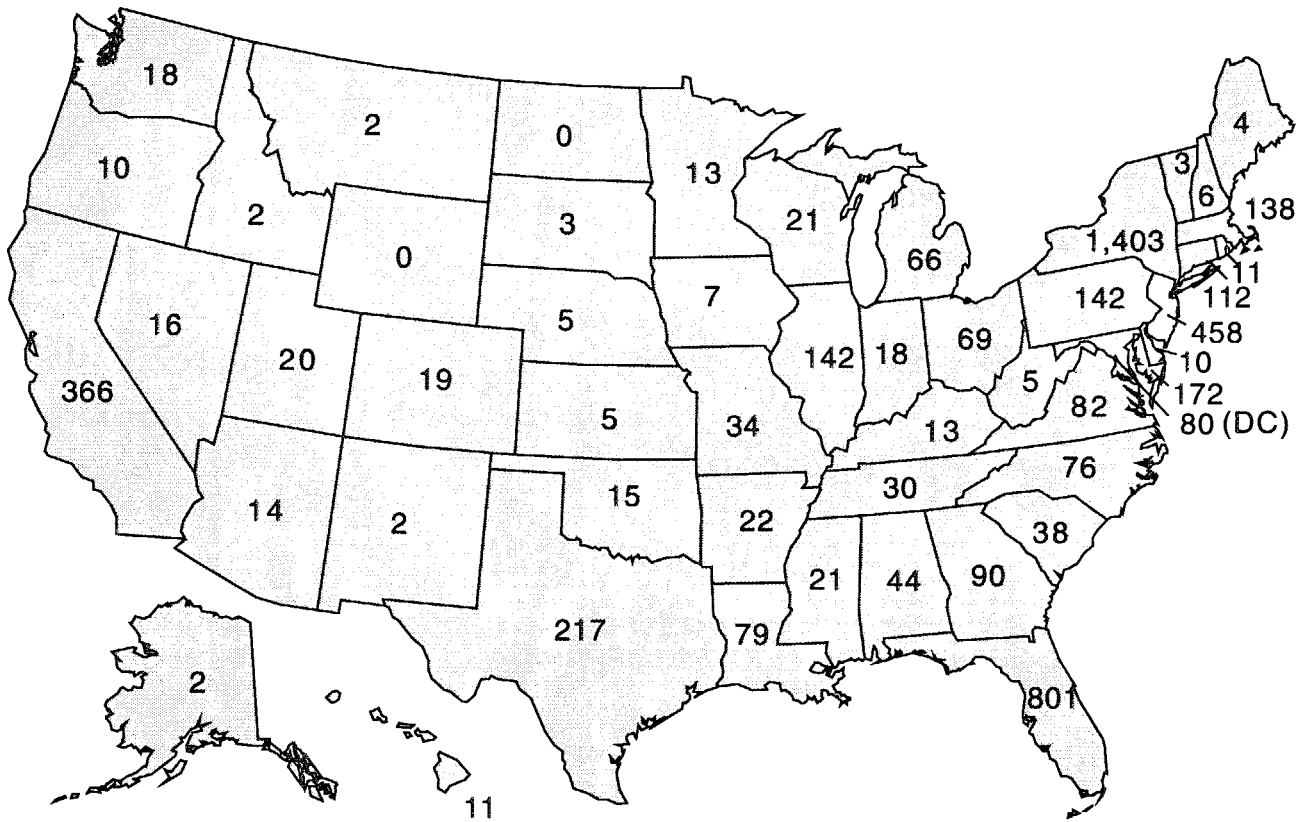


*Race and ethnicity are not risk factors for HIV infection; an assessment of risk behavior is necessary to properly target prevention efforts.

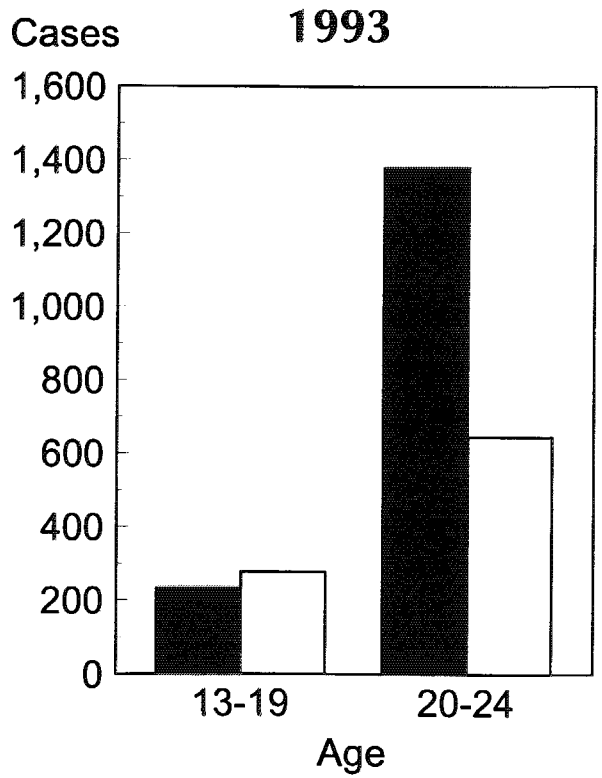
AIDS Cases Among Adults and Adolescents, by Sex and Exposure Category, Reported Through December 1993

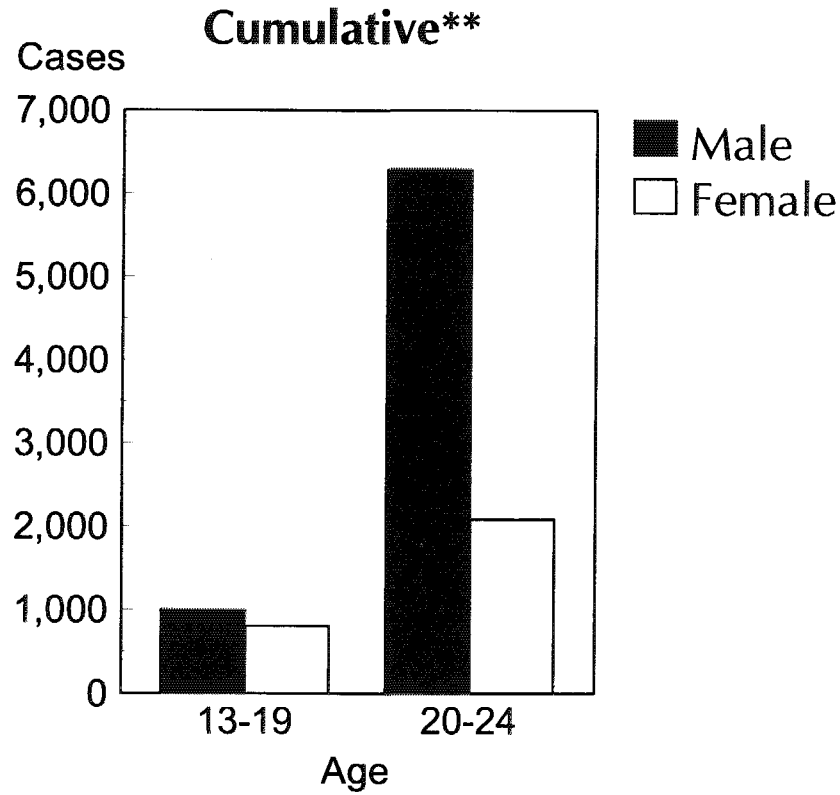


AIDS Cases Among U.S. Children (<13 Years), Reported Through December 1993



U.S. HIV Infection Cases (Not AIDS) Reported in 1993 and Cumulatively Among Young People Aged 13-24 (From States with confidential HIV infection reporting*)





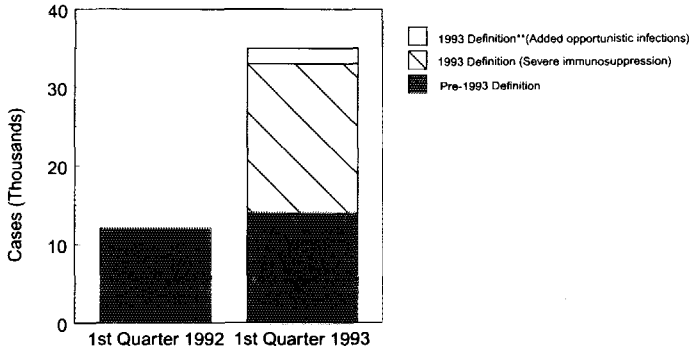
*Includes data from 25 States.

**States initiated HIV reporting in different years; cumulative case counts represent different time periods for each State.

Source: *HIV/AIDS Surveillance Report*, July 1994

1993 HIV Prevention Activities: Highlights

Reported AIDS Cases Among Adolescents and Adults
First Quarter 1992 and 1993



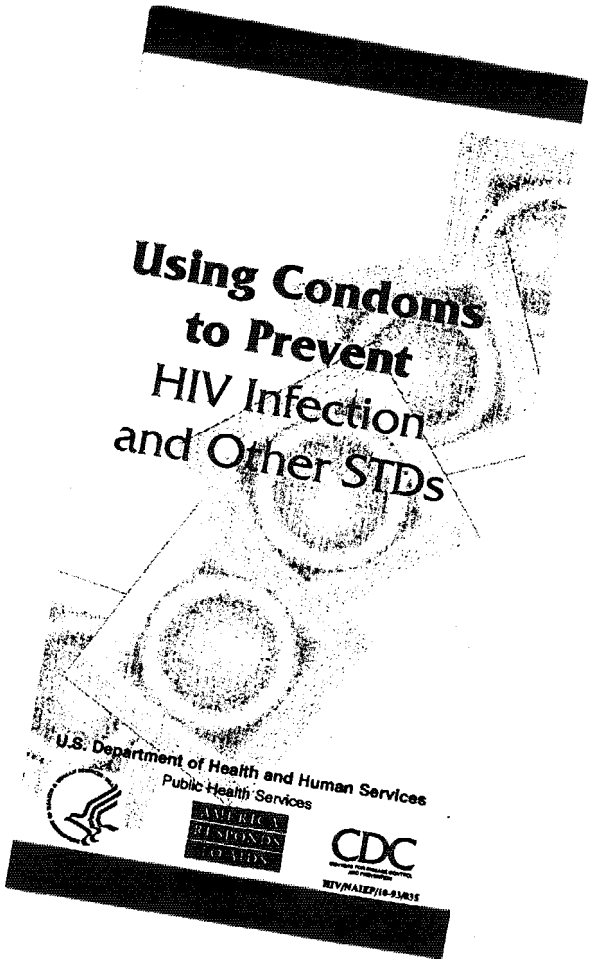
*All HIV-infected persons with severe immunosuppression (<200 CD4+ T-lymphocytes/µl or a CD4+ T-lymphocyte percentage of <14), pulmonary tuberculosis (TB), recurrent pneumonia, or invasive cervical cancer in addition to the clinical conditions included in the AIDS surveillance case definition published in 1987.
**Pulmonary TB, recurrent pneumonia, and invasive cervical cancer.

Initiated an external review process for CDC's HIV prevention programs and activities by individuals and groups outside of CDC who are experts in the field of HIV prevention. Five review groups were established by the CDC Advisory Committee on the Prevention of HIV Infection to examine CDC programs associated with (1) monitoring the HIV/AIDS epidemic; (2) promoting individuals' knowledge of serostatus (counseling, testing, referral, and partner notification); (3) developing partnerships for HIV prevention; (4) preventing risk behaviors among school-aged populations; and (5) improving public understanding of the epidemic. The review groups presented their analyses, suggested modifications, and proposed solutions to the Advisory Committee in November 1993; the Advisory Committee submitted a final report to CDC in May 1994.

Developed and distributed an HIV Prevention Community Planning Guidance document, which outlines a process whereby the identification of high priority prevention needs is shared between health departments administering CDC funds and the communities for whom the services are intended. CDC held four meetings in which governmental and nongovernmental organizations provided extensive input on the need for open and candid participatory community planning. The HIV Prevention Community Planning process embraces the notion that the behavioral and social sciences must play a critical role in the development, implementation, and evaluation of HIV prevention programs within a given community. The guidance applies to all of CDC's 65 state, territorial, and local health department grantees.

Following publication of the expanded AIDS surveillance case definition and revised HIV classification system for adolescents and adults, ***conducted scientific, programmatic, and operational activities to implement expanded case surveillance*** in the field and to assess the impact of the expansion. During 1993, more than 100,000 cases of AIDS were reported among adolescents and adults, representing a more than 100 percent increase over the number of cases reported in 1992. Of the cases reported in 1993, more than half were reported based on the criteria added to the definition in 1993.

1993 HIV Prevention Activities: Highlights



Launched an HIV Prevention Marketing Initiative (PMI) to prevent the sexual transmission of HIV among young people. PMI represents the application of marketing techniques and consumer-oriented health communications technologies based on science and is directed to the prevention of HIV and other sexually transmitted diseases (STDs) among young people 18-25 years of age. PMI has four levels of activities:

1. A national component of communications focused on HIV prevention among young people in the 1990s, including the role of condoms in preventing sexual transmission of HIV.
2. Technology and information transfer to support development of effective HIV prevention activities.
3. Prevention marketing demonstration sites to expand the reach of the national program through involvement and coordination with five local sites in the development of HIV prevention programs.
4. Integration of PMI with other CDC HIV prevention programs, particularly the HIV Prevention Community Planning process.

A comprehensive research and evaluation plan is being implemented simultaneously with each component of the program, which will direct the planning and decision-making processes.

Published in the Morbidity and Mortality Weekly Report (MMWR) an article discussing the science of condom efficacy, and specifically citing new studies that provide compelling evidence that latex condoms, when used consistently and correctly, are highly effective in preventing HIV transmission. Through PMI, CDC provided this article, along with supportive documents and materials, to state and local health departments for use in local HIV prevention and education activities.

1993 HIV Prevention Activities: Highlights

Percent of respondents who have talked with, received condoms, or received bleach from street outreach workers (OW) Baseline surveys, AIDS Evaluation of Street Outreach Projects

	Have ever talked with OW	Have received condoms from OW	Have received bleach from OW	
	%	%	%	N
IDU Sites				
Chicago	17.3	16.3	13.6	417
Atlanta	63.3	57.9	44.5	428
LA County	44.9	39.8	51.3	403
Philadelphia	65.2	55.7	50.0	270
NY ADAPT	59.6	57.4	67.5	399
Youth Sites				
LA Childrens Hospital	41.0	31.8	10.3	400
San Francisco	23.3	22.0	7.2	215
NY Victim Services	46.2	38.5	6.7	195

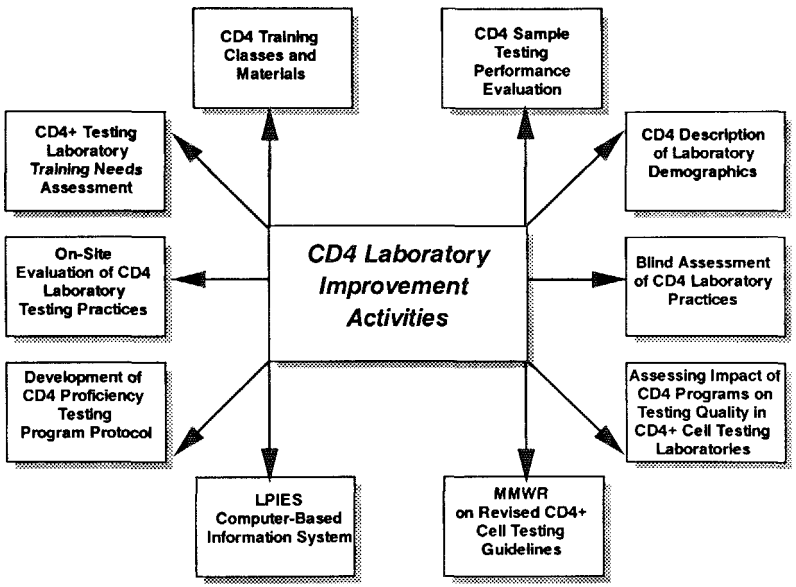
Completed data collection for the 1-year Youth Behavior Survey component of the National Health Interview Survey, in which sensitive risk behavior data are collected from youth via portable audio tape recorders with headphones. The information is similar to that collected in the school-based Youth Risk Behavior Survey, but includes a wider range of ages as well as out-of-school youth.

Developed a new CDC-wide "Plan for Further Engagement in International HIV/AIDS Prevention and Control, 1994-1998." The primary goals of the plan are to (1) develop new assessment tools and prevention interventions, (2) develop and promote HIV prevention training, and (3) establish comprehensive HIV/STD Prevention Centers, including multidisciplinary program research, implementation, evaluation, and training. In addition, CDC has established an International HIV Committee to improve information exchange, planning, and coordination of CDC's international HIV activities.

Distributed the report of a CDC-sponsored review of needle exchange programs conducted by the University of California. In the report, entitled "The Public Health Impact of Needle Exchange Programs in the United States and Abroad," researchers concluded that (1) adequately funded needle exchange programs (NEPs) "have the potential to serve significant portions of the local injecting drug user population," (2) "although quantitative data are difficult to obtain, those available provide no evidence that [NEPs] increase the amount of drug use by needle exchange program clients" or increase drug use in the community, (3) most studies of NEP clients "demonstrate decreased rates of HIV drug risk behavior," and (4) multiple mathematical models of NEP impact "suggest that [NEPs] can prevent significant numbers of HIV infections among clients of the program, their drug and sex partners, and their offspring."

1993 HIV Prevention Activities: Highlights

CD4+ Cell Testing-Related Activities
Public Health Practice Program Office



Expanded the Model Performance Evaluation Program (MPEP) activities to assess the performance quality of laboratories that perform CD4+ cell testing. This testing has become increasingly important in monitoring the immune status of patients infected with HIV and making decisions about initiation of antiretroviral therapy and opportunistic infection prophylaxis. Information collected from participating laboratories has provided valuable data on CD4+ cell testing practices which, when compared with performance evaluation testing, will assist CDC in understanding the quality of CD4+ cell testing in the United States and identifying factors that may affect such testing.

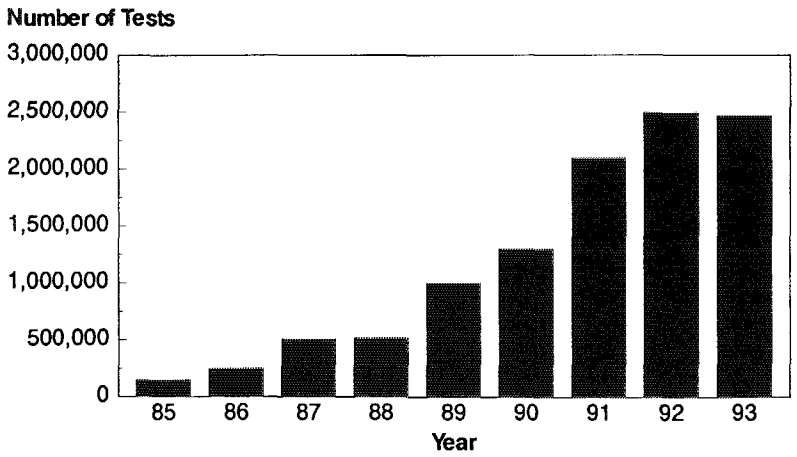
Played a pivotal role, through the Business Responds to AIDS (BRTA) program, in the stimulation and implementation of the President's initiative requiring that all Federal employees receive education about HIV infection and AIDS. The American Red Cross (ARC), a CDC grantee, has received more than 300 requests for training from Federal agencies for their work-place education programs. In addition, the BRTA Resource Service has received 494 calls from Federal agencies requesting assistance.

Enhanced tuberculosis (TB) surveillance systems to identify TB patients coinfected with HIV and ensure their appropriate therapy and case management; determine and monitor trends of TB cases with underlying HIV infection; describe epidemiologic and clinical characteristics of persons with TB disease and HIV infection; and determine the prevalence of substance abuse among TB patients.

Enrolled 240 women in the Women's AIDS Cohort Study, cofunded by the National Institutes of Health (NIH) and CDC, to evaluate the natural history of HIV disease in women. Of the 240 enrollees, 150 have had their first follow-up visit and 70 have had two follow-up visits. Preliminary findings describe the prevalence of current and past sexually transmitted diseases (STDs) and the association of vaginal candidiasis, genital shedding of cytomegalovirus, cervical dysplasia, and human papilloma virus infection with compromised immune systems.

1993 HIV Prevention Activities: Highlights

Number of HIV Tests at Publicly Funded Sites
United States, 1985 - 1993



Monitored retrospective investigations of patients treated by HIV-infected health-care workers. No cases of health-care worker-to-patient transmission of HIV were identified among 22,032 patients tested from 63 health-care practices.

Developed and pilot-tested a 3-day course on HIV prevention counseling. The counseling approach reflects the style and content in the *Technical Guidance on HIV Counseling* published in the MMWR. The most notable changes from prior CDC courses are the concentration on client-centered counseling and the establishment of personalized risk-reduction plans. Train-the-trainer courses are will be held in 1994 to share the materials with instructors from state and large city HIV prevention programs as well as staff from the Family Planning Regional Training Centers.

Developed a multisite research design and intervention program to prevent HIV-infected men and adolescents, including young men with hemophilia, from transmitting HIV to their sex partners, who could then transmit infection to their offspring. These projects share the "Stages of Change" model as a common conceptual framework. The facility-based activities provide standardized risk-reduction activities and counseling in a cohort of HIV-infected men.

1993 HIV Prevention Activities: Other Accomplishments

Monitoring the Epidemic

- Published two updates in the *MMWR* on mortality due to HIV infection among persons 25-44 years of age, focusing on the comparison with other leading causes of death. Also published an analysis on HIV-related mortality in U.S. cities and states. This study reported that HIV infection was the leading cause of death among men 25-44 years of age in 64 U.S. cities and among women 25-44 years of age in 9 U.S. cities in 1990, and documented the high proportion of deaths due to HIV infection among young men and women in several areas.

- Augmented the ability to type HIV infections and improved our molecular epidemiologic investigations through further enhancements in the application of polymerase chain reaction (PCR), direct DNA sequencing, and HIV strain-specific probes to identify closely related HIV strains and to establish potential HIV transmission patterns. CDC expanded the use of genetic variability analysis and comparison of the evolutionary relationships among viral isolates to identify unique genetic variants and to establish HIV phylogenetic patterns among study populations. These enhanced proficiencies have enabled CDC to successfully investigate a number of HIV transmissions of considerable public health importance in health-care settings and also established the existence of a new major HIV variant in Romania.

- Continued to conduct blinded HIV tests on persons examined in the National Health and Nutrition Examination Survey III and released national serostatus estimates based on 1988-1991 data.

- Enrolled more than 600 patients in the Enteric Opportunistic Infections Study, a prospective study designed to follow 1,000 HIV-infected patients in Atlanta, Georgia. Patients are being followed monthly for a 1-year period, during which time clinical specimens and data related to incidence and risk factors are being collected. The study has identified *Cryptosporidium* infection in 50 (9 percent) HIV-seropositive patients.

- Awarded funds to 38 state and local health departments to collaborate with other health-care providers in conducting TB screening and preventive therapy activities among persons at high risk for TB/HIV infection.

1993 HIV Prevention Activities: Other Accomplishments

Monitoring the Epidemic

- Demonstrated that viruses are the most commonly identified causes of gastroenteritis among HIV-infected patients. Further demonstrated that a newly discovered picornavirus is associated with chronic diarrhea in these patients and that astrovirus is the commonly identified cause of acute diarrhea.

- Continued to conduct, in collaboration with state and local health departments, standardized HIV seroprevalence surveys in designated subgroups of the U.S. population to monitor the HIV epidemic in this country. Results from these studies provide state and local health officials with important information needed to develop, target, and evaluate prevention programs; to assess trends in the HIV epidemic and related risk behaviors; and to assist in projecting the number of children and adults who will develop HIV-associated illness and require medical care.

- Conduct epidemiologic studies of HIV-infected persons with tuberculosis to document clinical characteristics of coinfected persons, describe the epidemiology and natural history of HIV and TB in dually infected persons, document the completeness of reporting to the AIDS and TB surveillance systems, and evaluate the TB case definition for HIV-infected persons.

- Funded TB-related research activities such as hospital worker skin testing, pilot projects for evaluation of surveillance systems, mathematical modeling of TB in the year 2010, and an efficacy study of the Bacillus Calmette-Guerin (BCG) vaccine.

- To improve understanding of the epidemiology of cryptococcal infection, conducted active population-based laboratory surveillance and a case-control study of risk factors for cryptococcal disease in four U.S. cities. Also developed molecular subtyping tools for application in epidemiologic studies of *Cryptococcus neoformans* infection.

- Conducted the "Third International Course in Surveillance and Applied Epidemiology for HIV and AIDS" in Atlanta, Georgia, for 30 participants from 18 countries.

1993 HIV Prevention Activities: Other Accomplishments

Monitoring the Epidemic

- Reported state-specific data on HIV-related knowledge, attitudes, and behavior from the Behavioral Risk Factor Surveillance System. To assess the extent of community awareness and use of HIV prevention services, a series of questions covering these topics was included in a population-based chronic disease and health-risk survey in the District of Columbia.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection Among Populations at Risk: Men Who Have Sex With Men

- Continued support for a multisite study of HIV seroincidence and attitudes toward vaccine trials among gay and bisexual men. Recruitment began in Chicago, Denver, and San Francisco in January 1993. Of eligible men, 1,487 (86 percent) enrolled in the study. Analysis of baseline data indicates that 36 percent of men enrolled are definitely willing to participate in HIV vaccine trials, 37 percent are probably willing, 20 percent might be willing, and 7 percent are definitely not willing.

- Supported through funding to the United States Conference of Mayors (USCM) five grants for collaborative efforts by local health departments and community-based organizations to conduct needs assessments to determine local community HIV/AIDS prevention needs and capacities. In addition, USCM will provide five grants for implementation of high priority HIV prevention activities identified during the needs assessments. CDC also provided assistance to USCM to fund an additional 8-10 collaborative assessment grants along with 3-4 collaborative implementation grants; the latter will focus on high priority needs of gay and bisexual men of color. With CDC support, USCM conducted, in five cities, an assessment of the HIV prevention needs of this population along with the HIV prevention capacities of their local communities.

- Provided financial and technical assistance for HIV prevention activities to community-based organizations (CBOs) serving men who have sex with men, and provided funding to national and regional minority organizations (NMOs and RMOs) for support of organizations and agencies that provide HIV/STD prevention services to men who have sex with men.

- Completed an ethnographic study of Hispanic/Latino men in southeastern Texas and southern California who do not identify themselves as gay but who have sex with other men. Men interviewed in public cruising areas, many of whom reported heavy drug and alcohol use, had incomplete or superficial knowledge about HIV/AIDS, used condoms inconsistently or not at all, and relied on ineffective risk-reduction strategies, such as avoiding gay-identified sex partners. A *Technical Report of Findings* provides recommendations for further research and HIV prevention activities for this underserved population at risk.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection Among Populations at Risk: Injecting Drug Users

- Collaborated with the National Institute on Drug Abuse (NIDA) and the Center for Substance Abuse Treatment (CSAT) in issuing an HIV prevention bulletin on bleach disinfection of drug injection equipment. This bulletin stated that sterile needles and syringes are safer than bleach-disinfected, previously used needles and syringes and that, for needles and syringes that were going to be re-used, bleach disinfection should reduce the risk of HIV transmission. The bulletin provided provisional recommendations for multistep procedures for bleach disinfection of needles and syringes, and was widely distributed by the CDC, CSAT, and NIDA.

- In collaboration with the Connecticut Department of Health, completed a 1-year evaluation of the impact of 1992 Connecticut laws that (a) allowed pharmacies to sell up to 10 needles and syringes without requiring a prescription and (b) decriminalized the possession of up to 10 needles and syringes. Studies in pharmacies in Hartford and Weathersfield showed a steady increase in purchases of "nonprescription" syringes in Hartford. Questionnaire surveys of injecting drug users (IDUs) showed widespread, but incomplete knowledge of the new laws; a shift of most frequent source of needles and syringes from purchases on the "street" to purchases in pharmacies; and a substantial decrease in reported multi-person use (sharing) of injection equipment.

- Collaborated with the National Academy of Sciences in briefings for the panel on needle exchange and bleach distribution programs.

- With NIDA and CSAT, co-sponsored a workshop on the disinfection of drug injection equipment. The workshop participants included staff from the three Federal cosponsors and selected representatives from state, public health and drug abuse agencies and community-based organizations (CBOs).

- Provided financial and technical assistance for HIV prevention programs to CBOs serving IDUs.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection Among Populations at Risk: Racial and Ethnic Minorities

- Provided technical assistance to the National Medical Association's Healthy People 2000 Project for its targeted media campaign to present important health messages to people of color. Through this collaboration, HIV/AIDS prevention billboards were developed and posted in fourteen major U.S. cities.

- Provided technical assistance to 10 historically black colleges and universities in Georgia to develop media campaigns for HIV/AIDS prevention. These institutions are working with local health departments, health clinics, public hospitals, college organizations, and college and local media to target HIV prevention messages.

- Continued funding of ARC, which has expanded its Crosslinks satellite program that provides to communities and ARC chapters innovative approaches for using its core, Hispanic, African-American, and workplace HIV education programs. Black Entertainment Television hosted an ARC Crosslink program on how African-American religious institutions can use these HIV education programs. In addition, ARC has collaborated with the Boys and Girls Clubs, Inc., to develop an age-appropriate K-12 Afterschool Care Curriculum for use in numerous communities across the country, and the Atlanta ARC chapter received a grant to provide HIV/AIDS education to nine cluster communities of the Atlanta Project spearheaded by former President Jimmy Carter and the Carter Center.

- As part of the HIV Behavioral Research and Evaluation Programs Targeting Communities of Color (BREPTCC), initiated two new research projects to examine behavioral issues associated with HIV transmission in communities of color. Such pilot studies are useful in generating hypotheses or conducting initial evaluations to assist in developing directions for future, longer-term, conclusive studies for HIV and STD prevention. CDC also continued funding of three existing BREPTCC projects: Alternatives to Prostitution Risk Reduction Study; Women and HIV/AIDS Prevention Project: Unintended Effects; and Availability and Utilization of Early Intervention Services for Selected Seropositive Populations. CDC provides technical support through cooperative agreements or contracts, or both, to investigators, communities, or institutions who conduct these BREPTCC research studies.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection Among Populations at Risk: Racial and Ethnic Minorities

- Funded a 2-year project for HIV prevention among minority populations titled "Cognitive and Institutional Barriers to HIV Prevention Among African Americans."
- Provided financial and technical assistance to CBOs serving minority and high-risk populations in the metropolitan statistical areas most heavily affected by HIV infection and AIDS. In addition, CDC funded NMOs and RMOs to support them in assisting organizations and agencies that provide HIV/STD prevention services to racial/ethnic minority populations, assess the HIV/STD prevention needs of racial/ethnic minority populations, and implement programs to change community norms related to safer behaviors.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection Among Populations at Risk: Youth

- Provided financial and technical assistance to 25 national education and health organizations to help them plan, develop, and disseminate recommendations on HIV education for youth in schools and other settings. In addition, CDC provided financial and technical assistance to every state, 6 territorial, and 19 local education agencies to implement locally determined HIV prevention programs.

- Collaborated with the Education Development Center to establish 58 School Health Education Training Centers in state and territorial education agencies funded by CDC. In 1993, these Centers provided training in development, implementation, and evaluation of HIV prevention programs to more than 15,000 teachers and other school staff.

- Convened an expert panel to review scientific literature in order to (1) draw conclusions about the effectiveness of sex and HIV education programs in terms of impact on adolescent sexual behavior, (2) determine key elements of effective programs, and (3) identify the gaps in knowledge in this area. The literature indicates that such programs do not hasten the onset of sexual activity or increase sexual frequency. In some cases, delay in sexual intercourse was observed as well as an increase in condom use. Effective programs were based on social learning theory, focused on specific risk behaviors, provided personalized risk information, addressed social and media influences on adolescents, reinforced positive peer norms, and provided communication skills training.

- Funded a 2-year project for HIV prevention among youth populations, "Familial Influences on HIV Risk and Risk Reduction Behavior in Adolescents."

- Provided financial and technical assistance to CBOs serving youth in high-risk situations.

- Continued funding of the AIDS Evaluation of Street Outreach Projects (AESOP), an eight-site project designed to evaluate the impact of street outreach programs on risk behavior of high-risk populations and to develop improvements that can be adapted to other programs. The target groups in three of the eight sites are youth in high-risk situations (YHRS) (i.e., youth ages 12-23 years who are homeless or runaways, or who support themselves through the street economy of drugs, prostitution, panhandling, and crime). (See also "Evaluating HIV Prevention Efforts.")

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection Among Populations at Risk: Women

- Continued the HIV Epidemiology Research Study (HERS), a collaborative effort between CDC and NIH to define, characterize, and determine risk factors for both AIDS-defining and non-AIDS-defining illnesses in women. Enrollment of the study cohort began in April 1993. As of late 1993, 635 women, including 377 HIV-positive and 258 HIV-negative women, have been enrolled. CDC continues to investigate gynecologic conditions associated with HIV infection, such as vaginal candidiasis and cervical dysplasia, in smaller cohorts of women.

- Continued behavioral research under the Comprehensive AIDS and Reproductive Health Education Study (Project CARES) to develop, implement, and evaluate interventions for the prevention of HIV infection and AIDS in women and infants. Activities include (1) analysis of clinic-based strategies to identify and remove barriers to effective use of contraception among women at high risk for HIV infection or HIV-infected, (2) assessment of 300 women at high risk of HIV infection to determine their readiness for behavior change according to the Transtheoretical Stages of Change model, and (3) production and piloting of the *Project CARES Advocates' Guide to Stages of Change Counseling*. As of September 1993, 445 women were enrolled in Project CARES. Multiple process evaluation measures have been developed to monitor study implementation at all sites.

- Developed a multisite research design and intervention program for the Prevention of HIV in Women and Infants Demonstration Projects, evaluating HIV prevention services in facilities and at the community level. The projects compare standard family planning services with an enhanced reproductive health counseling service that addresses both disease prevention and pregnancy planning in a cohort of high-risk and HIV-infected women. Barriers to care will be reduced through outreach and provision of services in nontraditional settings, such as drug treatment centers and homeless shelters. Community-level interventions (CLIs) utilize lay community members and outreach staff to influence the behaviors and norms of target populations. CLIs include (1) stage-tailored print materials that promote the use of condoms for disease and pregnancy prevention, (2) networks of peer volunteers who distribute these HIV prevention messages and materials and provide social reinforcement for changes in behaviors which reduce the risk of transmission, (3) outreach staff who tailor their encounters to each woman's needs as indicated by her readiness to adopt safer behaviors, and (4) a Community Mobilization Framework to maximize community-level participation and diffusion of messages.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection Among Populations at Risk: Women

- Collaborated with the Office of Population Affairs (OPA) to develop a national strategy for preventing HIV infection among women attending family planning clinics. This national strategy will integrate behavioral research, operations research, and training activities to create a combined, multidisciplinary approach for the reduction of HIV infection and AIDS among women. The combined efforts of this project will increase provider and clinic capacity to promote effective HIV risk-reduction behaviors. As part of this collaborative effort, CDC and OPA have jointly convened a Family Planning Training Partnership for HIV Prevention Work Group to provide an ongoing forum for participants in the family planning community to discuss the implications of HIV prevention research findings for family planning and reproductive health service provision and training. In addition, CDC and OPA are examining ways in which HIV education, counseling, and testing (ECT) services are provided in family planning clinics and the effect of HIV service integration on the delivery of family planning services from the point of view of providers, clinic managers and family planning clients. This study will also examine clinic protocols, policies, and systems as well as the impact of HIV service integration on clinic efficiency.

- Provided financial and technical assistance to CBOs serving women, including women of color, and provided funding to NMOs and RMOs for support of organizations and agencies that provide HIV/STD prevention services to women.

- In collaboration with investigators at the DeKalb County Sexually Transmitted Diseases Clinic, began planning a study of vulvovaginal candidiasis in HIV-infected women. The goals of this study are to understand the natural history of the disease in HIV-infected women compared with non-HIV-infected women; to better define risk factors for infection in this high-risk group; to evaluate newer diagnostic methods; and, by application of new molecular typing and antifungal drug susceptibility test methods, to determine whether HIV-infected women are more likely to develop "hypervirulent" and/or antifungal drug-resistant strains of candidiasis.

- Continued funding of the Pelvic Inflammatory Disease in HIV-Infected Women study to evaluate the etiology and clinical course of pelvic inflammatory disease in women with and without HIV infection. To date, protocols and questionnaires for collecting historical, clinical, and laboratory data have been finalized.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection in Occupational Settings

- Issued guidelines to prevent patient-to-patient transmission of bloodborne pathogens when administering injections.
- Sponsored a workshop on engineering controls for preventing airborne infections among workers in health-care and related facilities. Participants included engineers, architects, epidemiologists, health-care workers, hospital representatives, and infectious disease specialists. The conference focused on airborne disease transmission, control technologies, and research goals.
- Completed an evaluation of needle-stick injuries among health-care workers in a rural hospital. As in large urban hospitals, the lack of time to use universal precautions and concerns about interference with skillful performance were the two most frequent reasons for noncompliance in this small rural hospital. Like urban workers, rural workers did not report to their employee health clinics all their exposures to blood or body fluids; however, whereas urban workers most frequently cited lack of time as reason for not reporting, for rural workers the most common reason was the perception that the patient was not infectious.
- Completed studies to assess risk of and develop prevention strategies for occupational exposure to blood aerosols; a final report will be issued in 1994. A report will also be issued on completed studies of design factors for sharps disposal containers.
- Continued studies of needle-stick injuries and related behavioral factors, and evaluations of health-care devices intended to reduce the risk of accidental needle sticks to health-care workers.
- Continued field investigations of risk factors for and control measures to prevent occupational infection with tuberculosis. These investigations have been conducted in hospitals, correctional facilities, and a variety of public service offices. Both HIV-positive workers and workers with normal immune function are employed in some of these organizations, and recommendations will contribute to the protection of all workers on site.

1993 HIV Prevention Activities: Other Accomplishments

Preventing HIV Infection in Occupational Settings

- Conducted eight sessions nationwide to train graduate medical faculty in preventing occupational transmission of bloodborne diseases (including HIV and hepatitis) and tuberculosis. Faculty from 108 residency programs in family medicine, internal medicine, and obstetrics/gynecology attended and will use the information to train residents in their programs.

- Published an update of *Recommended Infection-Control Practices for Dentistry*. Although the basic principles of infection control remain unchanged, the emergence of new technologies, materials, equipment, and data require continual evaluation of current practices. More than 16,000 copies of the new document have been distributed to interested persons since the update.

- Revised and published educational materials for dental health-care workers, consistent with the 1993 recommendations for infection control in dentistry. Since publication of the document, *Dental Infection Control File–1993*, numerous copies have been distributed to program directors of dental education institutions, state dental program directors, dental organizations, and others with interest in dental infection control.

- Completed the data collection phase of an observational study to determine the frequency and nature of percutaneous injuries during the provision of clinical dental services.

- Evaluated toxicity and use of antiretroviral agents for post-exposure prophylaxis as part of an ongoing study of health-care workers exposed to HIV-infected blood.

- Cosponsored a scientific meeting with the American College of Surgeons on preventing transmission of bloodborne pathogens in surgical and obstetrics practices.

1993 HIV Prevention Activities: Other Accomplishments

Working With International Partners to Prevent HIV Infection

- Completed a 2-year cohort study of young male military conscripts in northern Thailand. This study identified sex with female prostitutes as the predominant risk behavior for HIV infection among young Thai men and noted the importance of other STDs as cofactors. The higher rate of HIV infection among men from the upper north subregion (14 percent) compared with men from other areas (2 percent) is associated with earlier onset and greater frequency of sex with prostitutes and less consistent condom use.

- Continued collaborative agreements with the U.S. Agency for International Development (USAID) for the Contraceptive Research and Development (CONRAD) project, which is designed to (1) identify characteristics associated with sexual transmission of HIV among a cohort of HIV-infected male blood donors and their sex partners, (2) identify characteristics of women infected through sexual contact with an HIV-infected partner, and (3) identify characteristics of infected male blood donors that are associated with greater infectivity to their female partners. The project will also attempt to clarify the transmission dynamics of heterosexual transmission of HIV by comparing the risk of transmission at different times after infection and different stages of HIV immunosuppression. During 1993, data collection instruments were developed and pretested. By Summer 1993, 487 potential participants had been screened and 148 couples enrolled.

- Analyzed data collected from Peace Corps volunteers, returned and current, which indicate that volunteers are at a high risk for HIV infection through unprotected sex with one or more partners, particularly in countries where infection is widespread. STD/HIV prevention activities must focus on barriers to condom use, including low perceived risk for HIV, lack of confidence in condom quality, and perceived resistance on the part of a partner to use of condoms.

- Provided on-site training and continuing technical assistance to community-based groups in the Republic of South Africa that are attempting to design STD/HIV prevention activities for black African youth. Qualitative research data, presented at the 8th International Conference on AIDS in Africa, indicate that South African township youth are in urgent need of community-based interventions that focus on recognizing STD symptoms and seeking treatment, sexual negotiation skills, and acceptance of condoms.

1993 HIV Prevention Activities: Other Accomplishments

Working With International Partners to Prevent HIV Infection

- Provided (1) short-term technical assistance to World Bank missions in Brazil, India, Uganda, Indonesia, Kenya; (2) consultants for the World Health Organization's Global Programme on AIDS; and (3) technical assistance for USAID projects in Bolivia, Central African Republic, the Caribbean Epidemiology Centre (CAREC), El Salvador, Ghana, Guatemala, Honduras, Indonesia, Jamaica, Kenya, Nicaragua, Rwanda, Republic of South Africa, Thailand, and Uganda.

- Provided CDC staff to serve in key United Nations and USAID positions, including positions as long-term HIV prevention advisors in foreign nations.

- Provided developmental assistance to AIDS Information Centre (counseling and testing network) in Uganda to address specific needs of women, including STD issues, at both the community and service delivery levels. In addition, CDC utilized a training manager from Uganda's AIDS Information Centre as a consultant on an expert panel to revise U.S. guidelines for HIV counseling and testing.

- Provided international access to National AIDS Clearinghouse and assisted USAID, CAREC, Latin American countries, and the Republic of South Africa with specific Clearinghouse-related activities.

- Conducted three HIV prevention education workshops in the Republic of South Africa for teachers, social workers, and administrators of private and independent schools as well as staff of CBOs serving youth.

- Completed an evaluation in Uganda of the behavioral impact of HIV counseling and testing. Results indicate different types of risk-reduction patterns, according to serotype status, suggesting the role of testing components in influencing risk reduction. Risk-reduction patterns also varied according to gender and age. Significant risk reduction was documented among seronegative persons. In addition, CDC initiated an evaluation of a Ugandan medical and social support "club" associated with a counseling and testing network. Outcomes to be assessed include behavior change and dissemination of HIV prevention into the community. This is relevant to domestic considerations of "enhanced counseling and testing" models.

1993 HIV Prevention Activities: Other Accomplishments

Working With International Partners to Prevent HIV Infection

- Continued development of decentralized STD services in the Central African Republic, which include research related to client demand and service quality.
- Conducted an "Epidemiology and AIDS" course for more than 20 physicians from Côte d'Ivoire and other countries, and conducted a workshop on "Development of an Epidemiologic Protocol" for Projet RETRO-CI (Côte d'Ivoire) staff.
- Cosponsored an HIV/AIDS surveillance workshop for district health officers from Nigeria.
- Conducted epidemiologic research in Côte d'Ivoire, focusing on HIV-1 and HIV-2, perinatal transmission, natural history, HIV and TB, the AIDS case definition, and diagnostic laboratory testing.
- Through the MPEP and in collaboration with the Pan American Health Organization (PAHO), assessed the performance of HIV-antibody testing in the National Reference Laboratories located in Latin American countries, and provided specialized reports and assistance in developing quality assurance programs. In addition, CDC provided performance evaluations of plasma donor material for HIV-antibody testing to 120 laboratories in 59 foreign countries.
- Provided technical assistance to HIV workplace education and business coalition efforts in Botswana, Thailand, and Japan.
- Assisted the Federation of Red Cross and Red Crescent Societies in developing *Guidelines on Blood Donor Counseling for HIV*, for distribution throughout the developing world.

1993 HIV Prevention Activities: Other Accomplishments

Evaluating HIV Prevention Efforts

- As part of CDC's ongoing assessment of publicly funded HIV counseling and testing services, conducted a study of behavioral and clinical factors related to clients seeking services in 25 STD clinics in Illinois. Findings indicated that clients who perceived themselves to be at risk for having HIV infection were more likely to initiate and complete all stages of the HIV counseling and testing process than were clients who had an actual risk for HIV, that is, those who had a history of risk behavior or had a current STD diagnosis. However, those who had an actual risk were more likely to test positive for HIV infection. This implies that HIV prevention programs should use actual risk rather than perceived risk to assess true client risk for HIV infection.

- Conducted evaluations of the behavioral impact of HIV counseling and testing on more than 1,000 clients from methadone clinics in Connecticut and Massachusetts. Of the 674 clients who recently enrolled in the methadone programs, those reporting seropositive test results were more likely to be black and 35 years or older; they were also more likely, in the past 30 days, to have injected heroin, injected cocaine, shared "works" with strangers, and practiced safer sex. An analysis of the impact of HIV CT on behavior change is in progress.

- Analyzed findings from data on the AIDS Community Demonstration Projects. Findings indicate that 1-2 years are required to reach optimal capacity for diffusing prevention messages in "hard-to-reach" communities in which individuals are at high risk for HIV infection. These messages are best disseminated by the community members themselves, and, once the messages saturate the community, significant changes occurred in most populations regarding intentions to initiate as well as actual adoption of behavior change.

- As part of the HIV BREPTCC, initiated two new research projects to examine behavioral issues associated with HIV transmission in communities of color. Such pilot studies are useful in generating hypotheses or conducting initial evaluations to assist in developing directions for future, longer-term, conclusive studies for HIV and STD prevention. (See page 25 for more information on BREPTCC studies.)

1993 HIV Prevention Activities: Other Accomplishments

Evaluating HIV Prevention Efforts

- Continued funding of AESOP, an eight-site project designed to evaluate the impact of street outreach programs on risk behavior of high-risk populations and to develop improvements that can be adapted to other programs. The eight projects are located in 6 cities: New York, Philadelphia, Atlanta, Chicago, San Francisco, and Los Angeles. The target groups in five of the eight sites are injecting drug users (IDUs); in the three other sites, efforts are directed to youth in high-risk situations (YHRS) (i.e., youth ages 12-23 years who are homeless or runaways, or who support themselves through the street economy of drugs, prostitution, panhandling, and crime). Results from the initial round of quantitative surveys conducted in 1993 during the second phase of AESOP indicate that many of the IDUs and YHRS interviewed had received condoms and other materials from street outreach workers. Each of the eight sites has developed enhancements to existing street outreach which are being evaluated through a series of behavioral surveys.

- Provided materials, training, and direct consultation to enable state and local education agencies to evaluate their school-based HIV prevention programs. CDC's *Handbook for Evaluating HIV Education* provided state and local education agency staff with measurement tools and guidelines for conducting evaluations of HIV-related policies, teacher training, curricula, and student outcomes.

- Provided technical assistance to the Colorado State Education Agency to evaluate the effectiveness of a classroom-based HIV prevention curriculum. Schools offering the special curriculum, which consisted of 15 hours of skills-based activities such as role-playing, direct instruction on HIV prevention strategies, and peer education, were compared with schools offering no structured HIV curriculum. Student assessments showed greater knowledge about HIV, greater intent to engage in safer sexual practices, and actual changes to safer sexual practices among sexually active students at a 6-month follow-up.

- Initiated evaluation of family planning clinics providing HIV ECT services for women and continued with a pilot study to evaluate HIV ECT services in clinics serving women.

1993 HIV Prevention Activities: Other Accomplishments

Evaluating HIV Prevention Efforts

- Awarded a cooperative agreement to Emory University School of Public Health to conduct a formative evaluation of developing and existing HIV/AIDS education and prevention programs in correctional facilities.

- Initiated a Mode of Transmission Validation (MTV) Project/Heterosexual Transmission Study to examine the usefulness of HIV infection reporting systems (named, anonymous, and other alternatives) in epidemiologic monitoring and what is their impact on programs providing HIV-related prevention, medical, and social services.

- Continued evaluation of CDC NAH to determine who is using the Hotline, what topics they are discussing, whether there are shifts in caller demographics and issues of concern over time, and what impact selected programs, PSAs, and AIDS-related "special events" directed at the general public and specific target audiences have on these demographics and concerns.

- Developed and implemented an effectiveness evaluation plan for the ARC "AIDS in the Workplace" training program to assess whether the ARC is meeting its learning objectives in each of the five modules of the "AIDS in the Workplace" program, including whether or not participants in the "AIDS in the Workplace" program are experiencing any measures of behavior change or behavior change intent as a result of participating in the program.

1993 HIV Prevention Activities: Other Accomplishments

Improving Public Understanding of the Epidemic

- Provided technical assistance for a 120-minute entertainment/education special on HIV/AIDS, "In a New Light '93," developed and aired by ABC television. CDC also coordinated public information services through its CDC National AIDS Hotline (NAH) to answer viewers' calls about HIV infection and AIDS, and helped in efforts to extend coverage of the special as a news event, resulting in more than 700 print stories in U.S. newspapers and magazines.

- Expanded the capacity of the CDC NAH to allow an average of 5,100 telephone calls per day to be answered by NAH information specialists. NAH answered 1.6 million calls in 1993, the highest number of calls answered in any year since the Hotline began operation. The Hotline has answered more than 9 million calls since services began. In addition, CDC initiated through the NAH a pilot program, "Classroom Calls," in which teachers arrange for their class, using a speaker-phone, to ask HIV/AIDS-related questions of and receive answers from a Hotline Information Specialist.

- Implemented an NAH information update system to share "training bulletins" (information updates about HIV/AIDS treatment, prevention, or events) with more than 300 AIDS hotlines, helplines, and service professionals throughout the United States and other countries. This system is designed to provide consistent messages from national, state, and local hotlines.

- Convened a "User Needs Assessment" meeting to provide feedback on the current information needs of persons using the CDC National AIDS Clearinghouse (NAC) and to assess the NAC's ability to meet those needs. NAC is exploring alternate strategies for providing more targeted and explicit materials for at-risk populations. NAC received 257,574 requests for materials in 1993 and distributed 4.5 million publications.

- Provided technical assistance for the *Surgeon General's Report to the American Public on HIV Infection and AIDS*. The report was released to the public at the IXth International AIDS Conference in Berlin.

1993 HIV Prevention Activities: Other Accomplishments

Improving Public Understanding of the Epidemic

- Conducted Regional Corporate Briefings on BRTA initiative for business leaders in Little Rock, Arkansas; Newark, New Jersey; Chicago, Illinois; Nashville, Tennessee; Orlando, Florida; Boston, Massachusetts; and Washington, D.C. Participants indicated that the greatest barriers to implementing an HIV/AIDS prevention education program were a company's lack of awareness about the need to respond to HIV/AIDS, competing business priorities, and cost. Very few reported fear or stigma as a barrier.

- Continued BRTA outreach activities to business through (1) development of print ads and matte service articles that were mailed to 6,275 business/trade publications, general publications, newspapers, newsletter, and airline magazines; (2) development of airport dioramas that have been placed in multiple sites at 14 airports throughout the country; and (3) responding to business inquiries to the BRTA Resource Service, including 8,356 calls from business, labor unions, government agencies, and others.

- Funded the AIDS National Interfaith Network to provide technical assistance to their affiliates for HIV prevention. The cooperative agreement with the University of Texas Educational Training center was continued to develop model collaborations among public health, community-based organizations, and the religious community.

- Continued funding of the National AIDS Exhibit Consortium for traveling AIDS exhibits to be used in science museums throughout the nation. The exhibits were released in November 1993, with 2 years of scheduled exhibitions. The demand has exceeded expectations, however, and many communities are now on a waiting list to receive the exhibits.

1993 HIV Prevention Activities: Other Accomplishments

Building HIV Prevention Capacity Through Laboratory Activities and Research

- In collaboration with the Grady Hospital Laboratory in Atlanta, Georgia, evaluated four alternative CD4 technologies for precision and accuracy in HIV-infected and uninfected persons. These new technologies could potentially replace flow cytometry for the evaluation of HIV-infected persons.

- Assessed the performance of laboratories that test for HIV antibody through MPEP. During 1993, MPEP provided performance evaluation sample panels consisting of HIV-antibody positive and antibody-negative donor material to more than 1,000 laboratories that are located in the United States and 120 laboratories located in 59 foreign countries. Information collected from these laboratories provides CDC with an updated data base of testing practices, assists CDC in establishing standards of testing, and assists CDC in identifying factors that may affect laboratory testing quality. During 1993, MPEP also implemented an HIV-antibody testing blind performance evaluation study through federally funded counseling and testing sites. This collaboration between public health departments, private laboratories, and CDC will result in a better understanding of the quality of HIV-antibody testing in the United States.

- Implemented a PCR performance evaluation project for detection of HIV. This pilot project will send to 30 laboratories performance evaluation samples for PCR detection of HIV-1 in clinical specimens. The project will provide CDC with important information about the performance quality of laboratories using PCR.

- Implemented a *Mycobacterium tuberculosis* performance evaluation program in response to the resurgence of tuberculosis in both the number and types of cases reported, and the emergence of new isolates that are drug-resistant. This voluntary performance evaluation program will assess the laboratories' susceptibility testing process for multidrug-resistant strains of *M. tuberculosis*.

- Mailed a survey to laboratories that perform HIV-antibody testing by enzyme immunoassay (EIA) to assess testing practices, potential sources of error, methods of obtaining training, and need for training in this type of testing. Information collected in 1993 will be used in developing future HIV laboratory training programs.

1993 HIV Prevention Activities: Other Accomplishments

Building HIV Prevention Capacity Through Laboratory Activities and Research

- Continued to provide training on HIV laboratory diagnosis and the diagnosis and treatment of opportunistic infections. Through the National Laboratory Training Network (NLTN), HIV-related training is provided to state and local public health entities as well as private hospitals and providers to ensure that laboratory training and practices remain relevant to the changing picture of HIV/AIDS. Almost 4,000 students were enrolled in 71 training courses, representing both public and private health-care providers. Additional training courses were provided by CDC, including "Meeting the Challenge: Multidrug-Resistant TB" that was duplicated and distributed by the NLTN, resulting in 19 course presentations in 18 states with 1,001 participants.

- Implemented a project to evaluate the impact of CD4 laboratory improvement initiatives. This project will include evaluation of courses and materials developed for and presented by the NLTN, CD4 performance evaluation, and the CDC CD4+ cell testing guidelines. In addition, through the Association of Schools of Public Health, MPEP conducted blind assessments of CD4 laboratory practices and began conducting on-site evaluations of laboratories that perform CD4+ cell testing to determine the standardization of testing practices and the performance quality of laboratories performing this test.

- In collaboration with the Association of State and Territorial Public Health Laboratory Directors, the Food and Drug Administration (FDA), and NIH, sponsored a CD4 Conference in Atlanta, Georgia. Information collected through this conference and the MPEP assisted CDC in revising the CD4+ cell testing guidelines, which were published in 1994.

- Initiated development of a protocol for a national proficiency testing/accreditation program. Such a program will provide important information on the logistic requirements for a national CD4 proficiency testing program using whole blood clinical specimens.

- Developed and printed flow cytometric training materials on quality assurance/quality control (QA/QC) issues for the CD4+ cell testing laboratory and for the pre- and post-analytical procedures for CD4+ cell testing. Seven flow cytometric immunophenotyping courses were presented by the NLTN with 63 participants receiving hands-on training. Additionally, two courses on QA/QC and pre/post-analytical procedures were established by the NLTN.

1993 HIV Prevention Activities: Other Accomplishments

Building HIV Prevention Capacity Through Laboratory Activities and Research

- Evaluated new and alternate CD4+ cell testing procedures to determine their effectiveness compared with conventional flow cytometric processes.
- Implemented a CD4 training needs assessment to collect information through mailed surveys, telephone surveys, interviews, and laboratory observations on practices that may affect performance in the CD4+ cell testing laboratory. This preliminary information has been used to determine needed training support for CD4+ cell testing laboratory personnel.

Acronyms

AESOP	AIDS Evaluation of Street Outreach Projects
AHCPR	Agency for Health Care Policy and Research
AIDS	Acquired immunodeficiency syndrome
ARC	American Red Cross
ARTA	America Responds to AIDS campaign
ASTHO	Association of State and Territorial Health Officials
ASTPHLD	Association of State and Territorial Public Health Laboratory Directors
AZT	Zidovudine
BCG	Bacillus Calmette-Guerin
BREPTCC	HIV Behavioral Research and Evaluation Programs Targeting Communities of Color
BRFSS	Behavioral Risk Factor Surveillance System
BRTA	Business Responds to AIDS program
CARES	Comprehensive AIDS and Reproductive Health Education Study
CBO	Community-based organization
CLI	Community-level interventions
CONRAD	Contraceptive Research and Development project
CSAT	Center for Substance Abuse Treatment
CSTE	Council of State and Territorial Epidemiologists
CTRPN	Counseling, testing, referral, and partner notification
ECT	Education, counseling, and testing
EOIS	Enteric Opportunistic Infections Study
FDA	Food and Drug Administration
HBV	Hepatitis B virus
HERS	HIV Epidemiology Research Study
HE/RR	Health education and risk reduction
HIV	Human immunodeficiency virus
HRSA	Health Resources and Services Administration
IDU	Injecting drug user
IHS	Indian Health Service
MDRTB	Multidrug-resistant tuberculosis
MMWR	Morbidity and Mortality Weekly Report

MPEP	Model Performance Evaluation Program
MTV	Mode of Transmission Validation project
NAC	CDC National AIDS Clearinghouse
NAH	CDC National AIDS Hotline
NASTAD	National Alliance of State and Territorial AIDS Directors
NEP	Needle-exchange program
NHANES	National Health and Nutrition Examination Survey
NHIS	National Health Interview Survey
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NLTN	National Laboratory Training Network
NMO	National minority organization
OASH	Office of the Assistant Secretary for Health
OPA	Office of Population Affairs
OSHA	Occupational Safety and Health Administration
PAHO	Pan American Health Organization
PCR	Polymerase chain reaction
PHS	Public Health Service
PMI	Prevention Marketing Initiative
PSA	Public service announcement
QA/QC	Quality assurance/quality control
RMO	Regional minority organization
SAMHSA	Substance Abuse and Mental Health Services Administration
SHAS	Supplement to HIV/AIDS Surveillance project
STD	Sexually transmitted disease
TB	Tuberculosis
TLI	T-lymphocyte immunophenotyping
USAID	U.S. Agency for International Development
USCM	United States Conference of Mayors
WACS	Women's AIDS Cohort Study
WHO	World Health Organization
YHRS	Youth in high-risk situations
YRBS	Youth Risk Behavior Survey