

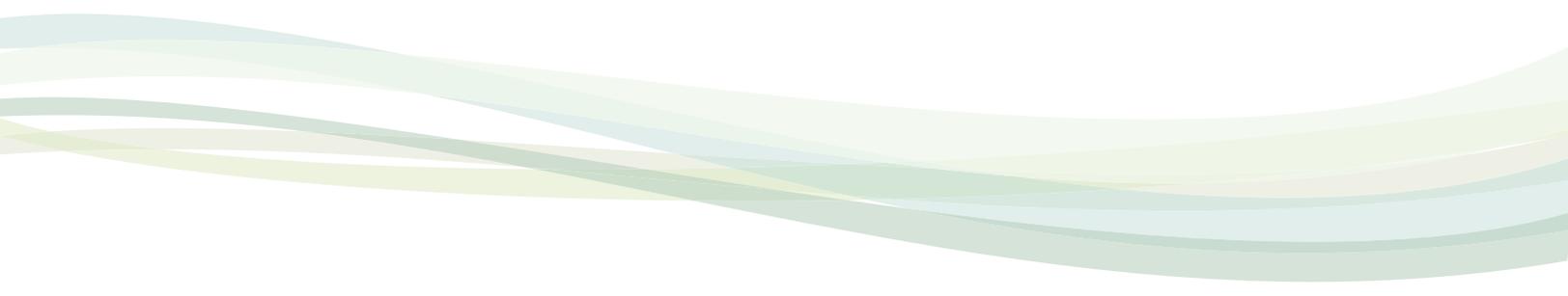
# National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

Annual Report • Fiscal Year 2009



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION





This third annual report of the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention highlights some major achievements and challenges faced by our organization in 2009, and looks forward to opportunities for improving health impact in the year ahead. We continue to deliver life-saving, effective, evidence-based prevention programs at home and abroad. Our stories show how we have strengthened our science by growing the size of our research efforts, increasing our research partnerships and collaborations, and developing and mentoring new researchers in the prevention arena.



The epidemics of HIV and other STDs, hepatitis, and TB are large and complex, but we have made progress over the last year both in the United States and throughout the world. In the U.S.:

- New diagnoses and rates of TB continued to drop and, in 2009, were at the lowest levels ever recorded.
- Expansion of hepatitis B vaccination programs brought continued declines in acute hepatitis B infections.
- Advances in checking for and tracking of hepatitis C infection continue.
- New efforts have started that focus on mobilizing communities to reduce HIV, STD, TB, and hepatitis health disparities and promote greater health equity.
- The Act Against AIDS campaign, the first nationwide, federally funded campaign to raise awareness about HIV/AIDS in over two decades was launched.
- Large investments continue to be made to promote HIV testing, especially in areas with high rates of disease among African Americans.
- The planning and delivery of our prevention investments and programs have improved by providing new program and funding opportunity announcements that are more balanced between national and local prevention priorities and needs.
- New prevention programs have been introduced and established programs and approaches refined, including collaborative programs that integrate services for more than one disease or risk; begin to address the social determinants of health; and put funding in areas where there is evidence of improved health.
- New communication technologies have promoted HIV and STD prevention.

This year's report also highlights NCHHSTP staff. Our Center attracts an exceptionally diverse set of public health and support professionals with a range of skills and experience that is perfect to develop and deliver evidence-based and high-impact prevention programs, research, and policies. We are especially proud of, and thankful for, the work of 1,200 locally employed staff who are citizens or residents of the countries that host CDC programs. These staff provide essential program and support functions. Our expert staff, combined with our unique relationships with governmental, non-governmental and private sector partners, form a foundation that provides us the opportunity to champion public health and accelerate disease prevention and health protection activities.

FY 2009 was a year that brought a new administration, new leadership, and a new energy. During the year we embarked on developing a National AIDS Strategy under the leadership of the Office of National AIDS Policy in the White House, and were honored to have the first town hall meeting regarding development of this policy at the National HIV Prevention Conference. We developed a strategic plan, which sets out our vision, and priority activities for the Center. In the future, we will strengthen our focus on health and health protection and not simply on disease prevention. We will move away from a one-size-fits-all prevention service to one that is tailored to the needs of our partners and the people we serve, maintaining our focus on quality, effectiveness and impact, while ensuring equitable access.

We will work to meet the standards set by this new administration that government should be transparent and accountable; participatory and committed to public engagement; and collaborative, acknowledging and acting on the fact that the whole is always greater than the sum of its parts. We are committed to communicating the right information, at the right time and in the right way, and that our science promotes the delivery and implementation of the most effective programs at home and around the world.

**Kevin A. Fenton, M.D., Ph.D., F.F.P.H.**  
**Director, National Center for HIV/AIDS,  
Viral Hepatitis, STD, and TB Prevention**

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Thanks to the following for contributing photos to the FY 2009 NCHHSTP Annual Report:

James Gathany, page 7; Cheryl Tryon, page 8; Teresa Durden, page 9; Wanda Walton, page 12; Alice Spivey, page 13; Bob Kohmescher, page 14; James Gathany, page 22; Wanda Walton, page 26; Alison Smith, page 27; Alison Smith, page 29 (left photo); Akos Somoskovi, page 29 (right photo); Division of TB Elimination, page 37; Alison Smith, page 38; Timothy Holtz, page 39.



## History

The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) is part of the Centers for Disease Control and Prevention (CDC), an agency of the U.S. Department of Health and Human Services (HHS).

The National Center for HIV, STD, and TB Prevention (NCHSTP) was established in 1994 to bring together most of CDC's HIV prevention activities under a single organizational home that also includes sexually transmitted disease (STD) prevention and tuberculosis (TB) elimination programs. In 2000, the Global AIDS Program (GAP) was added to NCHSTP in response to the global HIV/AIDS epidemic. In 2006, CDC's Division of Viral Hepatitis was added and the center was renamed the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. In FY 2009, CDC announced that GAP would be joining a new National Center for Global Health during FY 2010.

The diseases addressed by NCHHSTP share a number of commonalities. They have similar or overlapping at-risk populations—including racial and ethnic minorities, men who have sex with men, and injection drug users. These diseases also have important interactions. Those who are infected with certain STDs, such as syphilis or gonorrhea, are at greater risk for HIV infection. Likewise, those who are infected with HIV are far more susceptible to TB disease because their immune systems are weakened. Similarly, approximately 33% of those infected with HIV are co-infected with hepatitis C, and 10% are co-infected with hepatitis B.

These diseases also share similar social determinants, including poor access to health care, stigma, discrimination, homophobia, and poverty. In the area of prevention and control, effective, science-based interventions exist to reduce the burden of TB, viral hepatitis, most STDs, and HIV.

## Mission

NCHHSTP maximizes public health and safety nationally and internationally through the elimination, prevention, and control of disease, disability, and death caused by HIV/AIDS, non-HIV retroviruses, viral hepatitis, other STDs, and TB.

NCHHSTP achieves its mission by:

- Developing, implementing, and evaluating effective science-based prevention programs for HIV, viral hepatitis, STDs, and TB.
- Developing high-quality research and translating relevant findings into prevention policy and programs.
- Creating and strengthening strategic relationships and networks with individuals and organizations.
- Strengthening and promoting surveillance activities and findings for program planning, public health response, and evaluation.



## Who Are We?

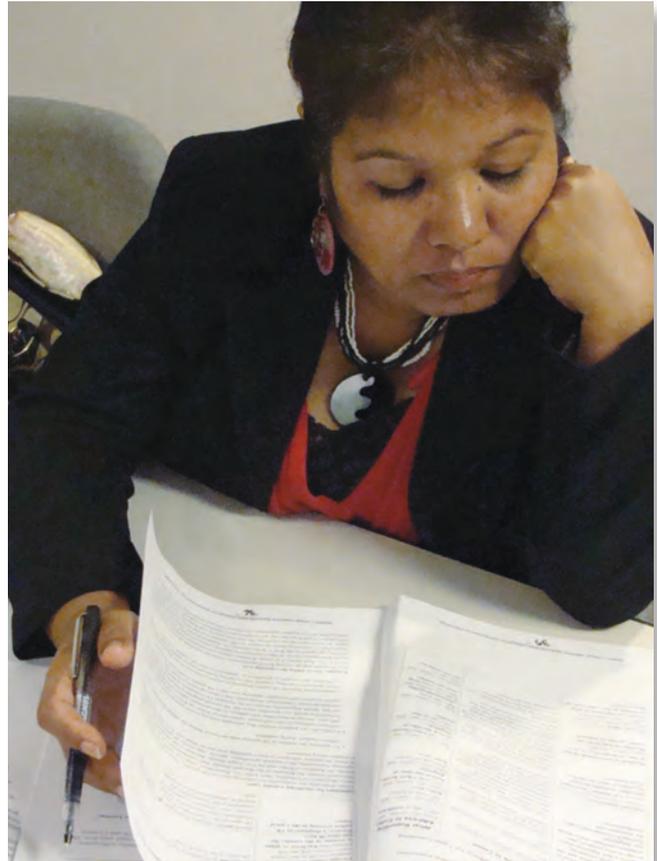
As a leader in preventing and controlling HIV infection, viral hepatitis, STDs, and TB, NCHHSTP applies well-integrated, multidisciplinary programs of research, surveillance, risk factor and disease intervention, and evaluation.

NCHHSTP addresses domestic HIV/AIDS prevention through an array of public health activities including monitoring the disease's impact, facilitating and supporting partnerships, implementing prevention programs, conducting intervention research and program evaluation, delivering technical assistance to build the capacity of organizations to offer prevention services, and developing policy and communications to support HIV prevention. These activities are conducted with a wide range of public- and private-sector partners, including state and local health departments, community-based organizations (CBOs) and other nongovernmental organizations, universities, businesses, and the media.

NCHHSTP works to prevent viral hepatitis infections and their acute and chronic liver disease consequences. Center staff educate health care and public health professionals to improve identification of persons at risk for chronic hepatitis C infection and ensure appropriate counseling, diagnosis, management, and treatment. NCHHSTP also conducts research, develops policies to control hepatitis A, B, and C, and supports surveillance to monitor who is getting chronically infected with viral hepatitis.

To prevent STDs, NCHHSTP provides national leadership through research, surveillance, policy development, and assistance to states, territories, and local health departments. NCHHSTP also provides federal support for a community-wide, science-based, interdisciplinary-systems approach to STD prevention and conducts prevention research to improve methods and delivery of prevention services and to develop and refine interventions. The center's focus areas include preventing STD-related infertility in women, preventing adverse outcomes of pregnancy, eliminating syphilis, preventing cancer related to sexually transmitted infections (STI), preventing STI-related HIV transmission,

reducing STI-related health disparities, strengthening STD prevention capacity and infrastructure, and addressing the effects of social and economic determinants and the costs of specific STDs among specific populations.



NCHHSTP provides leadership and assistance to domestic and international efforts to prevent, control, and eliminate TB. NCHHSTP provides grants to states and other entities for prevention and control services, researches the prevention and control of TB, funds demonstration projects, and sponsors public information and education programs. In addition, the center supports education, training, and clinical skills improvement activities to prevent, control, and eliminate TB. NCHHSTP also manages the national TB surveillance system and provides laboratory support for TB control activities. Because more than half of the U.S. TB cases are among those born outside of the United States, one of the TB program's chief aims is to prevent and control TB among foreign-born persons.

Through 2009, NCHHSTP also includes the Global AIDS Program (GAP), which was initiated in 2000 to address the international HIV/AIDS epidemic by assisting resource-constrained countries. GAP assists such countries in preventing HIV infection; improving treatment, care, and support for people living with HIV; and building vital capacity and infrastructure to address the global HIV/AIDS epidemic. GAP's highly trained physicians, epidemiologists, public health advisors, behavioral scientists, and laboratory scientists support the national HIV/AIDS strategies of more than 70 countries in Africa, Asia, Central and South America, and the Caribbean through its country and regional offices. In 2003, when the President's Emergency Plan for AIDS Relief (PEPFAR) was announced, GAP joined this unified U.S. government response to global HIV/AIDS. In 2008, Congress extended PEPFAR for 5 more years with the passage of the PEPFAR reauthorization bill. The legislation authorizes \$48 billion to the program through 2013.

## Where Are We?

NCHHSTP employs a cadre of dedicated staff to accomplish its domestic and international objectives. The center has a staff of more than 3,500 federal employees, fellows, contractors, and special overseas staff. Approximately 1,700 work in NCHHSTP's offices in Atlanta, Georgia; 300 are assigned to field offices in 29 states and the District of Columbia; and approximately 1,500 are working in international field offices in more than 30 countries.

## NCHHSTP Strategic Plan: Key Priorities

During FY 2009, NCHHSTP developed a strategic plan to guide the center's programs and research for the period 2010–2015. The plan was the result of a collaborative effort by staff in the NCHHSTP Office of Director, the center's divisions and branches, and other key partners within and outside CDC. It outlines key objectives and strategies for achieving mutual goals with NCHHSTP partners.

The plan outlines six key priorities to provide focus, direction, and a way to organize NCHHSTP's work, in addition to the center's core mission. They are:

- **Prevention through healthcare:** Health reform presents an unprecedented opportunity for NCHHSTP to work across multiple levels (federal, state, local, and global), and within and across public, private, non-governmental and other sectors to advance strategic priorities for preventing and controlling HIV, viral hepatitis, STDs, and TB.
- **Program collaboration and service integration:** NCHHSTP will look broadly across its programs to discover innovative ways to collaborate and use its resources wisely, taking advantage of multiple disciplines and shared knowledge, and to promote holistic approaches to health protection. NCHHSTP will find new ways to expand flexibility of funds to facilitate the integration of programs and services at the local level when appropriate. NCHHSTP will work with partners to increase the efficiency, effectiveness, and impact of preventive services.
- **Health equity:** Many of the populations served by NCHHSTP suffer from the stigma attached to their diseases or from socioeconomic disparities, and it is increasingly important to make work in this area a top priority.
- **Global health protection and systems strengthening:** Though much of NCHHSTP's work is focused on important and urgent domestic issues, it cannot ignore the interconnectedness of societies globally. CDC plays an important role in protecting the health and well-being of Americans at home and abroad, and it serves as an important international partner in efforts to protect and improve the health of all people.



- **Partnerships:** The center cannot accomplish its mission without strong partnerships in place. NCHHSTP will lead collaborative efforts with partners to reduce the impact of HIV/AIDS, viral hepatitis, STDs, and TB.
- **Workforce development and capacity building:** NCHHSTP will develop a strong, committed, and professional workforce. The center will work with its partners to assess and support critical local infrastructure as appropriate. A well-trained, diverse, and culturally competent workforce is critical to successfully meeting all other goals.

NCHHSTP has established eight internal work groups to address key programmatic priorities. These work groups are focusing on topics such as health issues in corrections facilities, surveillance and strategic information, and use of modeling and health outcome measures as tools to aid prevention efforts.

For example, the corrections work group, in collaboration with the Division of HIV/AIDS Prevention and Office of Health Equity, hosted a Corrections and Public Health Consultation in Atlanta in March 2009, with 93 registered attendees. The 2-day forum brought together experts from various sectors of corrections, public health, academia, and community partners to discuss effective ways to address important issues including health inequities in HIV/AIDS, viral hepatitis, STD, and TB for application in correctional settings. The work group also contributed to the CDC-wide correctional health website launched in March 2009 (<http://www.cdc.gov/correctionalhealth/>) and recommended strategies to prevent H1N1 influenza in prisons and jails.

## Prevention Through Healthcare

HIV and other STDs, viral hepatitis, and TB are among the leading causes of morbidity and death in the United States and account for substantial healthcare spending. The new focus on prevention and wellness supports the development of national strategies to improve the nation's health through evidence-based clinical and community prevention and wellness activities. There is also a new focus on improving the delivery of healthcare services, improving patient health outcomes and population health, developing new quality measures, and disseminating best practices in the delivery of quality healthcare services.

By establishing or expanding collaborations across CDC and with other governmental and non-governmental partners, NCHHSTP will work to advance its strategic and programmatic imperatives and expand opportunities for prevention through enhanced collaboration with other HHS Operating Divisions and other Federal Agencies.

## Encouraging Program Collaboration and Service Integration

The focus of program collaboration and service integration (PCSI) is to promote integrated service delivery at the client level or point of service; it does not address integration at the organizational or structural level. CDC's vision for PCSI is to provide prevention services that are comprehensive, science-based, and high quality to appropriate populations at every interaction with the health system. Following are examples of accomplishments in PCSI during FY 2009.

### *Strategic Plan for PCSI*

In 2009, after discussions with internal and external stakeholders, NCHHSTP developed a white paper that articulates the center's strategic plan for PCSI through 2011. The document describes a framework for conceptualizing PCSI, identifies how CDC will work with internal and external stakeholders to accomplish relevant goals, outlines key measures to monitor and evaluate progress, and describes how NCHHSTP will work with partners at national, state, and local levels to advance this strategic priority. The primary audience for this document is domestic NCHHSTP-funded programs.

### *Steps to Improve Data Sharing*

A low-cost, high-impact activity identified by external PCSI consultants was the development of common assurance of confidentiality statements for HIV/AIDS, viral hepatitis, STDs, and TB to facilitate sharing of surveillance data across and within program areas. NCHHSTP is pilot testing several models of assurances of confidentiality obtained from states.

### *Joint Agenda With National Partners*

NCHHSTP convened a meeting of approximately 30 leaders from CDC and national organizations to develop a collaborative PCSI agenda for 2009–2010 and to exchange information about accomplishments.

They agreed upon the following action items:

- National organizations will formally identify and adopt PCSI as a priority.
- National organizations will link to one another's websites.
- Common language, definitions, and key messages for decision makers will be developed.
- PCSI implementation will be assessed by identifying case studies and coordinating member surveys.
- PCSI models and best practices will be shared.
- Interface with the Health Resources and Services Administration's HIV/AIDS Bureau and Bureau of Primary Health Care will be developed.

## Promoting Health Equity

NCHHSTP strives to improve the health of populations disproportionately affected by HIV, viral hepatitis, STDs and TB, and related diseases and conditions. The center changed the name of the Office of Health Disparities to the Office of Health Equity in FY 2009, reflecting an emphasis on its goal of attaining health equity.

The Office of Health Equity leads the effort to improve the health of populations experiencing health inequities. A health inequity is a difference in health outcomes that is systematic, avoidable, and unjust. CDC's operational definition of health equity is the fair distribution of health determinants, outcomes, and resources within and between segments of the population, regardless of social standing.

Achieving health equity entails special efforts to improve the health of those who have experienced social or economic disadvantage. It requires continuous efforts focused on the elimination of health disparities, including disparities in health care and in the living and working conditions that influence health. It also requires persistence to maintain a desired state of equity after particular health disparities are eliminated.

## *Social Determinants of Health Approach*

Scientific evidence shows that genetic predisposition and risk behaviors only partially explain why some

people become sick and others do not. Many chronic and infectious diseases cluster in populations that experience social and economic constraints to good health. In recognition of the effect these constraints have on health, NCHHSTP is incorporating a social determinants of health (SDH) framework into its work.

Social determinants of health are the economic and social conditions that influence the health of individuals, communities, and jurisdictions as a whole. They determine the extent to which an individual possesses the physical, social, and personal resources to identify and achieve personal aspirations, satisfy needs, and cope with the environment. These resources include conditions for early childhood development; education, employment, and job security; food security, health services, housing, income, and income distribution; social exclusion; the social safety net; and racism and discrimination of all forms.

NCHHSTP hosted an External Consultation on Social Determinants of Health in December 2008. The consultation offered an opportunity for more than 100 leading academic, scientific, public health, and community partners to suggest more effective ways for NCHHSTP to address the social determinants of HIV/AIDS, viral hepatitis, STDs, and TB. The participants discussed how the social determinants of health can be addressed through public health policy, surveillance and epidemiology, research and evaluation, and agency partnerships and capacity building for prevention.

The findings of the meeting are summarized in a meeting report and other documents, which are available on the new SDH web page at <http://www.cdc.gov/socialdeterminants/>. The web page was developed to serve as an information source, point of contact, and sharing portal for national and international stakeholders interested in addressing SDH.

Before the consultation, the Office of Health Equity published a green paper summarizing the review of the SDH literature, which provided a background for discussing SDH. The Office of Health Equity is completing a white paper drawn from the green paper and SDH consultation findings. This document will provide an official set of proposals for use in policy development.

NCHHSTP has also issued a call for papers and has begun the peer review process for a Public Health Reports supplement on addressing social determinants of health in HIV/AIDS, viral hepatitis, STDs, and TB.

NCHHSTP organized, facilitated, and presented a Social Determinants of Health Institute during the National Partnership for Action to End Disparities leadership summit held in February 2009 in Washington, DC. This institute included an overview of the social determinants of health and links to chronic and infectious diseases, a review of data systems used to obtain information, and a review of CDC programs aimed at achieving health equity by addressing the social determinants of health.

### **Reorganized Health Disparities Website**

In 2009, NCHHSTP reorganized its health disparities website (<http://www.cdc.gov/nchhstp/healthdisparities>) around specific populations disproportionately affected by HIV/AIDS, viral hepatitis, STDs, and TB. The site offers user-friendly access to comprehensive information with links to each division's data. In addition, to highlight STD data on these disparities, new interactive STD health disparities web pages were launched in February 2009 (<http://www.cdc.gov/std/health-disparities/default.htm>). These pages allow users to compare STD rates by race and ethnicity, gender, and geography.

### **Maximizing Global Health Protection and Strengthening Health Systems**

In 2009, NCHHSTP saw the continued expansion of the Global AIDS Program (GAP) and the mobilization of activities addressing drug-resistant TB. In today's world, success in disease prevention requires interdependent relationships that are global in nature.

NCHHSTP is working to maximize global health protection and strengthen global health systems by fostering programmatic relationships among its divisions that conduct international activities. Ensuring active collaboration between NCHHSTP divisions leverages center and CDC resources and maximizes health impact. NCHHSTP actively pursues input about international program development and

public health research, fosters robust internal and external partnerships, and commits to novel and participatory approaches for implementation and dissemination.

For example, NCHHSTP is leading efforts to promote integrated global maternal, newborn, and early child health (MCH) services by co-chairing the CDC Global Perinatal Integration Working Group. The working group, which was started in NCHHSTP and has expanded to include colleagues working in MCH across CDC, developed a compendium of interventions and best practices for MCH integration. In addition, CDC has worked closely with the U.S. Agency for International Development and other U.S. government partners to develop a PEPFAR Technical Guidance document on integrating prevention of mother-to-child transmission and pediatric HIV services with MCH programs. Integrating these services could provide a stronger foundation for sustainability in resource-constrained countries around the world.



## Engaging Partners for Prevention

Because the scope of NCHHSTP's prevention task is so large, nationally and globally, it is critical to engage partners to improve prevention of HIV/AIDS, viral hepatitis, STDs, and TB. Involving partners and stakeholders enriches prevention initiatives, because partner perspectives inform CDC policies and messages and vice versa.

NCHHSTP works with government and nongovernment partners at community, state, national, and international levels. NCHHSTP funds prevention efforts, demonstration projects, capacity-building efforts, and surveillance activities in state, local, and territorial health departments, as well as community-based and national organizations.

NCHHSTP coordinates its efforts with other federal agencies, including those within HHS. For example, the Health Resources and Services Administration (HRSA) is authorized under the Ryan White HIV/AIDS Treatment Modernization Act to support treatment programs for people living with HIV and AIDS, and HRSA uses data from NCHHSTP's HIV/AIDS surveillance systems to guide funding for these programs. These data are also used to guide funding for the Department of Housing and Urban Development's Housing Opportunities for People with AIDS program.

As another example, the Substance Abuse and Mental Health Services Administration (SAMHSA) was one of NCHHSTP's partners in planning the 2009 National HIV Prevention Conference, the only major U.S. conference to focus exclusively on the full spectrum of HIV prevention. A SAMHSA representative was the conference co-chair. The conference was held in conjunction with the SAMSHA grantees meeting so that grantees could participate in both events. More than 3,000 public health, medical, and AIDS community leaders—including Earvin "Magic" Johnson, HHS Secretary Kathleen Sebelius, and Jeff Crowley, director of the White House Office of National AIDS Policy—attended the conference, held in Atlanta on August 23–26. The biennial meeting, co-sponsored by CDC and more than 40 other public and private agencies dedicated to fighting HIV and AIDS in the United States, allows community organizations, public

health professionals, clinicians, advocates, and other interested individuals to exchange information about effective prevention approaches.

The CDC Foundation is working with NCHHSTP to develop new private sector partnerships to enhance the center's programs. For example, the Foundation hosted a meeting in August 2009 with representatives of pharmaceutical and diagnostic companies to explore potential partnerships.

During FY 2009, NCHHSTP initiated a project to advance the concept of sexual health in the United States. This will be accomplished through developing strategic partnerships with the public and private sector, identifying and promoting evidence-based strategies, and advancing appropriate policy interventions. Activities planned during 2010 include hosting a consultation on sexual health in the spring, identifying research gaps, and developing a green paper to outline the vision for promoting sexual health in the United States. This project represents a collaboration among several divisions within NCHHSTP and across CDC, and key external partners.

## Developing a Robust Workforce

NCHHSTP's workforce development activities include the Branch Chiefs' Opportunities for Leadership Development (BOLD) initiative and the NCHHSTP Summer Fellows Forum. Both are led by the center's deputy director.



The BOLD initiative provides opportunities for the center's branch chiefs to strengthen their leadership abilities and increase their effectiveness in managing CDC personnel and programs. Activities include monthly leadership meetings, branch chiefs' quarterly leadership training on the Office of Personnel Management's Executive Core Qualifications, and supplemental CDC training offerings.

The NCHSTP Summer Fellows Forum is an 8-week program that provides summer fellows participating in racial and ethnic minority training programs with knowledge and skills in conducting public health prevention, intervention, surveillance, or epidemiologic research in HIV/AIDS, viral hepatitis, STDs, and TB. The ultimate goal is to provide a pipeline for future public health workers who are interested in returning to work at CDC. Sixteen fellows participated in the 2009 summer session.

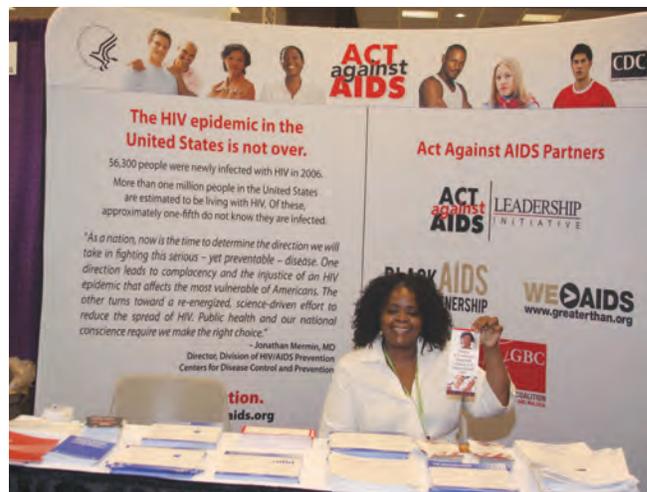
## Focus on Communication Science, Health Marketing, and eChannels

In FY 2009, NCHSTP took a number of steps to increase the evidence base and support for its communication research programs and health communication and social marketing campaigns.

### Act Against AIDS Campaign

The Act Against AIDS campaign, launched in FY 2009, is the first federally funded national HIV prevention campaign in more than two decades. Act Against AIDS is a 5-year, multifaceted national communication campaign intended to refocus national attention on the domestic HIV/AIDS epidemic and reduce HIV incidence in the United States.

The campaign's initial phase, *9½ Minutes*, is designed to combat complacency about the HIV/AIDS epidemic in the United States and raise awareness of the continued severity of the epidemic. The theme sends a simple yet startling message: Here in the United States, every 9½ minutes, someone's brother, mother, sister, father, or neighbor is infected with HIV—the virus that causes AIDS.



Incidence estimates released last year by CDC show that the U.S. epidemic is—and has been—worse than previously estimated. The 56,300 new HIV infections estimated to have occurred in 2006 represent a number almost 41% higher than the 40,000 new HIV infections that have been previously estimated to occur annually since the 1990s.

Informed by the latest HIV incidence estimates, the Act Against AIDS campaign focuses on these priority populations: African-American, Hispanic/Latino, and white men who have sex with men (MSM); African-American youth; African-American women; and health care providers. It targets strategic communications to the general public and to opinion leaders and policy makers who influence decisions regarding the populations most vulnerable to HIV. All phases of the campaign contribute to CDC's goal of reducing HIV incidence in the United States.

The Act Against AIDS campaign uses messages informed by formative research, community involvement, and evaluation. The campaign leverages CDC assets that include partnership networks, initiatives, and collaborations with private-sector organizations; websites and social media; public service advertising (transit, online, radio, television, print, and outdoor); news media; and interpersonal outreach to disseminate HIV prevention messages. Current campaign phases, geared to different target audiences, are *9½ Minutes*; *I Know*; *Prevention IS Care*; *One Test. Two Lives*; *HIV Screening*; *Standard Care*; *Take Charge, Take the Test*; and an HIV testing campaign for African-American MSM.

Through the campaign's Act Against AIDS Leadership Initiative (AAALI), NCHHSTP has funded 14 organizations with demonstrated reach (local chapters, member organizations, and/or affiliates), credibility, and influence in African-American communities. Each AAALI organization has hired a dedicated project coordinator and is incorporating HIV prevention into its national conventions, websites, publications, and conferences. AAALI partners have leveraged their assets to secure at least \$150,000 in donated ad placements for Act Against AIDS to date. They have conducted more than 70 HIV-related activities and 25 chapter trainings, with more than 211 chapters and 55,000 persons participating.

From the American Urban Radio Networks (AURN) to the National Association for the Advancement of Colored People (NAACP), partner groups will be working with NCHHSTP to use their organizations' influence and access to support the campaign's efforts to increase awareness of the epidemic's severity and reduce HIV incidence among African Americans. AURN messages for Act Against AIDS during drive-time programming reach an estimated 20 million listeners each week.

Act Against AIDS also incorporates new media in the campaign. The *9½ Minutes* website focuses on the fact that "every 9½ minutes, someone in the United States is infected with HIV" and emphasizes what can be done to reverse this disturbing trend. Within the first 80 days of the campaign, there were 52,500 page views of the home page, with 15,000 hits the first week; an average of 3,000 hits per week in subsequent weeks; and 23,000 subscribers requesting updates to Web content. Social media services such as YouTube and MySpace have been used to create a viral marketing of banners and videos and to promote the website. More information can be found at <http://www.actagainstaids.org>.

## STD Awareness

NCHHSTP is also using new media in other communications efforts. For example, for STD Awareness Month, April 2009, NCHHSTP collaborated with MTV and the Kaiser Family Foundation, working with other partners to inform young people about STDs and promote STD testing. CDC provided technical assistance to GYTog (Get Yourself Tested), a new part of *It's Your [Sex] Life*, an ongoing public information partnership of MTV and the Kaiser Family Foundation to help young people make responsible decisions about their sexual health.

Through on-air, online, text-message, and community promotions, GYT generated "buzz" and linked young people to local STD testing centers. Other NCHHSTP partners provided national, state, and local support and outreach. The GYT initiative received the Joel A. Berger Award in October 2009 from the Association of Cable Communicators, a national professional organization for the cable industry. This award is presented to a cable industry public affairs campaign that achieves exceptional results in the area of AIDS awareness. GYTog also received a Beacon Award for new media, one of 59 awarded to recognize outstanding community relations activities, educational efforts, multicultural public relations, and public service announcements.

In another effort to support STD awareness, NCHHSTP enhanced the National HIV and STD Testing Resources website, an online tool for finding HIV and STD testing centers by zip code ([www.findSTDtest.org](http://www.findSTDtest.org)). The site now includes STD testing sites, and by year-end will include HPV and Hepatitis B vaccination locations. The redeveloped STD Awareness Month website contains updated tools, multimedia resources, information about GYTog, and links to local STD awareness efforts around the country.

**THIS IS ONLY A TEST**

**GYT**  
**GYT09.ORG**

## National Prevention Information Network Outreach and Marketing

Since 2004, the National Prevention Information Network's (NPIN) role in helping NCHHSTP develop and maintain partnerships has changed substantially. While initially the focus was on in-person, conference-based outreach to promote NPIN services, by 2009, electronic communication channels and social networking sites enabled electronic marketing and more dynamic, user-initiated, and multidirectional communication to build long-term partner connections with and through NPIN.

For example, this year NPIN tried a new approach to reaching participants at the April 2009 annual meeting of the Rural Center for AIDS/STD Prevention: communicating with attendees via a mobile phone messaging service. This strategy was based on strong evidence that rural community health workers use their mobile phones more than the Internet.

Participants in this pilot project received a series of text messages that reminded them about the upcoming conference and NPIN's presence,

promoted a CDC presentation, encouraged a visit to the NPIN booth where giveaways were available, recapped key presentation messages, and thanked people for attending. Evaluation found that more than 90% of those who received the text messages thought they were a useful and appropriate way to receive information.

NPIN staff also conducted a similar effort at the August 2009 National HIV Prevention Conference in Atlanta. The service included 10 to 20 messages, plus key points from CDC plenary presentations and notifications of relevant small group meetings occurring at the conference. Other activities included:

- Posting PowerPoint presentations from the conference on the CDC NPIN website.
- Sending more than 100 tweets through NPIN's Twitter account to highlight key conference messages.
- Posting video of the plenary sessions on the CDC NPIN website. Through this technology, individuals unable to attend the meeting in person can still benefit from new information.



# A YEAR IN REVIEW: Program Accomplishments

To ensure the greatest impact on the HIV/AIDS, STD, viral hepatitis, and TB epidemics, NCHHSTP uses a comprehensive, evidence-based approach to prevention that incorporates surveillance, research, prevention interventions, and evaluation. NCHHSTP's surveillance and research activities help to better define and understand the nature of the epidemics across the nation and inform the targeting and development of prevention strategies. The center's prevention interventions and capacity-building efforts are based on behavioral, laboratory, and medical science and are designed to reduce the spread of HIV/AIDS, STDs, viral hepatitis, and TB. Program evaluation and policy research and development assess intervention effectiveness and refine prevention approaches.

## Key Strategic CDC Directions

CDC Director Dr. Thomas Frieden has identified five key strategic directions for the agency, which focus on strengthening core areas and on providing public health leadership nationally and internationally:

- 1) strengthen surveillance and epidemiology,
- 2) strengthen support to state and local health departments;
- 3) provide leadership in health policies,
- 4) promote community prevention, and
- 5) provide leadership in global health.

The following sections provide examples of how NCHHSTP's programs supported these broad strategic directions in FY 2009.

## Strengthening Surveillance and Epidemiology

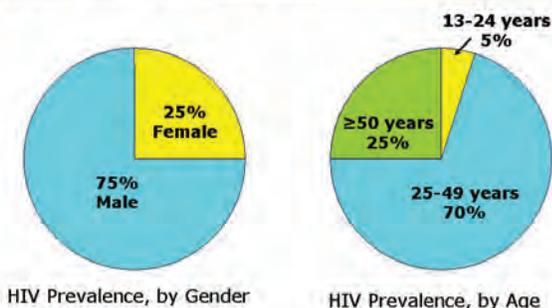
NCHHSTP's surveillance systems help to monitor the nation's HIV, STD, viral hepatitis, and TB epidemics. NCHHSTP works to strengthen its surveillance of these diseases by using available new technologies, improving data collection, and investigating specific outbreaks or populations to better characterize the epidemics.

### New HIV Prevalence Estimate Released

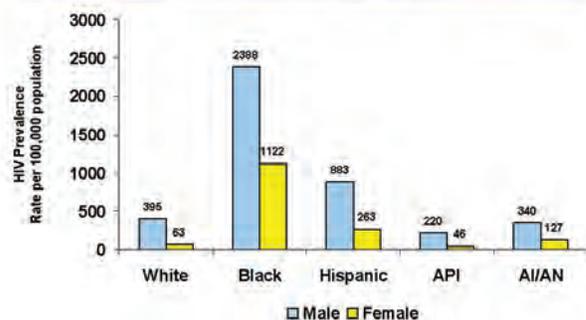
In FY 2009, NCHHSTP released new HIV prevalence estimates, which revealed that an estimated 1.1 million adults and adolescents were living with HIV infection in the United States at the end of 2006 and that gay and bisexual men of all races, African Americans, and Hispanics/Latinos were most heavily affected.

Nearly half of all people living with HIV in the United States in 2006 were men who have sex with men (MSM). Among men, MSM accounted for 64% of those living with HIV. The estimate also showed that HIV takes a great toll on communities of color. While blacks make up only 12% of the U.S. population, they represented 46% of all persons living with HIV. Hispanics/Latinos account for 15% of the population, but they made up 18% of persons living with HIV.

**Estimated HIV Prevalence, by Sex and Age, United States, 2006**



**Est. HIV prevalence: Rate per 100,000 population, by sex and race — United States, 2006**



NCHHSTP estimated that approximately one in five persons living with HIV in 2006—more than 230,000 persons—was unaware of his or her infection. This finding represented a slight improvement from an estimated 25% who were unaware in 2003. This finding reflects increased diagnoses of HIV infection. While it is a promising sign that HIV testing efforts across the nation are being expanded, far too many HIV-infected people remain undiagnosed.

The new estimates were published in the *Morbidity and Mortality Weekly Report*, October 3, 2008/57(39);1073-1076.

## Chronic Hepatitis B and C Cohort Study

In January 2009, NCHHSTP began work on the Chronic Hepatitis B and C Cohort Study (ChECS). ChECS is the first comprehensive U.S. longitudinal observational cohort of 15,000 or more patients with chronic viral hepatitis B and C (approximately 3,000 with B and 12,000 with C). Its purpose is to provide better understanding of chronic viral hepatitis and the impact of screening, care, and treatment recommendations.

Data from longitudinal cohorts of patients with chronic hepatitis B and C virus (HBV and HCV) infection are needed to understand the spectrum, natural history, and public health impact of the disease. ChECS will enhance the Division of Viral Hepatitis' surveillance data, which currently do not follow cases of chronic viral hepatitis longitudinally to monitor treatment and clinical outcomes.

Typically, clinical trials of anti-hepatitis drugs (for HBV or HCV) are conducted for 24 to 96 weeks, and patients in these small trials are not usually followed beyond demonstration of therapeutic effectiveness. In addition, much of what we know about chronic HBV and HCV infection and associated chronic liver disease comes from much smaller cohort studies that were done before the modern therapeutic era and often included patients coinfecting with HIV. With the advent of new therapies for chronic viral hepatitis, the need for a longitudinal observational cohort of persons chronically infected with HBV or HCV has increased.

The pilot portion of the study, funded by a grant from Vertex Pharmaceuticals, enrolled 2,121 patients with HBV and 9,163 with HCV from clinical sites in urban

centers in six states—Hawaii, Michigan, Minnesota, New Mexico, Oregon, and Pennsylvania—all of which participate in the HMO Research Network. The pilot study successfully concluded in the summer of 2009. Work began on the main portion of the study in fall 2009, with the addition of an independent site in Alaska—the Alaska Native Tribal Health Consortium Hepatitis B and Hepatitis C Registries—which will participate as a separate cohort site. Approximately 1,500 Alaskan Native and American Indian (AN/ AI) patients with chronic HBV infection and 1,000 patients with HCV infection have been followed by the CDC's Arctic Investigations unit for up to 20 years. Both retrospective and prospective Alaska registry data will be included in ChECS.

ChECS is being funded through the CDC Foundation by donations from at least four pharmaceutical company partners.

## Expanding STD Surveillance

To improve surveillance and epidemiology functions, the Division of STD Prevention expanded its STD Surveillance Network. The network now consists of 40 STD clinics in 12 geographic areas collaborating to monitor trends in STDs and related behaviors. The STD Surveillance Network allows broad and flexible capacity for many STD clinic and population-based surveillance activities. In 2009, the MSM Prevalence Monitoring Project was incorporated into the network, ensuring continued data on trends in STDs and HIV-risk behaviors in men who have sex with men. Data from the network sites collected during STD Awareness Month in April will be used to assist with evaluation of the success of the national awareness campaign.

## Improving TB Data Collection

In January 2009, the Division of Tuberculosis Elimination introduced a revised instrument for TB surveillance that provides enhanced data collection to better reflect the changing epidemiology of TB in the United States. The Report of Verified Case of Tuberculosis (RVCT), the standardized data collection form of the National Tuberculosis Surveillance System, was modified to show changing risk factors, new drug treatments, and enhanced laboratory capacity for diagnostic tests and to identify priority needs.

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The modified RVCT includes 11 new variables and 25 revised items. The RVCT revision is the culmination of years of effort by the RVCT Work Group, which included staff from the Division of Tuberculosis Elimination, the National Tuberculosis Controllers Association, and state and local TB programs.

The Division of Tuberculosis Elimination developed training materials and provided training to more than 300 TB health care providers from more than 90% of the 60 surveillance system reporting areas. The training materials include a set of modules that can be used in either a facilitated training course or for self-study. The modules provide instructions for completing each item on the RVCT, case studies to enable participants to practice applying the instructions to life-like situations, and a posttest to determine participants' knowledge of the course content. A facilitator guide is provided for trainers. For more information on the RVCT and the training materials visit [www.cdc.gov/tb](http://www.cdc.gov/tb).

## Strengthening Support to State and Local Health Departments

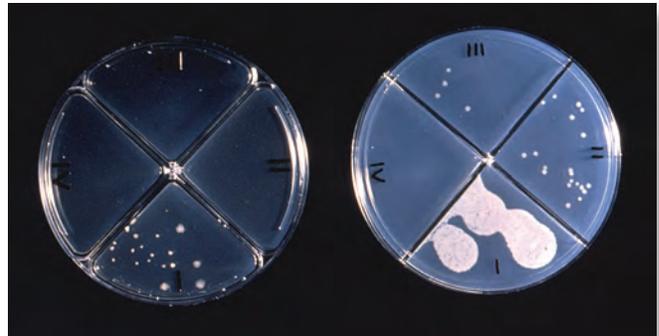
State and local health departments are key partners for all of NCHHSTP's activities. The center aims to strengthen and enhance support to health departments through its program areas.

### Building Tuberculosis Program Evaluation Capacity

In March 2009, the Division of Tuberculosis Elimination launched its National Tuberculosis Indicators Project (NTIP), a web-based system for tracking progress toward national TB prevention and control objectives. The system uses standard indicators for programs across the United States. It was developed in collaboration with state partners and aims to build program evaluation capacity.

The indicators system enables TB program managers to monitor progress and identify areas needing improvement and focused evaluation. Indicators are calculated from data already sent routinely to CDC. The system was launched in March 2009, with

11 indicator reports from 2000 onward. Program officials set their indicator objectives in collaboration with program consultants from the Division of Tuberculosis Elimination, and the NTIP reports allow them to track progress toward those objectives, to compare their indicators with the national averages, and to focus their evaluations on areas that most need improvement. NTIP will be used to focus efforts for technical assistance and program improvement.



Also in FY 2009, the Division of Tuberculosis Elimination created the Tuberculosis Program Evaluation Network (TB PEN) to build capacity for TB program evaluation activities in state and local TB programs and to increase the number of programs that are evaluating their activities. Organizations represented in the network include the National Tuberculosis Controllers Association, the Division of Tuberculosis Elimination, the Regional Training Medical Consultation Centers, the Tuberculosis Education and Training Network, and the Tuberculosis Epidemiologic Studies Consortium.

### Strengthening TB Laboratory Capacity

In April 2009, the Division of Tuberculosis Elimination's Mycobacteriology Laboratory Branch tasked a team of three TB laboratory consultants with building the capacity of state and local health department laboratories. The TB Laboratory Capacity Activity provides consultation services to state and local public health laboratories and oversees the laboratory enhancement component of the Division of Tuberculosis Elimination's TB cooperative agreements with state and large city health departments. This oversight includes technical review of annual reports, site visits to labs, and provision of a designated CDC laboratory liaison.

In conjunction with the Association of Public Health Laboratories, and with funding from the Office of Antibiotic Resistance, the Laboratory Capacity Activity initiated an operational research project to survey laboratory practices for mycobacteria within the public and private sectors. The activity also conducts education and training, such as a workshop held at the 2009 National TB Conference.



### Providing Supplemental Funding to Address HIV Prevention Among MSM

The Division of HIV/AIDS Prevention provided supplemental funding to 51 jurisdictions to require state and local health departments to develop a plan to enhance or better address HIV prevention services for MSM in FY 2009. In developing plans, jurisdictions assessed their current activities to prevent HIV infection among MSM and identified activities to

enhance their prevention efforts for MSM. For those jurisdictions that had already developed a plan for this target risk group, funds were used to address the identified unmet HIV prevention needs/gaps among MSM. These one-time funds were distributed to areas based on the individual jurisdiction's proportionate share of the national AIDS burden among MSM.

The 51 jurisdictions implemented a wide array of activities to strengthen their efforts to reduce the spread of HIV among MSM. For example, Chicago has begun to implement projects that include capacity building and cultural competency training; enhanced condom distribution; and the pilot of a new intervention that focuses on couples' voluntary counseling and testing. New York City has begun projects that include the development of social marketing activities targeting adolescents and targeted HIV/STD testing in high-risk venues.

### Enhancing STD Program Capacity

Strengthening STD prevention capacity and infrastructure was identified by the Division of STD Prevention as a high-priority goal in its strategic plan. With severe state and local public health funding cuts, NCHHSTP activities to support this goal are even more critical. Important improvements were achieved in training support, epidemiology enhancement, technical assistance, and application of research results to program improvement.

To fill a training gap identified by STD program managers, CDC's National Network of STD/HIV Prevention Training Centers developed and pilot tested the STD Program Management Course, a 3-day course for new STD program managers, the first formal comprehensive training for these professionals. The course was developed by the network in collaboration with the National Coalition of STD Directors, state and local STD programs, and other STD prevention training partners and stakeholders. Given the uniformly positive evaluations received from two groups of pilot participants, the new course will be offered in 2010 at all of the prevention training centers.

To facilitate broad sharing of lessons learned and successful approaches to program challenges, the Division of STD Prevention initiated a new series of

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Program Improvement Webinars. In FY 2009, seven webinars were conducted, with presentations from both CDC and state and local health department staff. The webinars were popular with program staff, and participation averaged 50–55 phone lines per webinar, with multiple staff on each line. Use of this technology allows for personal interaction with commitment of less time and fewer financial resources.

The Division of STD Prevention provided training and technical assistance on the development and use of evidence-based action plans, required for the first time in 2009 for project areas receiving syphilis elimination funding. Each plan submitted was reviewed by two members of the division's Syphilis Elimination Implementation Monitoring Group, and written comments were provided to project areas. In addition, a workshop on plan development and use was presented at the National Coalition of STD Directors' annual meeting, and individualized technical assistance and guidance was provided by phone and conference calls.

To assist STD prevention programs in estimating the economic benefits of their prevention activities, NCHHSTP researchers developed a spreadsheet tool based on research published in 2008. Using the spreadsheet tool, program staff can generate estimates of net costs of local program activities. The estimates can be useful for internal decision-making, as well as for communicating program effectiveness to policy makers and the general public.

### Increasing Collaboration Among Hepatitis Prevention Coordinators

More than 150 viral hepatitis prevention coordinators and community partners from 54 states and territories attended the National Hepatitis Coordinators Meeting in Decatur, Georgia, in March 2009. For the first time, adult viral hepatitis prevention coordinators and perinatal hepatitis B prevention coordinators met jointly, with a shared plenary agenda and with many interdisciplinary workshops and discussions. Organization of the joint meeting was a collaborative effort of the National Center for Immunization and Respiratory Diseases' Immunization Services Division and the NCHHSTP Division of Viral Hepatitis.

In addition to hearing updates from leadership and from technical experts in both divisions, participants attended joint workshops on skill building for cultural competence and strategic planning, program evaluation, and maximizing use of the media to deliver educational messages. Adult prevention coordinators also discussed emerging issues on the HCV prevention research agenda, the use of local case surveillance data to inform prevention programs, and innovative efforts to link patients with chronic viral hepatitis to care in underserved populations and geographic areas.

### Providing Leadership for Health Policies

NCHHSTP provides leadership in developing health policies related to prevention and control of HIV, viral hepatitis, STDs, and TB. Following are some examples of activities in FY 2009 in which NCHHSTP issued guidance or contributed in other ways to policy development in its key prevention areas.

#### Institute of Medicine Review of Chronic Viral Hepatitis

Early in FY 2009, the Division of Viral Hepatitis commissioned a study by the Institute of Medicine (IOM) to examine the current and future health burden of chronic viral hepatitis and associated disease. The IOM was asked specifically to assess the effectiveness of current prevention strategies and programs; assess surveillance, research, and program needs; and recommend priorities to guide surveillance, research, and program development.

The study panel has met several times and has held two public hearings in FY 2009—one in December 2008 in Washington, DC, and one in March 2009 in San Francisco. The panel is expected to provide its final report to the Division of Viral Hepatitis in January 2010. The study was undertaken in collaboration with, and with support from, CDC's Division of Cancer Prevention and Control, the HHS Office of Minority Health, the U.S. Department of Veterans Affairs, the National Viral Hepatitis Roundtable (NVHR), and industry partners.

## Goals and Strategies to Address Chronic Hepatitis B Infection

In December 2008, the Division of Viral Hepatitis, in collaboration with the HHS Office of Minority Health and the National Task Force on Hepatitis B Expert Panel, announced the release of *Goals and Strategies to Address Chronic Hepatitis B*, aimed at reducing and eliminating hepatitis B in the Asian American and Native Hawaiian and other Pacific Islander (AA/NHOPI) communities.

Hepatitis B is the world's most common serious viral infection of the liver and can cause premature death from liver disease or liver cancer. Chronic hepatitis B and liver cancer caused by hepatitis B in AAs/NHOPIs represent one of the most serious but frequently neglected racial and ethnic health disparities in the United States. Although the incidence of acute hepatitis B across the United States has declined substantially in recent years, the high prevalence of chronic hepatitis B among AAs/NHOPIs, particularly among those who are foreign-born, appears to have remained relatively constant.

Through the *Goals and Strategies to Address Chronic Hepatitis B*, the panel recommended improvements in the hepatitis B public health prevention infrastructure; increased health education, awareness, and screenings; improved access to care and treatment for chronic hepatitis B; and increased research on hepatitis B and liver cancer. The strategic plan, developed in partnership with the communities most affected, provides a roadmap to protect Asian Americans from hepatitis B.

For more information on the *Goals and Strategies to Address Chronic Hepatitis B*, visit <http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlid=190>.

## Division of HIV/AIDS Prevention External Peer Review

In FY 2009, the Division of HIV Prevention invited 75 experts from a range of disciplines (e.g., surveillance, policy, epidemiology) to conduct an external peer review of the division's entire portfolio of activities, including strategic planning and prioritization; surveillance programs; biomedical

intervention and laboratory research; health services and operational research; behavioral, social, and structural intervention research; health department and community-based organization programs for HIV prevention; social marketing activities; capacity-building assistance; and program monitoring and evaluation.

The external peer review meeting and final report, expected in early FY 2010, will provide the Division of HIV Prevention with objective input and guidance on its scientific and programmatic priorities and direction; serve as a basis for a new CDC HIV prevention strategic plan; and hopefully contribute to the development of a national AIDS strategy.

## Revisions to the Hepatitis A Vaccine Recommendations Regarding International Adoptees

In February 2009, the Advisory Committee on Immunization Practices (ACIP) voted unanimously to recommend hepatitis A vaccination for all previously unvaccinated non-traveling individuals who will be in close personal contact with an internationally adopted child. Approval of this new recommendation was based on the review of a large amount of data and other evidence compiled by the ACIP Hepatitis Working Group and the Division of Viral Hepatitis to support expanded use of hepatitis A vaccine.



According to the ACIP recommendation, when adoption is planned for a child from a country of high or intermediate hepatitis A endemicity, those who will have close personal contact with the adoptee during the first 60 days following the adoptee's arrival in the United States should be vaccinated. Previous ACIP recommendations called for vaccination of only

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those persons who travel to countries with high or intermediate hepatitis A endemicity, usually including adoptive parents.

Among children younger than 6 years of age, approximately 70% of hepatitis A–infected individuals are asymptomatic. In nearly all of the foreign countries from which Americans adopt children, hepatitis is endemic. The Division of Viral Hepatitis estimated the risk of hepatitis A infection among close personal contacts of international adoptees to be approximately 90–819 per 100,000 household contacts of international adoptees within the first 60 days of their arrival in the United States. This risk far exceeds the estimated incidence in the U.S. general population in 2007 of 1.0 per 100,000.

### Promotion of Infertility Prevention Through Chlamydia Screening

A high-priority strategic goal for the Division of STD Prevention is prevention of infertility resulting from sexually transmitted infection. Because untreated chlamydia and gonorrhea can lead to infertility in women, addressing both of these treatable infections are key strategies to achieve the goal. Annual chlamydia screening is recommended for sexually-active women 25 years and younger because chlamydia is often asymptomatic. Increasingly, screening and treatment for chlamydia are occurring outside of public STD clinics, so partnership with organizations in the private and nonprofit sectors is a cornerstone of the Division of STD Prevention's approach.

In collaboration with Partnership for Prevention, the division successfully launched the National Chlamydia Coalition (NCC) in June 2008. The coalition, which has grown to 59 national organizations, has achieved a number of important milestones, working through its three committees. For example, NCC has developed a website (<http://www.prevent.org/ncc>) that is a growing resource for teaching materials, clinical resources and patient education materials, and a regularly published e-newsletter that includes up-to-date information for subscribers about chlamydia and related topics.

NCC and its member organizations submitted a proposal to the National Committee for Quality

Assurance (NCQA) to include the chlamydia screening Healthcare Effectiveness Data and Information Set measure in the 2010 NCQA health plan accreditation score for commercial and Medicaid plans. NCQA accepted the proposal, and the measure will become part of the accreditation set in July 2010. Accreditation measures help employers and consumers compare health plans based on quality. Including the chlamydia screening measure in the accreditation set increases its visibility, ensures that plans seeking accreditation will implement the chlamydia screening measure, and raises the likelihood that plans will focus on improving their performance on this measure.

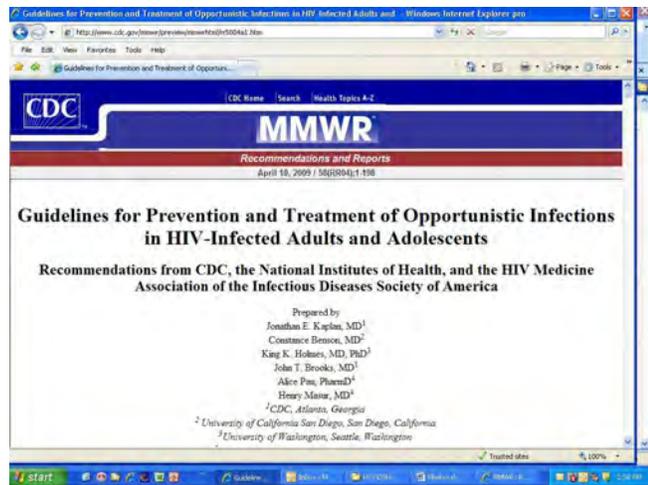
The Division of STD Prevention is also collaborating with the National Association of Community Health Centers (NACHC) to develop tools to promote adherence to evidence-based recommendations for screening and treatment in health centers. During a June 2009 meeting organized by NACHC, health departments and health centers in the Southeast identified barriers that hinder collaboration in STD screening and treatment. CDC is working with the NACHC to implement recommendations developed during the meeting.

To address gonorrhea, the Division of STD Prevention conducted four regional gonorrhea control meetings with Infertility Prevention Program partners to maximize opportunities for STD program directors and managers to assess current morbidity and potential prevention strategies. Like the meetings with community health centers, the regional gonorrhea meetings provided opportunities to share successful prevention efforts and to develop collaborations to address common challenges. As a result of these meetings, health department grantees developed action plans that include strategies to enhance targeted screening and extend the reach of partner services.

### Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents

The Division of HIV/AIDS Prevention published "Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and

Adolescents” in the *MMWR* on April 10, 2009. This report updates and combines earlier versions of guidelines published separately for adults in 2002 and for adolescents in 2004.



The guidelines are intended for use by clinicians and other health care providers, HIV-infected patients, and policy makers in the United States. They address several opportunistic infections that occur in the United States and five opportunistic infections that might be acquired during international travel.

Changes in the guidelines include a greater emphasis on the importance of antiretroviral therapy for the prevention and treatment of opportunistic infections and provision of information about the diagnosis and management of immune reconstitution inflammatory syndromes. The guidelines update information about drug interactions that affect the use of rifamycin drugs for prevention and treatment of TB. Additions to the guidelines include a new section on hepatitis B virus infection and the addition of malaria to the list of opportunistic infections that might be acquired during international travel.

Previous guidelines on this topic have the distinction of being both the longest *MMWR Recommendations and Reports* ever published and among the most frequently downloaded. The updated guidelines are found at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5804a1.htm>.

## Promoting Community Prevention

NCHSHTP assists communities in preventing HIV, viral hepatitis, STDs, and TB by providing science-based interventions and activities to reduce disease and related morbidity. Following are some examples of NCHSHTP activities in promoting community prevention in FY 2009.

### New Intervention for African-American MSM

In response to an HIV outbreak among young African-American MSM in North Carolina, the Division of HIV/AIDS Prevention funded and tested a cultural adaptation of the Popular Opinion Leader Model. The intervention proved efficacious, and the division opted to disseminate the intervention nationally. The community-level intervention “d-up: Defend Yourself!” is designed for and developed by African-American MSM. The d-up! intervention promotes social norms of condom use and helps African-American MSM to recognize and handle risk-related racial and sexual bias.

The d-up! intervention includes some new activities focusing on African-American MSM. One activity emphasizes HIV-transmission education to ensure that young African-American MSM understand clearly how HIV is transmitted. A second new activity is “Preparation for Bias.” This unique intervention concept was based on the life stories of African-American MSM who indicated that they wished they had been better prepared to psychologically deal with racism and homophobia. In the intervention, young African-American MSM are taught how to support resiliency in their MSM friends so that they can better deal with racism and homophobia in their lives while maintaining a positive self-concept.

From October 31, 2008, to June 30, 2009, 16 d-up! trainings were provided for 213 prevention providers. Staffs from 74 community-based organizations have been trained to implement d-up! for young, African-American MSM. Response from city, county, state, and territorial health departments has been outstanding with 22 health departments participating in the d-up! trainings of prevention providers.

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## 2009 Compendium of Evidence-based Behavioral Interventions

The 2009 *Compendium of Evidence-based Behavioral Interventions* provides a comprehensive, up-to-date list of HIV behavioral interventions scientifically proven to reduce HIV and STD risk that can be used to guide programmatic planning throughout the United States. As of August 2009, the compendium included 69 evidence-based HIV behavioral interventions, including the newest additions of community-, individual- and group-level interventions.

The compendium presents the strongest evidence-based interventions in the literature to date. Each intervention has been rigorously evaluated and has demonstrated efficacy in reducing HIV-related risk behaviors or promoting safer behaviors. These interventions have put science into practice and made a significant impact on achieving the CDC's goal of having prevention partners use the most effective HIV behavioral interventions with all populations.

## Responding to STDs in Correctional Populations

Adult and juvenile correctional populations are an integral part of the larger community. The majority of people in jails and juvenile facilities are housed there for short periods of time and quickly return to their communities. Several studies have confirmed the high prevalence of STDs in jail populations. If infected and untreated for STDs, inmates can potentially spread diseases to the larger population upon their release. Therefore, the Division of STD Prevention is continuing to expand the reach of STD prevention efforts in correctional settings.

To inform program recommendations and activities, NCHHSTP conducted several studies in 2009 focused on STDs in correctional populations. In February, a special issue of *Sexually Transmitted Diseases* was devoted to responding to the burden of STD, HIV, and viral hepatitis in correctional populations. The Division of STD Prevention also evaluated jail screenings in 11 large jails in the United States and conducted a study, published in the July 2009 issue of *Sexually Transmitted Diseases*, to examine the influence of chlamydia screening of men in Philadelphia prisons on community infection rates.

The division is using these findings to help programs make the case in their communities to prioritize jail screenings, as well as to provide information to help structure effective screening programs in correctional facilities.

In 2009, CDC conducted the NCHHSTP Corrections and Public Health Consultation and the STD Treatment Guidelines Consultation to review evidence and develop recommendations to promote STD screening in correctional settings. During these consultations, experts—including representatives from two correctional health accrediting bodies, American Corrections Association and the National Commission of Correctional Health Care—recommended that CDC publish guidance for screening in correctional settings.



## Collaboration with Historically Black Colleges and Universities to Prevent STDs

To reduce STD disparities in African-American communities that experience the highest rates of STDs, NCHHSTP is collaborating with historically black colleges and universities (HBCUs) on a community outreach initiative. Project partners include Morehouse School of Medicine, Charles Drew University of Medicine and Science, Howard University, and Meharry Medical College.

In the first phase of the project, participating partners developed an STD training curriculum for HBCU faculty, staff, and students of the organization's member institutions and a web-based STD curriculum package for HBCU medical schools. The curricula will be used in the subsequent phases of the project, which include use of the curricula on HBCU campuses, outreach to surrounding communities by HBCU faculty and trained students, and evaluation of the curricula and outreach efforts.

## STD Disparities in African-American Communities

A special supplement to the journal *Sexually Transmitted Diseases* was published in December 2008. The supplement, "Addressing STD Disparities Among African-American Communities," grew out of a monograph of background papers prepared for the 2007 Consultation to Address STD Disparities in African-American Communities. Consultation participants encouraged CDC to share these papers with a broader audience. This special issue includes many of the background papers, which highlight relevant issues related to STD disparities in African-American communities.

## TB in African-American Communities

NCHHSTP held community information summits on tuberculosis at four sites during 2008–2009, as part of an effort to address the TB disparity in the African-American community in the U.S. Southeast. The summits aimed to improve the capacity of health departments to foster collaborative partnerships around TB and to engage in advocacy, communication, and social mobilization activities.

The four study sites were located in rural and urban areas of Georgia, North Carolina, and Tennessee.

Researchers and local health departments worked together to plan the four summits. Summit participants included community leaders and other key stakeholders, such as correctional and schools personnel. At each summit, a health department staff member or physician from the community gave a presentation on TB, and a short video entitled, "Working Together to Stop TB in the African-American Community" from the Southeastern National TB Center was shown. Summit participants worked together to outline action steps they could take to reduce TB in their community. Persons affected by TB also shared their personal testimonials at the events. Researchers are currently collecting evaluation data to assess the summits' effectiveness. A case study of the summit at each site will be written for the final report.

## Ethnographic Study of the Karen Burmese

NCHHSTP's Division of Tuberculosis Elimination is conducting a study to provide TB programs with practical cultural information on the Karen Burmese to help respond to their needs in a culturally appropriate manner. The Karen are an ethnic group



from Burma. Many Karen live in camps along the mountainous northwest border in Thailand; the Karen are being relocated to the United States through refugee programs.

Using information gathered from two study sites with 73 participants, an ethnographic guide focused



mother-to-child transmission; improved diagnostic laboratory capabilities across HIV/AIDS, TB, and malaria; support for the goal of training and retaining 140,000 health care workers; and strengthening of indigenous health systems.

## Building Global Public Health Workforce Capacity

Effective national public health systems depend on a trained and motivated workforce to carry out the services needed to achieve health goals. Unfortunately, countries supported by PEPFAR face critical shortages of these important health professionals, who are now delivering an expanding set of HIV services. To tackle this issue, GAP supports a range of interventions that support sustainable development of health professionals in more than 70 countries. These activities include:

- Helping develop human resource information systems that track the qualification and deployment of health workers, generating workforce data for rational planning and decision-making.
- Strengthening pre-service education for nurses, doctors, laboratorians, epidemiologists, managers, and other public health professionals.
- Providing ongoing training, technical assistance, and mentorship for the range of public health professionals, such as by establishing 2-year Field Epidemiology and Laboratory Training Programs and twinning partnerships between U.S. state health officials and peer officials from host governments.
- Improving productivity of staff by supporting policy development and implementation of “task-shifting,” which can be used to expand services provided by lower-level staff.
- Improving retention of existing health workers, by improving facility infrastructure; ensuring adequate medication, equipment, and supplies; improving workplace safety; and improving communication, mentorship, and supervision.

Capacity building of the local workforce is also inherent in GAP’s staffing model. In 24 countries, GAP’s technical leaders are co-located with their fellow host government ministry of health (MoH)

professionals, allowing for invaluable peer-to-peer mentorship and technical exchange. GAP also hires and mentors approximately 1,200 skilled, locally employed technical staff in each of the countries where it works to help deliver programs and provide technical assistance.

In 2009, GAP made significant strides in expanding health workforce information systems globally. In Kenya, CDC has worked since 2002 to help develop the first human resources information system (HRIS) in sub-Saharan Africa, a system that currently collects registration and deployment data on health care workers on a quarterly basis from more than 6,000 health facilities nationwide. The data produced have been used to inform policy and program decisions by the MoH, such as to guide the placement of nurses to the most underserved areas in the country, successfully extend the retirement age of nurses by 5 years, and help the PEPFAR program decide where and how the new male circumcision activity could most effectively be delivered. In 2008 and 2009, the system was expanded to now include laboratorians, physicians, and dentists.

The project now serves as a model for replication around the continent. Recognized as a best practice by the PEPFAR Human Resources for Health (HRH) Technical Working Group, the project’s impact was presented at a PEPFAR Regional HRH Technical Consultation that convened in South Africa in March 2009. Following the meeting, health professionals from Nigeria and Zimbabwe contacted GAP to request an in-country orientation. The orientation allowed the Nigerian and Zimbabwean MoH and U.S. government officials to observe the Kenya system’s capabilities and determine how comparable systems could be implemented within their countries. As a result, the Nigeria and Zimbabwe HRH teams are now actively planning their own HRIS.

## Integrating HIV and Maternal and Child Health

Over the past decade, the U.S. government has made significant progress in combating mortality due to HIV/AIDS, including preventing and treating HIV among millions of pregnant women. However, overall maternal mortality during this same period has only been reduced slightly. Globally, 500,000

# A YEAR IN REVIEW: Program Accomplishments

maternal deaths occur each year largely the result of preventable conditions such as severe bleeding and infection, and exacerbation of underlying conditions such as malaria and anemia, which could be mitigated with low-cost, evidence-based interventions.

In April 2009, GAP contributed to the development of “Saving Mothers and Children: Accelerating Progress Towards the Child Survival, Maternal Health, and Disease Reduction Millennium Development Goals,” a proposal outlining a comprehensive strategy to reduce maternal, newborn, and child mortality. This integrated approach also includes a strong focus on strengthening essential primary and community health services and the health systems that support them.

GAP also helped facilitate the integration of HIV and MCH services by developing guidance for preventing mother-to-child transmission of HIV (PMTCT) and MCH integration. This guidance, which will be used by interagency country teams to program PEPFAR funds, promotes the integration of PMTCT, pediatric HIV, and maternal child health services to strengthen overall health outcomes for women, infants, and children. These guidance documents will play a pivotal role in GAP’s support to MoHs to build local public health services and systems capacity to reduce maternal, newborn, and child mortality.

## Bolstering Quality of African Laboratories Through Accreditation

Sub-Saharan Africa carries a huge disease burden—with roughly 5 million deaths each year from HIV/AIDS, tuberculosis, and malaria combined.



Functioning public health infrastructure—in which laboratories play a primary role—is vital to mitigating this burden. For nearly a decade efforts have been underway to improve these critical facilities. GAP—through PEPFAR—has been among the key partners in this process, along with the World Health Organization (WHO), as part of the intensified fight against HIV/AIDS.



Currently, only a handful of Africa’s laboratories are accredited. Many of them lack equipment, proper funding, adequate training for lab workers, and systematic management of work. In July 2009, officials from 13 African countries launched a major push for accreditation of the continent’s medical laboratories.

This historic effort, implemented through GAP, operates under the guidance of WHO and PEPFAR and includes valuable assistance from the American Society for Clinical Pathology and the Clinton HIV/AIDS Initiative. Much of the effort focuses on training laboratory managers and other administrative staff to improve the management of the facilities. A five-step accreditation process has been established that is structured around WHO’s core standards for laboratories. This process allows labs to receive credit for improvement over time and eventually attain full accreditation.

GAP’s commitment to this effort—along with that of ministries of health, international partners, and the labs themselves—is a testament to the fact that infrastructure investments have matured to where Africa’s laboratories can aspire to and realistically achieve compliance with international standards.

## International STD Prevention Efforts

NCHHSTP is continuing collaborations with other nations, WHO, and other international partners to prevent STDs globally with five significant activities.

First, NCHHSTP continued its collaboration on the WHO global initiative to eliminate congenital syphilis as a public health problem. In 2009, global partners formally adopted congenital syphilis elimination indicators, now included in WHO data collection forms, which will allow measurement of progress in congenital syphilis elimination. CDC continues to participate in BASTA (Battling Antenatal Syphilis: A Team Approach), an informal consortium of international public health partners advocating for congenital syphilis elimination. This consortium has been actively promoting global congenital syphilis elimination at international conferences and meetings throughout the year.

Second, a point-of-care rapid syphilis test that can detect antibody to both treponemal and non-treponemal antigens has been developed in collaboration with a commercial partner. In collaboration with the WHO STD Diagnostics Initiative, the test is currently being evaluated in four

international settings (Brazil, Haiti, Tanzania, and China) and in one domestic setting (Birmingham, Alabama). This test could prove to be a critical tool for expanding antenatal screening to control adult disease and prevent congenital syphilis in the developing world.

Third, CDC is working to improve the ability to assess the burden of STDs globally, particularly in providing capacity building for global regional reference laboratories. In 2009, CDC assisted six countries in completing integrated sexual behavior and STD prevalence surveys.

Fourth, to address global HPV, the Division of STD Prevention worked with WHO to develop HPV vaccine recommendations and guidance for monitoring HPV vaccine impact. WHO's recommendations for use of HPV vaccine were published in April 2009 (*Weekly Epidemiologic Record No. 15, 2009;84:117–132*).

Finally, NCHHSTP is continuing to support WHO to strengthen its regional gonococcal surveillance program in an effort to reduce the global spread of gonorrhea caused by cephalosporin-resistant strains. The funding has been used to increase the number of sites in Southeast Asia that can perform in vitro susceptibility testing.



# A YEAR IN REVIEW:

## Scientific Findings

Research is an important part of CDC's comprehensive approach to prevention, and excellence in science is a strategic priority. This priority mandates that we practice evidence-based science grounded in sound peer-reviewed research and that we ensure a strong science base for public health action.

NCHHSTP conducts extensive biomedical and behavioral research to better understand the complex factors that lead to epidemics, to evaluate methods of testing and treatment, and to examine strategies to eliminate health disparities. All extramural and intramural research activities conducted or supported by NCHHSTP are subject to external peer review, ensuring rigor and quality and that research funds support the most meritorious research ideas and projects. External peer review improves our science by providing expert feedback on quality, productivity, science, and direction.

Three advisory boards regularly provide peer review of NCHHSTP programs: the Advisory Council for the Elimination of Tuberculosis, which advises on the center's TB prevention and control programs; the CDC/HRSA HIV/AIDS Advisory Committee on HIV and STD Prevention and Treatment, which reviews HIV, STD, and viral hepatitis programs; and the Coordinating Center for Infectious Diseases (CCID) Board of Scientific Counselors, which provides cross-cutting program review, focusing on all CCID programs, including those of NCHHSTP. In addition, external peer review panels are periodically convened to review NCHHSTP research programs.

NCHHSTP is also committed to mentoring young scientists who are interested in epidemiologic and prevention research. The extramural Minority HIV/AIDS Research Initiative (MARI), initiated in 2002, creates partnerships between CDC epidemiologists and researchers who are members of minority races and ethnicities and who work in communities of color. MARI funds epidemiologic and prevention studies of HIV in communities of color and encourages the career development of young investigators. The center also has a number of Epidemic Intelligence Service (EIS) officers; 13 officers joined the center in FY 2009. The EIS is the country's critical epidemiology training service, working to combat the causes of major epidemics.

Research findings are published in peer-reviewed journals. NCHHSTP staff published or have in press a number of journal articles, book chapters, books, guidelines, and other publications. Following are some highlights from FY 2009.

## HIV Studies and Research

### Investigation of HIV Infection Among Young African-American MSM in Mississippi

In 2008, the Mississippi State Department of Health requested assistance from CDC after noting an increase in new HIV diagnoses among young African-American MSM at an STD clinic in Jackson. A review of state HIV surveillance records revealed that the number of new HIV diagnoses among African-American MSM aged 17–25 years in the Jackson area was 45% higher in 2006–2007 than in 2004–2005.

CDC and the state health department collaborated on an investigation in which 30 young African-American MSM who were infected with HIV and 95 uninfected young African-American MSM were surveyed to determine risk factors associated with HIV infection and to learn more about their social and sexual networks. Preliminary results showed that during the 12 months before their HIV diagnosis, 69% of the HIV-infected participants had unprotected anal intercourse, but only 10% thought they were likely or very likely to acquire HIV infection in their lifetimes. These results were published in the *MMWR* 2009;58(04):77–81.

The Division of HIV/AIDS Prevention is working with the Mississippi State Department of Health to use data from this investigation to develop a comprehensive approach to decrease acquisition and transmission of HIV infection among young African-American MSM, including improving dissemination of epidemiologic data; expanding HIV testing in health care and other settings; and implementing targeted, community-wide prevention activities.

## Macaque Studies Exploring New HIV Prevention Strategies

CDC is sponsoring or participating in several clinical trials evaluating the safety and efficacy of daily oral pre-exposure prophylaxis (PrEP) with tenofovir disoproxil fumarate (TDF) or a combination of TDF and emtricitabine (also known as Truvada) among different high-risk populations.

PrEP with antiretroviral drugs has gained considerable attention as a potential biomedical intervention to protect high-risk HIV-negative people from becoming infected. CDC has been in the front line of PrEP animal research and developed a repeat-low dose exposure macaque model that can be used to examine various PrEP strategies. Using this model, CDC scientists found that the oral administration of Truvada before and after exposure to simian/human immunodeficiency virus (SHIV) effectively prevented rectal infection in macaques; this approach is known as intermittent PrEP.

In a second study using this model, CDC researchers compared the effectiveness of a topical tenofovir vaginal gel and a gel that included a combination of tenofovir and emtricitabine. The study found that both vaginal gel formulations were equally effective and provided complete protection against SHIV, suggesting that single-drug regimens may be effective for topical gels.

## Viral Hepatitis Studies and Research

### Nonhospital Health Care–Associated Hepatitis B and C Virus Transmission: United States, 1998–2008

In the United States, transmission of hepatitis B virus and hepatitis C virus from health care exposures has been considered uncommon. However, recent reports of outbreaks of hepatitis B and hepatitis C infections in nonhospital health care settings indicate a growing problem.

NCHHSTP reviewed nonhospital health care–associated viral hepatitis outbreaks that occurred in the past decade to assess health care exposures

and characterize practices associated with viral hepatitis transmission in the United States. The review revealed 33 outbreaks in the past decade: 12 in outpatient clinics, 6 in hemodialysis centers, and 15 in long-term care facilities. In each setting, the putative mechanism of infection was patient-to-patient transmission through failure of health care personnel to adhere to fundamental principles of infection control (for example, reuse of syringes or lancing devices).



These recognized outbreaks indicate a wider and growing problem as health care is increasingly provided in outpatient settings in which infection control training and oversight may be inadequate. The results of the review indicated that a comprehensive approach involving better viral hepatitis surveillance and case investigation, health care provider education and training, professional oversight, licensing, and public awareness is needed to ensure that patients are always afforded basic levels of protection against viral hepatitis transmission.

# A YEAR IN REVIEW:

## Scientific Findings

### Large Epidemic of Hepatitis E in Uganda

During the last half century, several large hepatitis E virus (HEV) epidemics have occurred in Africa. An NCHHSTP study published in FY 2009 describes the first documented hepatitis E epidemic in Uganda, among residents of internally displaced persons' camps in October 2007.

NCHHSTP collected information from all residents of two sub-counties of Kitgum district (Madi Opei and Paloga) to calculate the symptomatic hepatitis E attack and mortality rates. Serum was also collected from systematically selected participants to determine the prevalence of HEV infection. Symptomatic hepatitis E was defined as self-reported jaundice during October 2007 to June 2008.

Overall, the study enumerated 19,098 people in 4,021 households; 4,898 (25.6%) had had jaundice, and 75 of those persons had died (case fatality rate [CFR] = 1.5%). Serologic analysis of 469 randomly selected residents of both districts showed that 303 (64.6%) had anti-HEV IgG, IgM, or both. IgM antibodies persisted in 60% of symptomatic persons for at least 7 months.

Symptoms were infrequent in infants younger than 2 years old (97/1,352 [7.2%]) and highest in pregnant women (193/239 [80.7%]); but the CFR was very high in both those groups (13.4% and 6.7%, respectively). Control efforts were directed at ensuring a safe drinking water supply and hand and defecation hygiene; these efforts did not, however, markedly prevent subsequent infections, indicating the need for vaccination to control such outbreaks.

### International Symposium on Drug-Resistant and Vaccine-Escape HBV Infections

On June 4–5, 2009, the Division of Viral Hepatitis hosted an international symposium entitled Drug-Resistant and Vaccine-Escape Hepatitis B Virus Infections: Emergence and Surveillance. There were 180 individuals who attended this scientific event, held at CDC in Atlanta. International experts presented their latest findings, exchanged ideas, and discussed strategies for surveillance of emerging mutants.

The presentations and the discussion that followed provided a roadmap for future research by highlighting the emerging threat of HBV mutants. There was growing consensus that such mutants are likely to arise particularly from resource-poor countries that are hyperendemic for chronic hepatitis B and those that are endemic for HIV and HBV. The symposium also highlighted the need for global surveillance systems that use viral genome-based approaches to detect mutations. The conference proceedings will be reported as a spotlight issue of *Antiviral Therapy*.

## STD Studies and Research

### HSV/HIV Interaction

HSV<sub>2</sub> (genital herpes) is important in the HIV epidemic and may contribute to HIV transmission. Using a triple-blind, placebo-controlled, randomized crossover trial of suppressive acyclovir for women co-infected with HSV<sub>2</sub> and HIV<sub>1</sub> in Thailand, scientists in the Division of STD Prevention evaluated the effect of the drug therapy on cervicovaginal HIV<sub>1</sub> shedding. The study found a statistically significant reduction in HIV genital shedding and plasma HIV load for the women on suppressive acyclovir treatment, an antiviral treatment for genital herpes. This finding is important given that HIV genital shedding is the source for most heterosexual HIV transmission worldwide. The study was published in *Journal of Acquired Immune Deficiency Syndromes* 2008;49(1):77–83.

### Enhanced Patient-based Partner Notification

Patient referral is used in the vast majority of gonorrhea and chlamydia infections. To determine whether patient referral is effective, the Division of STD Prevention conducted a randomized controlled trial of a patient referral program for 600 STI clinic patients infected with gonorrhea and chlamydia. The program consisted of a two-session behavior-change and skill-building intervention to enhance and encourage partner notification and reduce sexual risk behaviors.



The program was found to increase sexual partner notification at 1 month, decrease sexual risk at 6 months, and reduce chlamydia infection (primarily in men). The intervention was shown to be helpful in reducing risks for subsequent STIs in urban minority patients attending STI clinics. The study was published in the *American Journal of Public Health* 2008;99(Suppl 1):S104–S110.

## Anal Sex and STDs

Following earlier work indicating a greater than 30% overall lifetime prevalence of anal sex in the heterosexual population in general, Division of STD Prevention scientists studied heterosexual anal sex activity in the year following an STD clinic visit for 2,357 patients. Thirty-nine percent of subjects were found to have had anal sex during the year, and 23.5% of subjects had anal sex during two distinct 3-month intervals in the year. Anal sex was found to be associated with increased frequency of sex, having more than two partners, having unprotected sex, and having a main partner. Sixty-three percent of subjects never used condoms. These findings imply that clinicians should be aware of the common occurrence of anal sex in persons attending STD clinics, ask

about the practice, appropriately examine and treat patients who engage in anal sex, and recommend risk-reduction strategies. The study was published in *Sexually Transmitted Diseases* 2008; 35(6):592–598.

## Clinic-based Testing for Rectal and Pharyngeal Gonorrhea and Chlamydia

Division of STD Prevention scientists surveyed STD testing practices for CBOs serving men who have sex with men (MSM). Three CBOs used nucleic acid amplification testing (NAAT), and three used microbial culture to test for gonorrhea and chlamydia. Results of the study indicate the utility of NAATs in nontraditional medical settings because of greater sensitivity and the possibility of suboptimal handling of microbial cultures outside traditional medical clinics. In addition, NAATs can detect both gonorrhea and chlamydia with a single test and in self-collected specimens of rectal and pharyngeal sites. The study was published in *MMWR* 2009;58(26):716–719.

## Chlamydia Screening

Division of STD Prevention scientists also participated in a number of studies on chlamydia in U.S. males. In 2005, there were 232,781 chlamydia cases reported among men (161.1 cases per 100,000), an increase of 43.5% from 2001. Collectively, the studies of chlamydia among males provide evidence for the need and cost-effectiveness of a targeted chlamydia screening approach for men.

The first study analyzed data on chlamydia from national surveys—the National Health and Nutrition Examination Survey (NHANES), the National Longitudinal Study of Adolescent Health (AddHealth), the National Job Training Program, the Men Having Sex with Men (MSM) Prevalence Monitoring Project, and surveys conducted in adult and juvenile corrections facilities.

NHANES indicated that the prevalence rate of chlamydia in U.S. males 20–29 years of age was 3.2% overall. Rates were found to be highest in black men in both NHANES (5.3%) and AddHealth (11.1%). In adult corrections data, the positivity rate among men 21–25 years was 7.8%, and in juvenile corrections facilities, 6.7%. For men entering the

National Job Training Program, the 2005 rate was 8.1%. Among MSM, the urethral chlamydia rate was 6%. These findings indicate persistently high rates of chlamydia in men in the United States, particularly among men entering the National Job Training Program and in corrections facilities. Disease burden is highest among young men and black men. The study was published in *Sexually Transmitted Diseases* 2008;(35)11:S3–7.

The second was a study on cost-effectiveness of screening men for chlamydia to prevent pelvic inflammatory disease (PID) in women. In this study, data from a demonstration project and longitudinal study that examined screening men for chlamydia were applied to a compartment-based transmission model to estimate cost-effectiveness. The study found 1) a program targeting high-risk men for screening was cost-saving compared with using equivalent program dollars to expand screening for lower-risk women; and 2) combining partner notification with male screening was shown to be more effective than screening men alone. These results suggest that male screening would be most effective in venues where men have higher rates of chlamydia. The study was published in *Sexually Transmitted Diseases* 2008;(35)11:S66–S75.

In a third study, data reported to the Healthcare Effectiveness Data and Information Set (HEDIS) were analyzed to determine changes in screening rates. Screening for chlamydia helps to preserve reproductive health through treatment of chlamydia infection, thus reducing sequelae causing damage to the reproductive tract. The annual screening rate for sexually active women in commercial and Medicaid health plans was found to have increased from 25.3% in 2000 to 41.6% in 2007. This study indicates some improvement in screening rates for chlamydia in women, though authors note that screening among uninsured women must be addressed because much of the disease burden affects that population. The study was published in *MMWR* 2009;58(26):362–365.

## Tuberculosis Studies and Research

### Kanamycin Resistance in *Mycobacterium tuberculosis*

The emergence of multidrug-resistant TB (MDR TB) highlights the urgent need to understand the mechanisms of resistance to the drugs used to treat the disease. Kanamycin and amikacin are important bactericidal drugs used to treat MDR TB, and resistance to one or both of these drugs is a defining characteristic of extensively drug-resistant (XDR) TB.

In a study of the molecular mechanisms of low-level kanamycin resistance, CDC's Mycobacteriology Laboratory Branch has identified mutations in two regions of a gene that encodes a previously uncharacterized aminoglycoside acetyltransferase. This study has led to the inclusion of this gene in a panel to be used in a new service that will be offered fall 2009 to state public health laboratories by the Mycobacteriology Laboratory Branch for the molecular detection of mutations associated with drug resistance in isolates of *M. tuberculosis*.

### Rapid Methods to Detect TB Drug Resistance

Conventional laboratory methods for detecting drug resistance in patients with TB can take weeks to months. This delay can lead to inappropriate treatment and additional transmission of TB in the interval while medical providers are waiting for drug-susceptibility results. Newer molecular-based methods for detecting drug resistance, however, have the potential to provide results in hours to days. The Division of Tuberculosis Elimination has been working with partners in multiple countries on field studies to test the accuracy and feasibility of implementing rapid molecular tests for TB drug resistance.

In a study using stored isolates from a public TB laboratory in Thailand, the performance of a rapid molecular test for isoniazid and rifampin resistance was compared with liquid culture techniques. The study found the rapid molecular test had a sensitivity of 95.3%, 100%, and 94.4% for isoniazid resistance,

rifampin resistance, and multidrug-resistant (MDR) TB, respectively, validating its use as a rapid and reliable first-line diagnostic test on smear-positive sputum. The median laboratory processing time was 25 days for liquid culture and 5 days for the molecular test.

Using isolates from an ongoing, nine-country study of MDR TB patients, the results of the molecular test were compared with results of standard agar-based methods. The rapid molecular technique correctly identified isoniazid, rifampin, and multidrug resistance in the large majority of patients faster than conventional phenotypic laboratory methods. Further studies are needed to evaluate its impact on treatment outcome and the cost associated with widespread implementation.

### **TB Trials Consortium (TBTC) Study 28**

TBTC Study 28, a randomized, double-blind, international clinical trial, found that moxifloxacin is an effective and safe alternative to isoniazid when part of a four-drug regimen for the treatment of drug-sensitive tuberculosis. This finding suggests that when there is known resistance or intolerance to isoniazid, moxifloxacin can be substituted to provide effective TB treatment. Moxifloxacin substitution for isoniazid did not result in significant improvement in 8-week culture conversion, and thus, the study did not support the hypothesis that moxifloxacin would confer a large 8-week advantage in sputum culture conversion. Consequently, whether the addition of newer fluoroquinolones to standard TB therapy would support shortening of tuberculosis treatment from 6 months to 4 months remains uncertain; other groups are conducting phase 3 studies to test this hypothesis.

A manuscript reporting results of TBTC Study 28 has been e-published and is in press at the *American Journal of Respiratory and Critical Care Medicine*.

### **Factors Associated With Treatment of Latent Tuberculosis Infection**

Treatment of latent tuberculosis infection to prevent progression to tuberculosis disease is an important part of the strategy to eliminate TB in the United States. A study by the Tuberculosis Epidemiologic Studies Consortium, designed to learn about demographics and treatment adherence among patients with latent tuberculosis infection (LTBI), surveyed clinics that began treatment of at least 10 LTBI cases in 2002. Based on the survey findings, it was estimated that 291,000–433,000 persons initiate LTBI treatment each year; approximately 80% of LTBI treatment is initiated in public health clinics. An estimated 47% of patients who were offered treatment completed it. Completion was associated with shorter treatment regimens.

Despite low treatment completion rates, LTBI treatment in 2002 prevented an estimated 10,000 cases of TB. These results quantify the benefit of LTBI treatment for TB prevention and underscore the importance of newer, shorter treatment regimens.

### **Identification of Missed Opportunities to Prevent Tuberculosis in Foreign-Born Persons in the United States and Canada**

Foreign-born persons in the United States currently account for nearly 60% of newly-diagnosed TB cases. Although TB rates have been dropping among foreign-born persons, the disparity in rates between U.S.-born and foreign-born persons continues to grow. In 2007, the TB rate among foreign-born persons (20.7 per 100,000 population) was almost 10 times that among U.S.-born persons (2.1/100,000).

The Tuberculosis Epidemiologic Studies Consortium, funded by the Division of Tuberculosis Elimination, conducted a study of TB among foreign-born persons in the United States and Canada. The consortium researchers interviewed 1,527 foreign-born

adolescents and adults newly diagnosed with TB to describe the epidemiology of TB in the foreign-born and identify missed opportunities for prevention. Participants were from 99 countries and lived in 19 states and 2 Canadian provinces; the U.S. residents were similar in age, sex, and national origin to all foreign-born U.S. residents with TB.

More than 25% of participants were undocumented at entry to the United States, and another 20% were on short-term visas that did not require examinations. This finding is important for the design of outreach programs to reduce the burden of TB in foreign-born persons. The study also estimated the additional benefit that will accrue from new technical instructions designed to improve identification of active TB in legal immigrants and refugees to the United States before they arrive in this country. The new instructions will increase identification of cases by only an estimated 6.7%. This study points to the importance of focusing prevention efforts on groups already in this country and outside the reach of the current immigration system.



## Global Health Studies and Research

### Strengthening Blood Transfusion Services

Globally, more than 80 million units of blood are donated each year. Of this total, only about 2 million are donated in sub-Saharan Africa where the need for blood transfusions is high because of maternal morbidity, malnutrition, and a heavy burden of infectious diseases, including malaria. Inadequate blood supply in many African countries is compounded by inconsistent laboratory screening and the collection of blood from donors at high risk for HIV. Nearly all persons transfused with HIV-infected blood themselves become infected, and unsafe blood transfusions have contributed to the transmission of HIV in sub-Saharan Africa.

Since 2004, through PEPFAR, GAP has worked in partnership with countries to strengthen laboratory, surveillance, and workforce capacity, as well as to bolster key prevention initiatives—essential components for sustainable public health systems.

A critical part of this effort has been 5 years of support to improve national blood transfusion services in 14 resource-limited countries in Africa and the Caribbean. To assess the progress of this activity, data were analyzed that had been collected by national blood transfusion services during 2003–2007 and reported to the GAP blood safety management information system in 2008. Analysis showed that over the past 5 years, the 14 countries had substantially increased total blood collections from low-risk donors; strengthened laboratory capacity to ensure that all collected units were screened for HIV and other transfusion-transmissible infections; and had seen a decrease in the prevalence of HIV-infected units. For example, Tanzania did not have a national blood service when PEPFAR began in 2004. In 2005, they collected approximately 12,500 units of blood and, just 2 years later, had increased collections to nearly 110,000 units, nearly 90% of which came from low-risk donors. This critical analysis was presented in *MMWR* 2008;57(47):1273–1277.

## Advances and Future Directions in HIV Surveillance in Low- and Middle-Income Countries

In 2009, GAP conducted a follow-up to a 2004 study that analyzed surveillance methods and activities in low- and middle-income countries. From 2001 to 2008, 30 of these countries implemented national population-based surveys with HIV testing. Furthermore, the follow-up found that antenatal clinic HIV sentinel surveillance sites in sub-Saharan Africa increased from slightly more than 1,000 in 2003–2004 to almost 2,500 in 2005–2006.

Between 2003 and 2007, at least 122 behavioral surveys in low- and middle-income countries used respondent-driven sampling for surveillance among high-risk populations, although many countries with concentrated epidemics continue to have major sentinel surveillance gaps. Improvements have been also made in modeling estimates of the number of

people who are HIV-infected, and systems are now in place to measure HIV drug resistance. This review concluded, however, that reliable monitoring of trends and measuring of HIV incidence, morbidity, and mortality remain a challenge.

GAP's review recommended that future surveillance efforts should concentrate on implementing sentinel surveillance in groups with high-risk behaviors in a large number of countries, improving methods to estimate HIV incidence, improving the ability to monitor trends in prevalence, using data from ART treatment programs, and increasing mortality surveillance. Greater attention should be also paid to understanding risky behaviors, including concurrent sexual partnerships. National-level information on mother-to-child HIV transmission rates and treatment outcomes is also needed. The review concluded that it is vitally important to improve surveillance quality and build local capacity to collect, evaluate, and use data.



# A YEAR IN REVIEW:

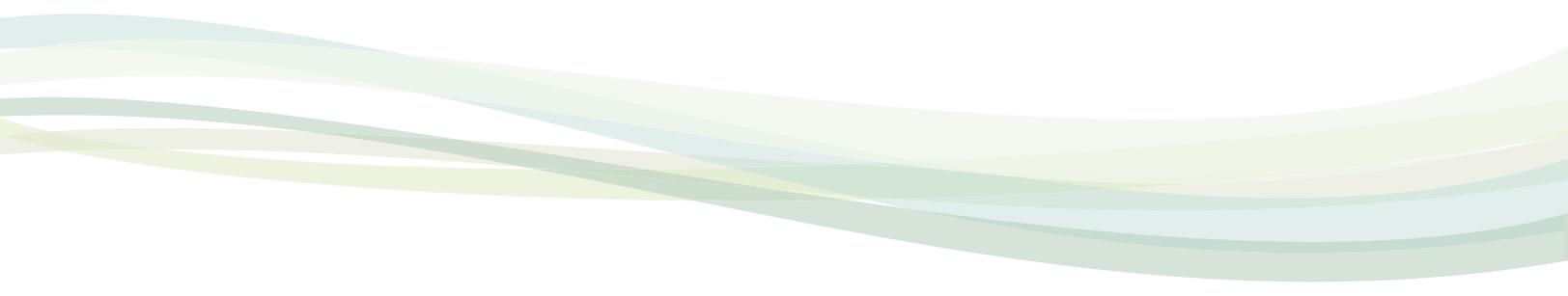
## Scientific Findings

### HIV Counseling and Testing Strategies in Uganda

The implementation of new strategies for HIV counseling and testing (HCT) is key to expanding HCT coverage. HCT increases knowledge of HIV status, encourages safer sex, and is an entry point for HIV care and treatment services. Increasing HCT coverage can reduce HIV-associated denial, stigma, and discrimination and mobilize communities to respond to the epidemic.

In a study in Uganda, GAP, through PEPFAR, evaluated how various strategies differ in costs and efficacy. GAP found that, in addition to stand-alone HCT, expanding new hospital-based and home-based strategies may have the cost-effective scalability needed to substantially increase access. All testing strategies had relatively low per-client costs. Hospital-based HCT most readily identified HIV-infected individuals eligible for treatment, whereas home-based strategies more efficiently reached populations with low rates of prior testing. GAP's assessment determined that these multiple strategies have the potential to help countries meet WHO's call for universal access to HCT by 2010.

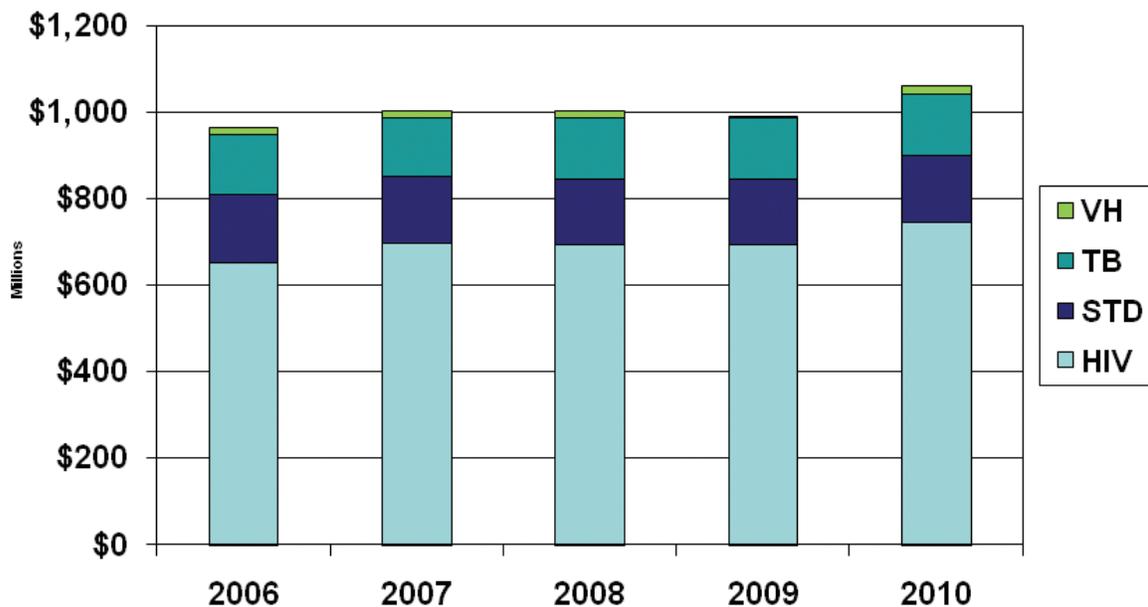




NCHHSTP receives funding from the Labor-HHS appropriation to support both its domestic and global programs. In addition, NCHHSTP's Global AIDS Program receives significant support from the Global HIV/AIDS Initiative (GHA) account. Other critical sources of support in FY 2009 included the budget activities for CDC Leadership and Management, Emerging Infections, Food Safety (for hepatitis A), Health Marketing, and Health Informatics.

Funding for most domestic programs has remained level or declined slightly over the past 4 years. (See figure 1.)

### Figure 1: NCHHSTP Domestic Program Budget FY 2006-2010\*



\*FY 2010 amounts reflect the President's budget request.

Of NCHHSTP's \$1 billion domestic budget, the majority of funds, nearly 70%, goes to domestic HIV prevention programs, with the rest distributed to TB, STD and viral hepatitis prevention programs. (See figure 2.) The majority of the overall domestic budget funds, about 86%, was distributed extramurally to state and local health departments, nongovernmental agencies, universities and other partners. (See figure 3.)

Figure 2: Domestic HIV, Viral Hepatitis, STD, and TB Prevention Actual Funding, FY 2009

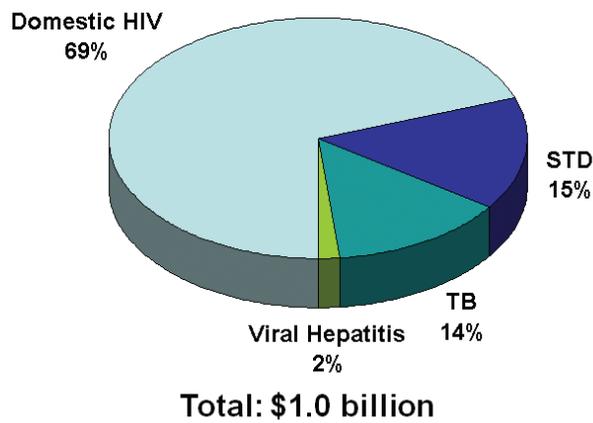
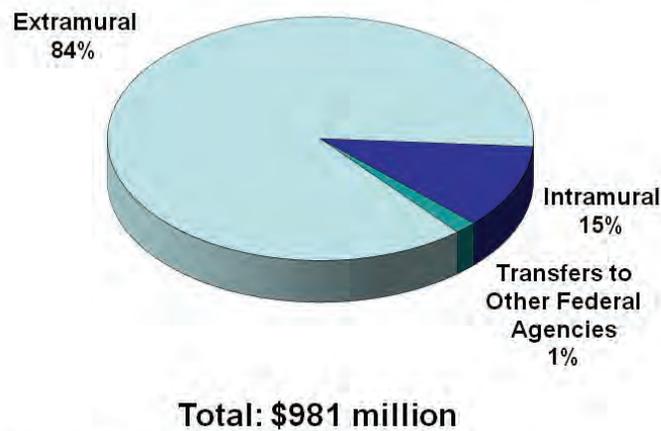


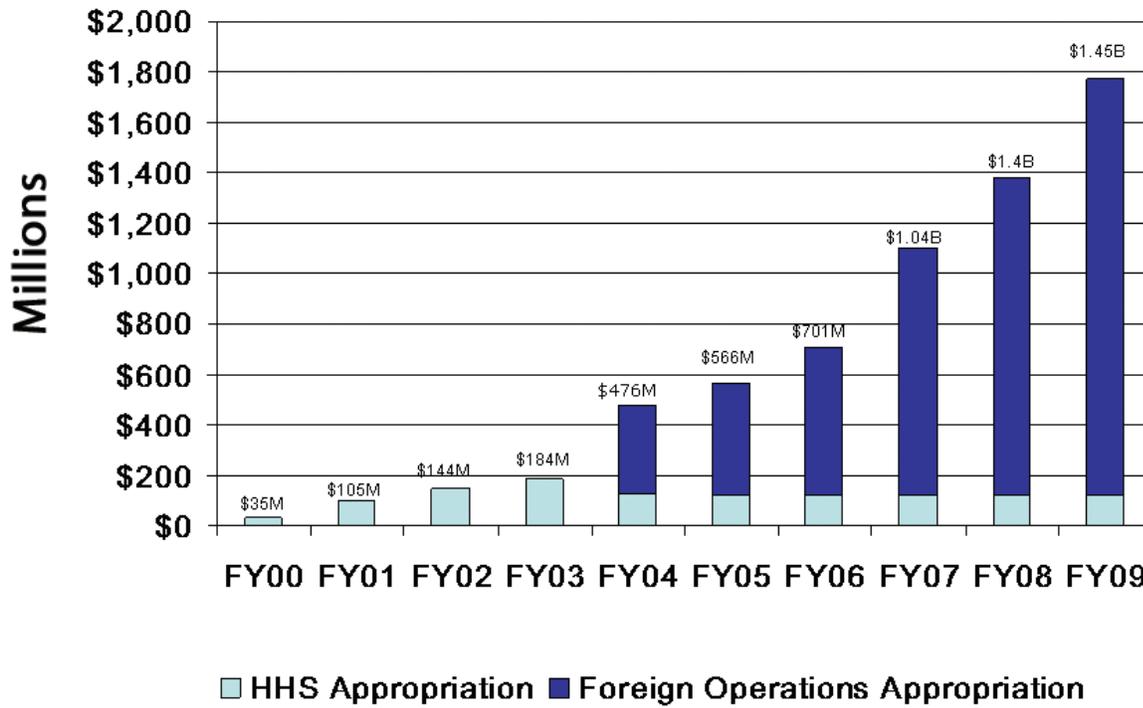
Figure 3: Domestic HIV, Viral Hepatitis, STD, and TB Prevention Extramural and Intramural Obligations, FY 2009\*



\*Excludes Gift Fund, Crada, Royalties and Reimbursable Funding.

Funding from the GHAI account for global activities of the Global AIDS Program has increased significantly to support the President’s Emergency Plan for AIDS Relief. (See figure 4.)

Figure 4: Global AIDS Program (GAP) Budget



Other budget lines at CDC support the Center’s health communication activities, health informatics activities, and leadership and management. Also, Emerging Infectious Disease (EID) funds support surveillance for vaccine preventable STDs (Hepatitis B and HPV), and surveillance for drug resistant infections (e.g. gonorrhea and XDR-TB). In addition, some of NCHHSTP’s activities to prevent hepatitis A are supported through the Food Safety Budget activity. (See table 1.)

<b>Table 1: Other Critical Support Received FY 2005 – FY 2009</b>					
	<b>2005</b>	<b>2006</b>	<b>2007*</b>	<b>2008</b>	<b>2009</b>
<b>Leadership &amp; Mgmt.</b>	<b>\$9,078,000</b>	<b>\$6,925,000</b>	<b>\$3,304,000</b>	<b>\$2,822,487</b>	<b>\$3,268,065</b>
<b>Business Support Services</b>	<b>\$1,261,000</b>	-	<b>\$482,000</b>	-	
<b>EID</b>	-	-	<b>\$8,363,000</b>	<b>\$6,455,397</b>	<b>\$6,548,574</b>
<b>Food Safety (HAV)</b>	-	-	<b>\$693,000</b>	<b>\$683,508</b>	<b>\$683,480</b>
<b>Health Marketing</b>	<b>\$11,806,000</b>	<b>\$11,290,000</b>	<b>\$1,194,000 **</b>	-	-
<b>Health Informatics</b>	<b>\$5,908,000</b>	<b>\$5,320,000</b>	-	-	-
<b>HHS Minority AIDS Initiative</b>	<b>\$9,722,000</b>	<b>\$8,390,000</b>	<b>\$7,697,000</b>	<b>\$7,284,975</b>	<b>\$2,739,500</b>
<b>Congressional Projects</b>	<b>\$1,389,000</b>	-	-	<b>\$1,275,324</b>	<b>\$1,851,000</b>

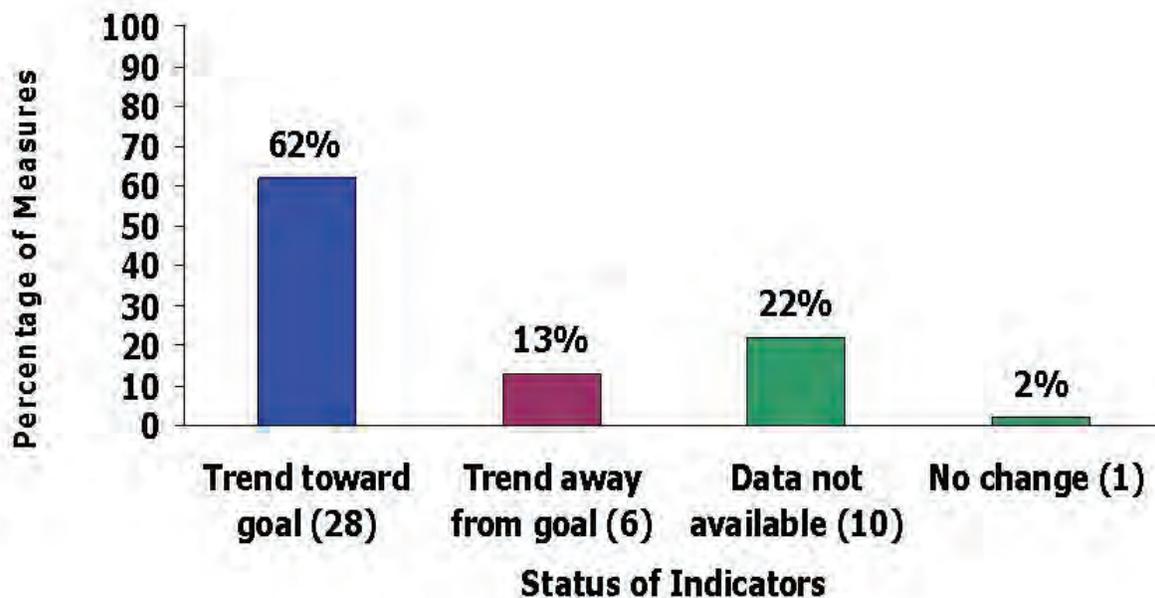
\*FY 2007-2009 amounts for food safety and emerging infectious diseases reflect the addition of the Division of Viral Hepatitis to the Center in 2007. EID funding also supports activities related to anti-microbial resistant STDs and monitoring related to vaccine-preventable diseases.

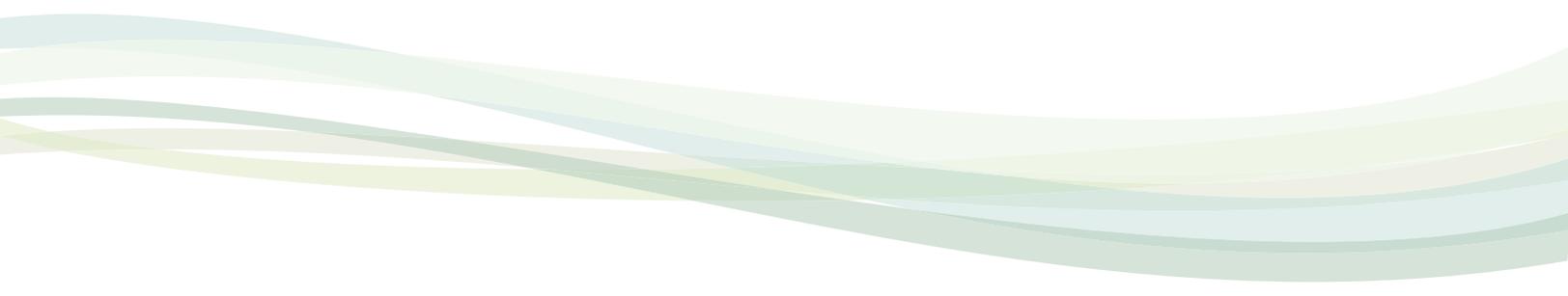
\*\*In FY 2005 and FY 2006, the National Prevention Information Network (NPIN) was funded through the health marketing budget line. In FY 2007, funding for NPIN was transferred to the HIV prevention budget line.

## Performance Indicators

NCHHSTP’s domestic and international portfolios have been reviewed by the Office of Management and Budget (OMB) and found to be performing effectively. Results are available at [www.expectmore.gov](http://www.expectmore.gov). In collaboration with OMB, the Center has established 45 performance measures to assess the extent to which our efforts result in real changes in health outcomes in the United States and abroad. These indicators reveal that positive progress is being made; data on 62% of the indicators have improved since 2002. NCHHSTP is working to improve outcomes in those areas where progress has not been made and to establish data systems to assess performance in other areas.

### FY 2009 NCHHSTP Performance Indicators (45 total) All Divisions & Programs





## PERFORMANCE MEASURES FOR HIV/AIDS, VIRAL HEPATITIS, STD, AND TB PREVENTION

### Domestic HIV/AIDS Prevention

<b>GOAL 1: DECREASE THE ANNUAL HIV INCIDENCE RATE</b>		
Measure	Baseline	Result
1. Decrease the annual HIV incidence.	56,300 (2006)	Not Available
2. Decrease the number of pediatric AIDS cases.	118	28 (2007)
3. Reduce the black:white rate ratio of HIV/AIDS diagnoses.*	10.33:1	8.5:1 (2007)
4. Reduce the Hispanic:white rate ratio of HIV/AIDS diagnoses.*	4.1:1	3.46:1 (2007)
5. Increase the number of states with mature, name-based HIV surveillance systems.	29	37
6. Increase the percentage of HIV prevention program grantees using Program Evaluation and Monitoring System (PEMS) to monitor program implementation.	0 (2006)	95%
7. Increase the number of evidence-based prevention interventions that are packaged and available for use in the field by prevention program grantees.	7	17
8. Increase the number of agencies trained each year to implement Diffusion of Effective Behavior Interventions (DEBIs).	53	980
<b>Data Source:</b> Measure 1 - HIV/AIDS Incidence Surveillance in 34 states. Measures 2 - 5 - HIV/AIDS Reporting System (eHARS). Measure 6 - Program Evaluation and Monitoring System (PEMS). Measure 7 - Replicating Effective Programs (REP) Project data. Measure 8 - Diffusion of Effective Behavioral Interventions (DEBI) Tracking Database.		

\*\* Data for these measures is derived from 33 states with mature, stable HIV case surveillance. These states are: Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Idaho, Iowa, Indiana, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New York, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

<b>GOAL 2: DECREASE THE RATE OF HIV TRANSMISSION BY HIV-INFECTED PERSONS</b>		
Measure	Baseline	Result
1. Decrease the rate of HIV transmission by HIV-infected persons.	5% (2006)	Not Available
2. Decrease risky sexual and drug using behaviors among persons at risk for transmitting HIV.	Not Available	Not Available
<b>Data Source:</b> Measure 1 - Calculations of HIV incidence and prevalence, utilizing HIV/AIDS Incidence Surveillance System and special prevalence studies; Measures 2 - Medical Monitoring Project (MMP).		

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<b>GOAL 3: DECREASE RISKY SEXUAL AND DRUG USING BEHAVIORS AMONG PERSONS AT RISK FOR ACQUIRING HIV</b>		
Measure	Baseline	Result
<b>1. Decrease risky sexual and drug-using behaviors among persons at risk for acquiring HIV.</b>	<b>Men who have sex with men (MSM) – 47% (2004) High Risk Heterosexual (HRH) – 86% (2007) Injection Drug Users (IDU) – 73% (2005)</b>	<b>Not Available</b>
<b>2. Increase the proportion of persons at risk for HIV who received HIV prevention interventions.</b>	<b>MSM – 18.9% (2004) IDU – 29.7% (2005) HRH – 12.5% (2007)</b>	<b>Not Available</b>
<b>Data Source: Measures 1 and 2 – National HIV Behavior Surveillance (NHBS) System.</b>		

<b>GOAL 4: INCREASE THE PROPORTION OF HIV-INFECTED PEOPLE IN THE UNITED STATES WHO KNOW THEY ARE INFECTED</b>		
Measure	Baseline	Result
<b>1. Increase the proportion of HIV-infected people in the United States who know they are infected.</b>	<b>74.5% (2003)</b>	<b>79% (2006)</b>
<b>2. Increase the proportion of persons with HIV-positive test results from publicly funded counseling and testing sites who receive their test results.</b>	<b>81%</b>	<b>83% (2006)</b>
<b>3. Increase the proportion of people with HIV diagnosed before progression to AIDS.*</b>	<b>78.1%</b>	<b>82.2% (2007)</b>
<b>Data Source: Measure 1 – Special studies using eHARS. Measure 2 - Counseling, Testing, and Referral System (CTR) → Program Evaluation and Monitoring System (PEMS). Measure 3 - eHARS.</b>		

\* Data for these measures is derived from 33 states with mature, stable HIV case surveillance. These states are: Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Idaho, Iowa, Indiana, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New York, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

<b>GOAL 5: INCREASE THE PROPORTION OF HIV-INFECTED PERSONS WHO ARE LINKED TO PREVENTION AND CARE SERVICES</b>		
Measure	Baseline	Result
<b>1. Increase the percentage of HIV-infected persons in publicly funded counseling and testing sites who were referred to Prevention Counseling and Referral Services (PCRS).</b>	<b>Not Available</b>	<b>Not Available</b>
<b>2. Increase the percentage of HIV-infected persons in publicly funded counseling and testing sites who were referred to medical care and attended their first appointment.</b>	<b>Not Available</b>	<b>Not Available</b>
<b>3. Increase the percentage of HIV-infected persons in publicly funded counseling and testing sites who were referred to HIV prevention services.</b>	<b>Not Available</b>	<b>Not Available</b>
<b>4. Increase the percentage of HIV-infected persons in medical care who initiated medical care within three months of diagnosis.</b>	<b>Not Available</b>	<b>Not Available</b>
<b>Data Source: Measures 1 - 3 – Program Evaluation and Monitoring System (PEMS). Measure 4 - Medical Monitoring Project (MMP).</b>		

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## Viral Hepatitis Prevention

GOAL 6: REDUCE THE RATES OF VIRAL HEPATITIS IN THE UNITED STATES		
Measure	Baseline	Result
1. Reduce the rate of new cases of hepatitis A (per 100,000 population).	11.3/100,000 (1997)	1.0/100,000 (2007)
2. Reduce the rate of new cases of hepatitis B (per 100,000 population).	2.6/100,000 (2003)	1.5/100,000 (2007)
3. Increase the proportion of individuals knowing their hepatitis C virus infection status.	50% (2004)	Not Available
4. Increase the number of areas reporting chronic hepatitis C virus infections to CDC to 50 states and New York City and District of Columbia.	19 areas (2003)	33 areas
Data Source: Measures 1, 2, 4 – The National Notifiable Diseases Surveillance System (NNDSS); Measure 3 -- The National Health and Nutrition Examination Survey (NHANES).		

## STD Prevention

GOAL 7: REDUCE THE RATES OF NON-HIV SEXUALLY TRANSMITTED DISEASES (STDs) IN THE UNITED STATES		
Measure	Baseline	Result
1. Reduce pelvic inflammatory disease in the U.S.	197,000	146,000
2. Reduce the prevalence of chlamydia among high-risk women under age 25.	10.1%	12.8%
3. Reduce the prevalence of chlamydia among women under age 25, in publicly funded family planning clinics.	5.6%	7.8%
4. Reduce the incidence of gonorrhea in women aged 15 to 44 (per 100,000 population).	279/100,000	285/100,000
5. Eliminate syphilis in the U.S.	2.4/100,000	4.5/100,000
6.a) Reduce the incidence of P&S syphilis in men (per 100,000 population). *	5.7/100,000 (2006)	7.6/100,000
6.b) Reduce the incidence of P&S syphilis in women (per 100,000 population).	1.1/100,000	1.5/100,000
7. Reduce the incidence of congenital syphilis (per 100,000 live births).	10.2/100,000	10.1/100,000
8. Reduce the racial disparity of P&S syphilis (reported ratio is black:white).	8.1:1	7.9:1
Data Source: <u>Measure 1</u> – The National Disease and Therapeutic Index (NDTI) (IMS Health). <u>Measure 2</u> -- The U.S. Department of Labor, National Job Training Program; CDC, IPP Chlamydia Prevalence Monitoring Project. <u>Measure 3</u> -- CDC, IPP Chlamydia Prevalence Monitoring Project. <u>Measure 4 - 8</u> -- STD Morbidity Surveillance System, CDC.		

\*In FY 2002, the incidence of P&S syphilis in men was 3.8 per 100,000 (initial 2002 baseline). However, because an outbreak of syphilis among men who have sex that occurred after 2002 has driven up the male syphilis rates, CDC is reporting a new baseline for 2006.

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## TB Prevention

<b>GOAL 8: DECREASE THE RATE OF CASES OF TUBERCULOSIS AMONG U.S.-BORN PERSONS IN THE UNITED STATES</b>		
Measure	Baseline	Result
1. Decrease the rate of cases of TB among U.S.-born persons (per 100,000 population).	2.9	2.0
2. Increase the percentage of TB patients who complete a course of curative TB treatment within 12 months of initiation of treatment (some patients require more than 12 months).	80.9%	83.5% (2006)
3. Increase the percentage of TB patients with initial positive cultures who also have drug susceptibility results.	93.0%	94.6% (2007)
4. Increase the percentage of contacts of infectious (Acid-Fast Bacillus (AFB) smear-positive) cases that are placed on treatment for latent TB infection and complete a treatment regimen.	41.0%	66% (2006)

Data Source: Measures 1 – 3 - The National TB Surveillance System. Measure 4 - The National TB Surveillance System and the national Aggregate Reports for TB Program Evaluation.

## Global AIDS Program (GAP)

<b>GOAL 9: THE GLOBAL AIDS PROGRAM WILL HELP IMPLEMENT THE PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF IN 15 FOCUS COUNTRIES BY PARTNERING WITH OTHER USG AGENCIES TO ACHIEVE THE GOALS OF TREATING 2 MILLION HIV-INFECTED PEOPLE AND CARING FOR 10 MILLION PEOPLE INFECTED WITH OR AFFECTED BY HIV/AIDS BY 2008, AND PREVENTING 7 MILLION NEW HIV INFECTIONS BY 2010</b>		
Focus Country Performance Measures (Includes all USG activities) *		
Measure	Baseline	Result
1. Number of people receiving HIV/AIDS treatment.	69,911 (2003)	2,485,300 (2009)
2. Number of individuals provided with general HIV-related palliative care/basic health care and support during the reporting period, including TB.	854,800 (2004)	5,734,800
3. Number of pregnant women receiving PMTCT services, including counseling and testing during the reporting period.	1,271,300 (2004)	5,850,100
4. Number of individuals who received counseling and testing during the reporting period (counseling includes the provision of test results to clients).	1,791,900 (2004)	17,901,400

Data Source: Country Operational Plans (COPS) database.

\*Performance is reported for entire USG efforts by the Office of the Global AIDS Coordinator. Data are through September 2008, unless otherwise noted.

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<b>GOAL 10: THE GLOBAL AIDS PROGRAM WILL HELP IMPLEMENT THE PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF IN THE OTHER BILATERAL COUNTRIES BY PARTNERING WITH OTHER USG AGENCIES , INTERNATIONAL AND HOST COUNTRY ORGANIZATIONS TO ACHIEVE THE GOALS OF PREVENTING NEW HIV INFECTIONS, TREATING HIV-INFECTED PEOPLE, AND CARING FOR PEOPLE INFECTED WITH OR FFECTED BY HIV/AIDS</b>		
<b>Other Bilateral Countries Performance Measures (Includes all USG activities) *</b>		
<b>Measure</b>	<b>Baseline</b>	<b>Result</b>
<b>1. Number of individuals receiving antiretroviral therapy at the end of the reporting period (includes PMTCT+ sites).</b>	<b>20,774 (2004)</b>	<b>115,000</b>
<b>2. Number of individuals trained to provide laboratory-related activities.</b>	<b>1,488 (2004)</b>	<b>3,420</b>
<b>3. Number of pregnant women who received HIV counseling and testing for PMTCT and received their test results.</b>	<b>145,133 (2004)</b>	<b>457,509</b>
<b>4. Number of individuals who received counseling and testing during the reporting period.</b>	<b>773,649 (2004)</b>	<b>1,644,600</b>
<b>Data Source: GAP Planning and Reporting System and OGAC.</b>		

\*Performance is reported for the entire USG efforts by the Office of the Global AIDS Coordinator.

## Overarching NCHHSTP Efficiency Measure

<b>Efficiency Measure<sup>1</sup></b>	<b>Baseline</b>	<b>Result</b>
<b>1. Increase the efficiency of core HIV/AIDS surveillance as measured by the cost per estimated case of HIV/AIDS diagnosed each year.</b>	<b>\$1,357 (2003)</b>	<b>\$699 (2007)</b>
<b>Data Source: <u>Measure 1</u> - HIV/AIDS Reporting System (HARS) is used to collect state HIV and AIDS data, financial assistance information is drawn from administrative records and adjusted for inflation.</b>		

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