



Health care workers in Ethiopia take special care to ensure patient records are kept accurately.

“Creating a world free of HIV is one of the great moral callings of our time and one that requires a global response. On this World AIDS Day, I commend the people who are leading the fight in their nations and communities, and I especially call on the world community to rededicate efforts to prevent stigma and discrimination against people living with and affected by HIV/AIDS. The American people stand with the people of the world in the fight against HIV/AIDS.”

Secretary of State Condoleezza Rice
World AIDS Day
December 1, 2006

Chapter 7

Improving Accountability and Programming

In order to ensure quality and sustainability of its programs, the President’s Emergency Plan for AIDS Relief (Emergency Plan/PEPFAR) is committed to the strategic collection and use of information for program accountability and improvement. With each year of implementation, PEPFAR expands its knowledge base of best practices and lessons learned, which drives funding decisions and adjustments to ongoing programs.

The collection and analysis of high-quality data in under-resourced settings is a critical challenge. For example, given the obstacles they face, health care personnel often find it difficult to track patients and manage records. In many countries, health management information systems (HMIS) are weak and thus compound the challenge.

To support host nations in addressing these issues, U.S. Government (USG) country teams, in coordination with host governments and partners, determine strategic information (SI) activities and priorities for each upcoming fiscal year as the part of the Country Operational Plan (COP) process.

PEPFAR-supported programs are monitored at different levels, providing information needed to improve programs.

This work starts with reporting core output results, in terms of three fundamental questions:

1. How many people are reached through prevention, treatment, and care programs?
2. How many sites and programs are supported to provide prevention, treatment, and care services?
3. How many people have been trained and/or retrained to deliver services?

To monitor the outcomes and impact of PEPFAR and other international efforts at a higher level, the Emergency Plan supports serologic surveys to monitor trends in HIV prevalence within countries. Population-based surveys such as the Demographic and Health Survey (DHS) and AIDS Indicator Survey (AIS) measure changes in HIV-related behaviors. Program monitoring and evaluation systems also measure behavioral and health status changes of individuals who participate in PEPFAR-supported programs.

Many international partners are deeply involved in supporting the nations that have been hard hit by HIV/AIDS; this raises the specter of uncoordinated efforts, which can handicap international responses. One of the “Three

Ones” principles for international coordination at the country level (discussed in the chapter on Strengthening Multilateral Action) is to support a single national monitoring and evaluation (M&E) system. Coordination with international partners is central to PEPFAR’s strategic information efforts.

Initiatives in 2006 to improve the information required for accountability and programming focused on:

- Measuring changes in the HIV epidemic and related behaviors;
- Strengthening, standardizing, and coordinating USG and host country strategic information systems;
- Improving data quality and PEPFAR results reporting;
- Expanding the use of results reports;
- Refining the Emergency Plan evaluation strategy;
- Communicating results and best practices;
- Expanding the use of data to improve HIV service provision;
- Scaling up HMIS infrastructures to accommodate service provision scale-up; and
- Protecting confidentiality and security of HIV-related information.

Measuring Changes in the HIV Epidemic and Related Behaviors

Successful prevention, treatment, and care programs match service delivery with the people who need it. Decision makers cannot make informed judgments about effective service scale-up without a clear understanding of the relationships among population, HIV prevalence, and existing services.

Surveillance and Surveys

In order to measure changes in the HIV epidemic in focus countries, PEPFAR supported periodic antenatal clinic (ANC) HIV sentinel surveillance (serologic surveys of women attending clinics), as well as DHS or AIS surveys that include HIV testing. Data from these surveys are fun-

Mozambique: HIV and Associated Risks in the Mozambique Armed Defense Forces

The personnel of the Mozambique Armed Defense Forces (FADM) view HIV/AIDS and its consequences as a true enemy to military readiness, and to Mozambican society as a whole. Military members know anecdotally that HIV/AIDS affects FADM personnel, but until recently, there were no data to quantify the rates of HIV infection or the unique risk factors of this population.

The FADM sought support through PEPFAR to conduct a survey examining FADM demographics and risk factors, HIV prevalence, and behavioral risk. The survey also tracked referrals from counseling and testing services to treatment and care for individuals who test HIV-positive.

The study was developed at the request of the FADM as a collaborative project with the U.S. Government. Twelve individuals with backgrounds in health were selected by the FADM as HIV counselors and testers. They underwent a one-week classroom training, followed by a one-week practical internship at a counseling and testing site.

Volunteers were encouraged by the FADM leadership to participate in the survey. At survey sites, the senior officer briefed personnel on the study, stressed its importance, and often participated in the survey him-or herself.

The results of the study provide invaluable information on the impact of the HIV/AIDS epidemic on the FADM. The study will also serve as a model for future surveillance surveys of military members.

damental to understanding the local epidemics. They become the basis for program planning and are used to evaluate program efficacy (when used longitudinally).

Mapping

Historically, spatial references in sentinel surveillance and DHS data have been underutilized. When working at the national level, program planners and implementers have given insufficient attention to how the spatial aspects of population and HIV distribution affect the efficiency and effectiveness of their programs. Population is distributed unevenly within countries, as is HIV prevalence within populations.

To address this challenge, PEPFAR uses Geographic Information Systems (GIS) as an information management and analytic tool to improve HIV/AIDS program delivery. By facilitating the integration and analysis of spatially referenced data by mapping, GIS help PEPFAR answer essential

Table 7.1: Accountability: ANC and DHS/AIS Survey Summary		
Country	Last year completed	
	ANC	DHS/AIS
Botswana	2005	
Côte d'Ivoire	2006	2006 ³
Ethiopia	2006	2005 ²
Guyana	2006	2004 ¹
Haiti	2006	2006 ²
Kenya	2006	2003 ²
Mozambique	2004	2003 ⁵
Namibia	2006	2000 ⁵
Nigeria	2005	2003 ⁵
Rwanda	2006	2005 ²
South Africa	2006	2005
Tanzania	2006	2003/2004 ³
Uganda	2005	2005/2006 ²
Vietnam	2006	2006 ⁴
Zambia	2004	2002 ⁵

Footnotes:
¹ AIS
² DHS+testing
³ AIS+testing
⁴ AIS+testing in one province
⁵ DHS

questions, such as: Where are the highest HIV-prevalence districts in the country? What is the geographic distribution of counseling and testing service delivery points? How many people live within the catchment areas of facilities that currently offer ARVs? Where should PEPFAR expand its services in order to maximize coverage or equity?

To obtain the kind of information needed for strategic decision-making, PEPFAR is using novel geo-spatial modeling techniques, in addition to techniques that have been applied to other diseases. GIS analytic tools improve the measurement and management of rapid service scale-up, which is essential as PEPFAR works to meet its prevention, treatment, and care targets. In the past, decisions regarding the distribution of services might have been based on an equity principle and/or convenience of access. Now, using the more quantitative, geographically linked GIS data, PEPFAR can target service delivery points to areas of greatest need.

For example, using GIS mapping, figure 7.1 communicates the gender disparity in HIV prevalence by geospatial

Figure 7.1: HIV Prevalence by Gender, 2002-2004 Data Aggregated to First Order Administrative Divisions

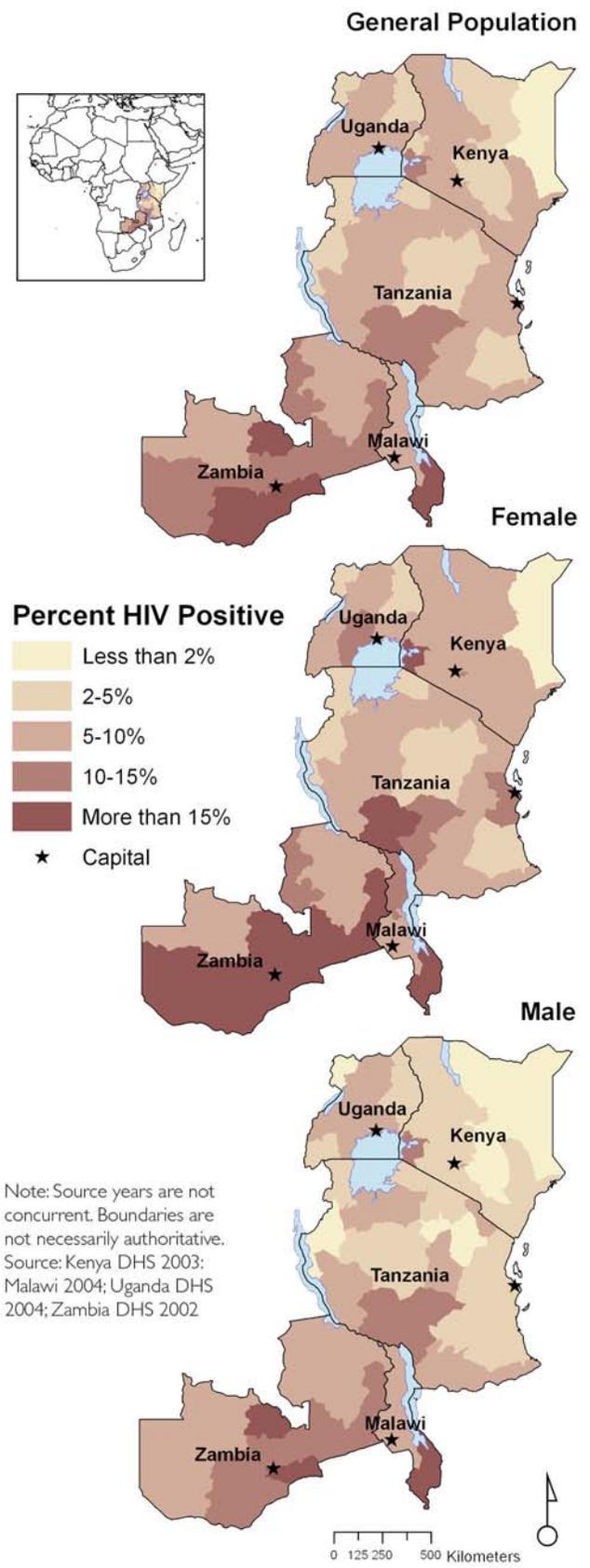
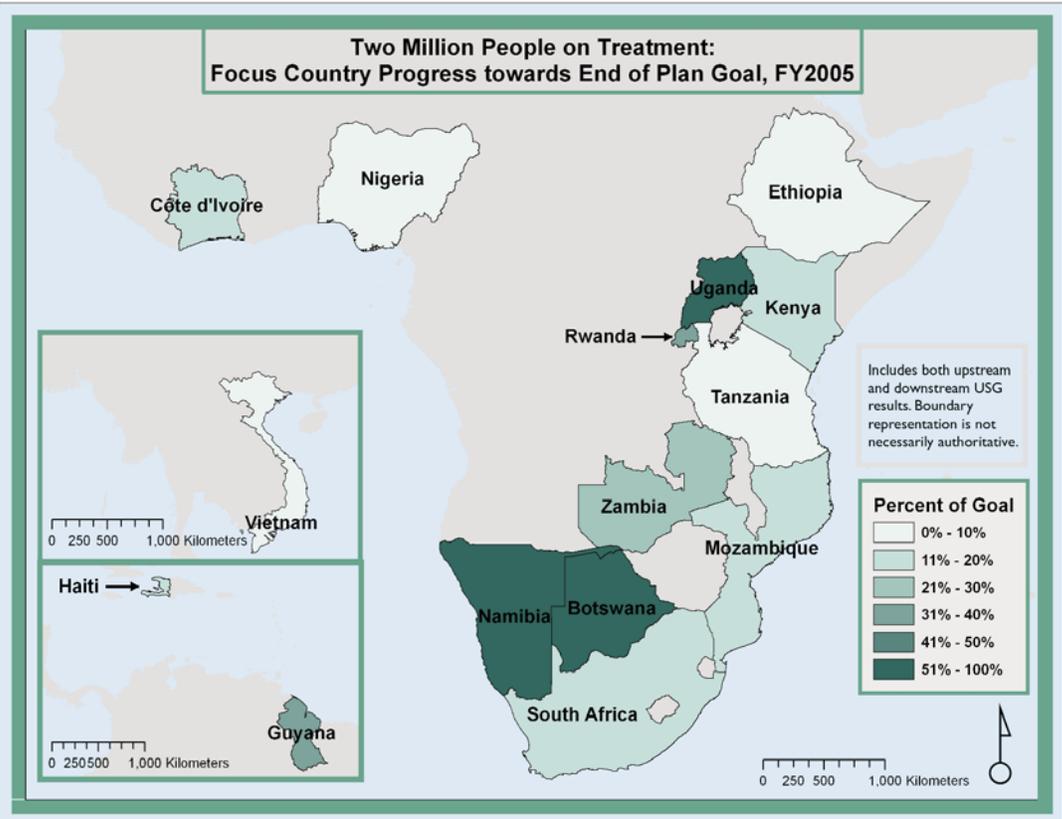
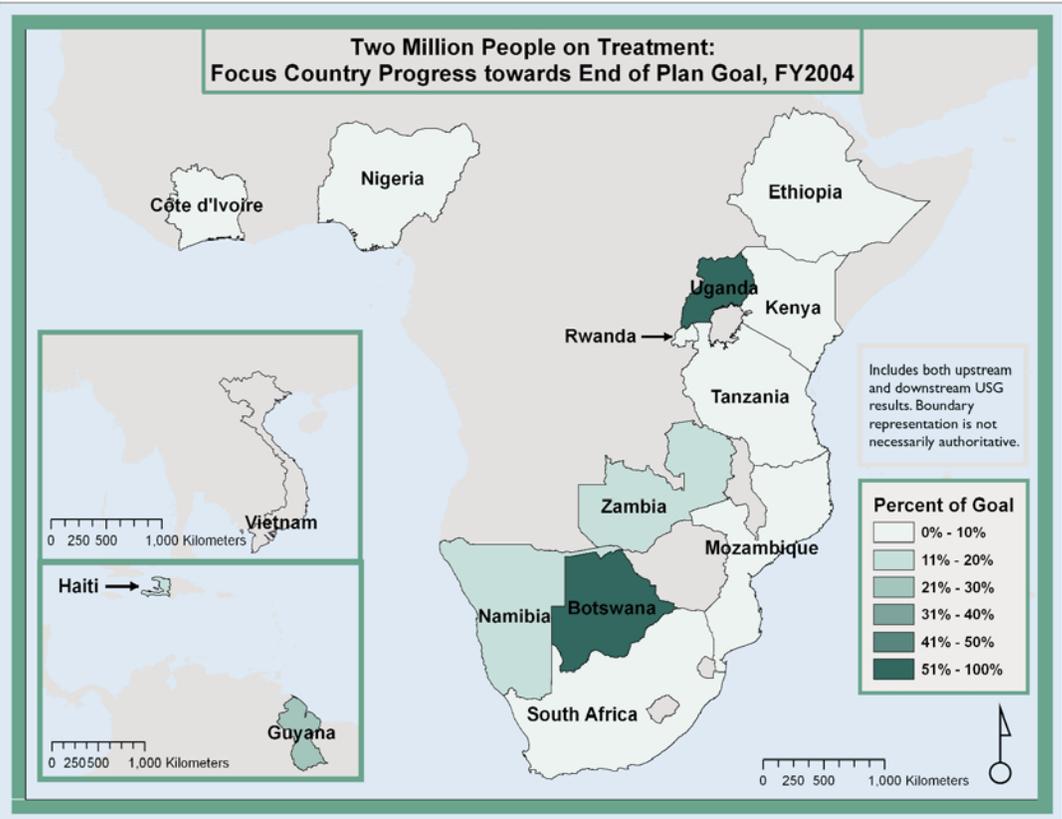
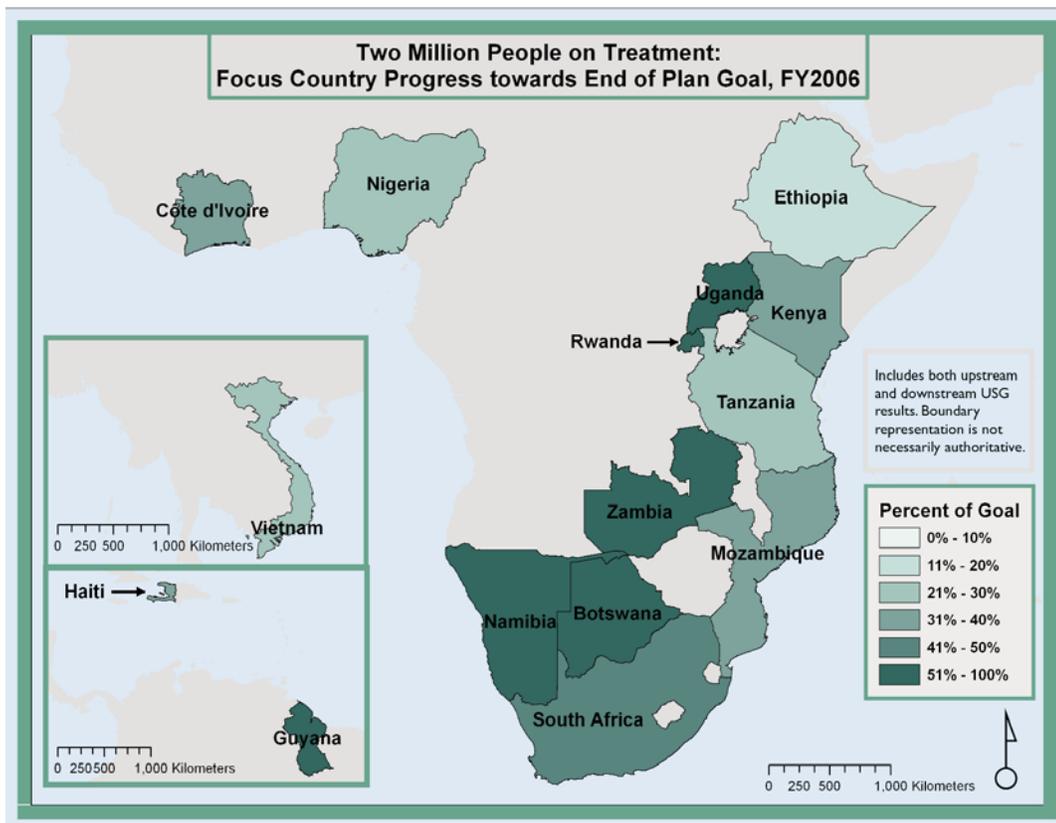


Figure 7.2: Map of the Scale-Up in Treatment Coverage in Focus Countries from FY2004-FY2006





dimensions; this data can be used to inform program planning. Figure 7.2 also demonstrates how GIS mapping can be used to track changes in treatment scale-up across all PEPFAR focus countries.

Surveillance

Measuring the national burden of HIV is essential for developing effective prevention and care interventions. Historically, the only data for estimating HIV rates in most countries were the results of HIV tests among selected groups in the population. In general, this “sentinel surveillance” included pregnant women visiting health centers for antenatal care and less frequently clients seeking treatment for sexually transmitted infections. In 1997, the Joint United Nations Programme on HIV/AIDS (UNAIDS) began using sentinel surveillance data to estimate national HIV prevalence levels. These estimates, the only data available at that time, were widely circulated and accepted internationally.

Starting in 2001, another source of data became available. The MEASURE DHS project, now funded by both the U.S. Agency for International Development (USAID) and

PEPFAR, began including HIV testing of large, nationally representative samples of the population through the DHS. To date, 20 DHS and AIS surveys with HIV testing have been carried out in Latin America, sub-Saharan Africa, and Asia, and surveys are underway in another 11 countries. In almost all of these surveys, the percentage of women and men testing positive for HIV has been lower than levels estimated from sentinel surveillance. In Kenya, for example, national HIV prevalence estimated from sentinel surveillance ranged from 12 to 18 percent, as compared to the DHS population-based estimate of 6.7 percent.

What accounts for this difference? The most common sentinel surveillance sites, are predominantly urban and exclude men and non-pregnant women. Because HIV infection in developing countries is more common both among women and within urban areas, data collected from ANCs may lead monitors to overestimate national HIV prevalence. In contrast, the DHS tests a more representative sample of the population, including both women and men from all areas of the country.

Innovative Use of Survey Data

In Kenya, the PEPFAR-funded dissemination activities for the Kenya Service Provision Assessment survey (KSPA) have contributed to closer collaboration between the public and private health care sectors in Nairobi. In February 2006, PEPFAR and the National Coordinating Agency of Population and Development (NCAPD) carried out a series of small group workshops to discuss KSPA results. A participant in one of these seminars, Dr. David E. Bukusi, director of HIV counseling and testing at Kenyatta Hospital in Nairobi, invited PEPFAR staff and NCAPD to present the KSPA findings to staff at Kenyatta Hospital. These workshops were so successful that requests began coming in from other hospitals for similar programs.

To meet this demand, NCAPD convened a meeting of 23 administrators of public and private hospitals in Nairobi. During the discussion that followed the KSPA presentations, participants acknowledged the lack of collaboration, and often even contact, between the managers of private health care facilities and high-level policy-makers in the Ministry of Health. Participants also recognized the need to foster collaboration in order to improve health care delivery.

In June 2006, as a result of this meeting, Dr. Gakuruh, the Head of Health Sector Reform in Kenya, highlighted the lack of collaboration between the public and private sectors at a health summit convened by the Ministry of Health. Consequently, the Assistant Minister for Health, Dr. Machege challenged both sectors to collaborate. She asked the private hospitals to form a professional association to represent the needs of the private sector at the Ministry of Health. This action is the first time Kenya has made a formal effort to coordinate the work of both the public and private sectors in its HIV/AIDS interventions.

All international health and scientific agencies, including UNAIDS, now agree that population-based testing provides a more accurate estimate of national HIV prevalence. In fact, based on the DHS results, UNAIDS has revised its national HIV prevalence estimates downwards for most countries.

In addition to providing a better estimate of overall HIV prevalence, the DHS also links HIV infection status with other social and behavioral information, such as education, knowledge, and condom use, giving a more detailed picture of the epidemic. This information is vital for developing appropriately-targeted programs across the spectrum of potential prevention, treatment, and care interventions.

To improve the quality of the data being collected to monitor HIV prevalence, morbidity, mortality, and behaviors, the USG developed training materials and participated in and supported regional surveillance trainings and workshops on estimating HIV prevalence and incidence. Training materials also are available on implementing basic HIV seroprevalence surveys, using Epi Info software to analyze ANC HIV sentinel surveillance data, sampling hard-to-reach populations, conducting behavioral surveillance, and performing sample vital registry with verbal autopsies. Additionally, the USG helps UNAIDS and the World Health Organization (WHO) to conduct regional workshops on HIV estimates and projections, and provides expert consultation on the modeling used to develop these estimates and projections. Finally, PEPFAR has supported the development of new surveillance methods, which

include targeting hard-to-reach populations, monitoring antiretroviral drug (ARV) resistance, improving the quality of laboratory testing for HIV serologic surveys, and assessing new laboratory methods to monitor recent infections among HIV surveillance and survey samples.

Strengthening Country Strategic Information Systems

Program accountability and improvement are dependent on the collection, analysis, reporting, and use of data regarding HIV/AIDS program management and results. Unfortunately, many Emergency Plan countries have neither the human capacity nor a robust infrastructure for HMIS and information and communications technology (ICT). Consequently, timely access to and analyses of high-quality data in order to manage the above activities, and to report on core indicators, can be problematic. HMIS activities funded under the Emergency Plan build upon existing data and information systems so PEPFAR can better monitor and contribute to HIV service provision.

In 2006, the Emergency Plan worked with experts from host governments, implementing partners, and other multilateral and bilateral partners, to:

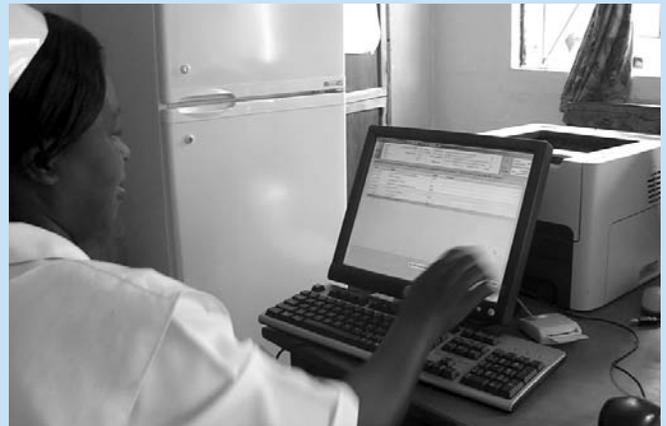
- Enable the collection, aggregation, transmission, and use of core indicator data from service delivery at the district and national levels, including reporting to the

Zambia: New Technology Helps Track Patients on Antiretroviral Treatment

Agness is a midwife and the coordinator for HIV counseling and testing services at the Prevention of Mother-To-Child HIV Transmission program at the Nangongwe Clinic in Kafue District, Zambia. In April 2005, the clinic started using a Smart Card as part of an electronic medical record (EMR) system, the Continuity of Care Patient Tracking System. This EMR system, which is supported by the PEPFAR, is the product of collaboration between the Zambian Ministry of Health and the U.S. Government.

With the Smart Card-EMR service, Agness and other health care workers can access up-to-date medical information on their patients and compile end-of-month reports much more quickly than they could with paper records. Agness has participated in trainings on the use of the EMR system and is proud of her ability to use the new technology to care for her patients.

Zambia is the first country in Africa to introduce EMR technology, which is particularly important for people on antiretroviral treatment. The system allows health care workers to carefully monitor patient medications and emerging drug resistance. This close patient tracking helps to control the number of patients who must switch from first- to second-line drugs. In so doing, the EMR system also helps to control expenses associated with second-line regimens.



A health care worker uses the new Continuity of Care Patient Tracking System at Nangongwe Clinic.

- Strengthen human resource and training information systems that capture the deployment of service providers trained to serve HIV/AIDS program clients.
 - Identify, adapt, and promote universally beneficial best practices and innovative technologies for HMIS, including adopting international guidelines and developing, adopting, and strengthening data exchange standards and tools.
 - Support efforts to harmonize data elements and core data sets.
- HMIS activities are supported at both the central level as well as within country programs. Examples of significant activities that have been undertaken at the central level include:
- Development of a strong public-private partnership initiative with leaders in the information and communication technology (ICT) sector in order to develop innovative, concrete solutions to some of these challenges. The ICT sector in the United States is the largest and most advanced in the world. Its experience and expertise, gained through work in multiple sectors, can be leveraged to improve the lives of the millions of people around the world who are affected by the
- Document in-country, HIV-related HMIS, including the relationship to Ministry of Health routine health information systems, with the goal of integrating HIV facility-based information systems into broader regional or national health information systems.
 - Facilitate the design of country-level HMIS that integrate separate HIV information systems, including patient management, laboratory services, supply chain management, and program indicators.
 - Provide country-specific support for design, implementation, and maintenance of sustainable information systems to support service delivery and supply chain management.
 - Identify, evaluate and promote the use of appropriate information system technologies to support innovative PEPFAR technical and program management strategies.
 - Develop the human and organizational capacity essential to managing HIV/AIDS HMIS.
 - Strengthen human resource and training information systems that capture the deployment of service providers trained to serve HIV/AIDS program clients.

HIV/AIDS pandemic. It is anticipated that several joint projects will be implemented in Emergency Plan-supported countries over the next year.

- Guidelines to ensure Confidentiality and Security of HIV-Related Information. These guidelines were developed by an international consultative group co-chaired by UNAIDS and the Office of the Global AIDS Commissioner, and focus on data collected for patient management and monitoring, as well as program and HIV services monitoring and evaluation as part of scaling up HIV services in middle- and lower-income countries. In 2007, these guidelines will be adapted and piloted in selected countries.
- The Emergency Plan is supporting the development of a spatial data repository to provide electronic files needed for mapping country-specific program planning and results data to show geographic coverage. These efforts include the production of digital sub-national administrative boundaries, with population data from the U.S. Census Bureau's International Database, as well as the compilation of available health facility geographic points available across Emergency Plan countries.

In-country Emergency Plan programs continue to support a host of innovative solutions that not only meet immediate program needs, but also build in-country capacity in health information systems. Some of these include the following efforts:

CareWare is free, client-level software for monitoring HIV clinical and supportive care. This program was developed under contract for the Health Resources and Services Administration within the Department of Health and Human Services, and was initially released in 2000 for use in U.S. HIV/AIDS clinics. Major clinical modules and reporting functions were added over time. In 2006, a major new version was released, configurable as standalone, on a wide area network, or on the Internet. A number of new features were added, included pharmacy prescription, invoicing, medication inventory, appointment scheduler, medication regimen builder, a Quality of Care module that tracks HIVQUAL indicators, a language translation module, and a forms designer to allow each local installation to customize the look of their data entry screens. CareWare is being implemented in Honduras, Kenya, Nigeria, Russia, Tanzania, Thailand, Uganda, Vietnam, and Zambia.

The Ethiopian Telehealth Project is a collaboration among the Emergency Plan, the U.S. Army Telemedicine and Advanced Technology Research Center, the National Defense Force of Ethiopia, the Ministry of Health, and Jimma University. Its goal is to use information and communications technologies to support the development of communities of practice within the country and to demonstrate the use of ICT to extend service delivery to peripheral settings, where most of the population lives.

The project has two basic components. The first is the creation of resource centers, from hospitals to health clinics. The resource centers, which vary in size from 30 seats in large teaching hospitals to a single computer at a rural health clinic, are connected via telecommunications links (mesh radio networks and national telecommunication backbone), and support the development of communities of practice through e-learning, simulation-based training, and tele-consultation. They also provide the ability to effectively exchange patient record data.

The second component of the project is the deployment of mobile HIV/ART clinics. These clinics are based at health clinics and will allow clinic nurses to provide HIV/AIDS services, equivalent to those provided in hospitals, on a rotating basis at community-level health posts. In Ethiopia, where nearly 50 percent of the people have no direct access to a health clinic, the ability to offer consistent health care services and the capacity to link directly to higher-level facilities will greatly increase and improve HIV/AIDS management.

The Ethiopian Telehealth Project will demonstrate that:

1. Resource centers can be used to support both distance learning and simulation-based training, using both locally-created course material as well as material adapted from U.S.-based medical schools.
2. Tele-consultation among reference hospitals, secondary hospitals, and health clinics facilitates real-time patient management.
3. Medical records (based on an adaptation of the BMIST program) can be electronically transmitted between health facilities.

Ethiopia: New Postgraduate Diploma to Improve Public Health Sector

The lack of adequately trained health personnel has negatively affected the entire Ethiopian public health sector in all areas of activity, but most seriously in terms of patient treatment and care.

In February 2006, the Postgraduate Diploma/Master of Science (MSc) in Health Monitoring and Evaluation was launched at Jimma University in Ethiopia – the first course of its kind on the African continent. The new program, created at the request of the Ethiopian Minister of Health, was supported by PEPFAR and allows students to work towards either a one-year postgraduate diploma or a two-year Master of Science degree.

The principal objective of the course is to create a new cadre of health professionals with skills in improving health care management. This will help improve the quality of care, promote health-sector development, and facilitate evidence-based decision making in Ethiopia's public health care sector.

The philosophy of the graduate course conforms to the Jimma University model of combining community, team, and research-based training. The course consists of three two-month blocks of courses, with two months in between each course block, during which time students are placed in an internship. The first group of 31 students, who were recruited from the public health sector, are completing their first year of studies. As of December 2006, Jimma University had received 80 applications for next year's cohort.

This program partners Jimma University with the National School of Public Health in Brazil and a PEPFAR partner university in the United States. The program will greatly enhance monitoring and evaluation capacity in Ethiopian health institutions, and also will help to alleviate the current lack of trained staff, which constantly threatens to undermine HIV/AIDS prevention, treatment, and care efforts.

This program serves as a model and will be replicated in other universities, including seven in Ethiopia and others throughout Africa. Jimma University also hopes to institute new distance learning programs.



CDC/University Teaching Hospital PCOE

A February 16, 2006, inauguration ceremony recognized the launch of the Postgraduate Diploma/Master of Science (MSc) in Health Monitoring and Evaluation at Jimma University in Ethiopia.

The portable HIV/AIDS clinic project will demonstrate that:

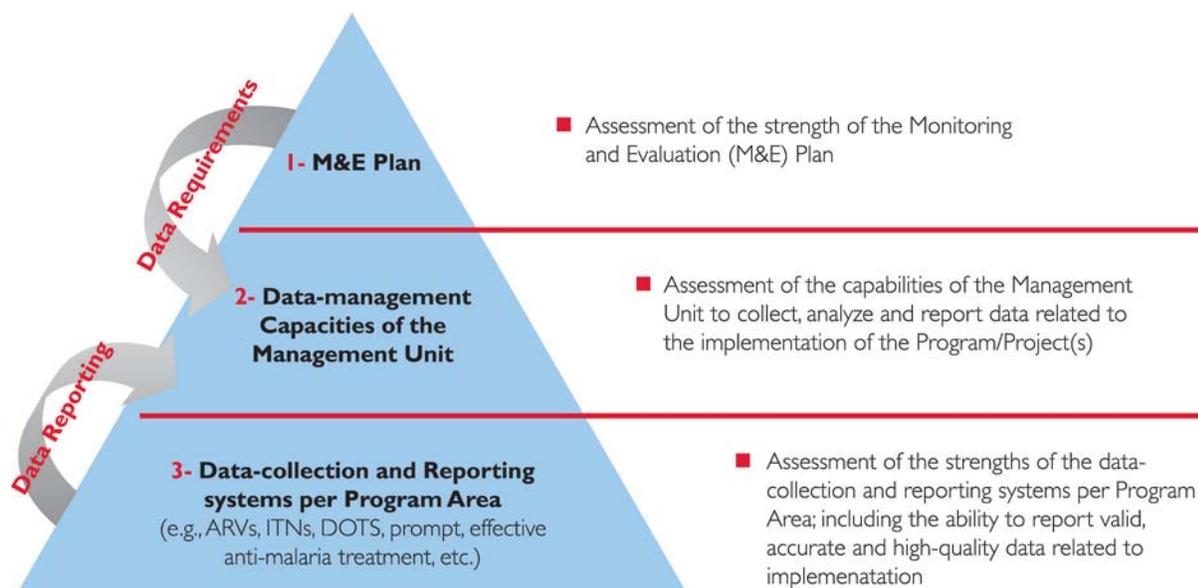
1. The complete range of HIV/AIDS management services (except lab) can be provided from a foot locker-sized package. These services include HIV counseling and testing, physiologic monitoring, drug management, and other therapies, as defined by Ethiopian national HIV/AIDS treatment guidelines.
2. Patient information can be captured locally and transmitted to a health clinic, via a PDA-based version of modified BMIST electronic medical record.
3. Health workers at a community-based health post can tele-consult with clinicians at a health clinic or hospital for real-time patient management.

Improving Data Quality of PEPFAR Results Reporting

During fiscal years 2005 and 2006, USAID/Office of Inspector General (OIG) performed audits of USAID missions in 10 of the 15 PEPFAR focus countries. The Audit Objective was to determine if USAID's Emergency Plan prevention and care activities were progressing as expected towards the planned outputs in its grants, cooperative agreements, and contracts. The OIG capping report noted two areas of concern: 1) measuring output progress and achievements and 2) quality of output data.

The setting of targets is complex, and the quality of partner results or output data varies. Because the United States remains the only international HIV partner to require that its partners report annually on standardized indicators, the introduction of data quality standards is an ongoing effort. However, one benefit of standardized indicators is that PEPFAR tracks key services by age and by gender.

Figure 7.3: Monitoring and Evaluation Systems Strengthening Framework



PEPFAR has been transparent regarding the challenges it has faced in regard to data quality, especially in the areas of prevention and care. The only OIG audit reports to look at treatment were Ethiopia and Haiti, and neither had reporting issues. The Emergency Plan has taken steps to correct obvious data deficiencies.

For instance, in Côte d'Ivoire, national numbers are not included in upstream totals because they are not reliable. Other national totals also have been reduced to offset the duplication of counts. Even before the OIG audits, PEPFAR had already recognized these challenges and taken steps in improving and monitoring community-level programs. Strategic information advisors were sent to help countries strategize about how to strengthen their program measurements.

In 2006, for example, South Africa added a Data-Quality Advisor position to its PEPFAR USG team and constructed a single data warehouse into which all PEPFAR partners report on their performance, thereby ensuring an audit trail on all data reported by the Mission. As the OIG noted, there are as many cases of under-reporting numbers as there are of over-reporting by partners.

All of the 15 focus countries, along with 16 additional countries receiving more than \$5 million annually in USG bilat-

eral HIV/AIDS funding, now have a headquarters advisor to assist them with in-country partner trainings on data collection and data quality. The Strategic Information advisor works on record-keeping, program reporting standards, HMIS systems, and other quality improvement initiatives.

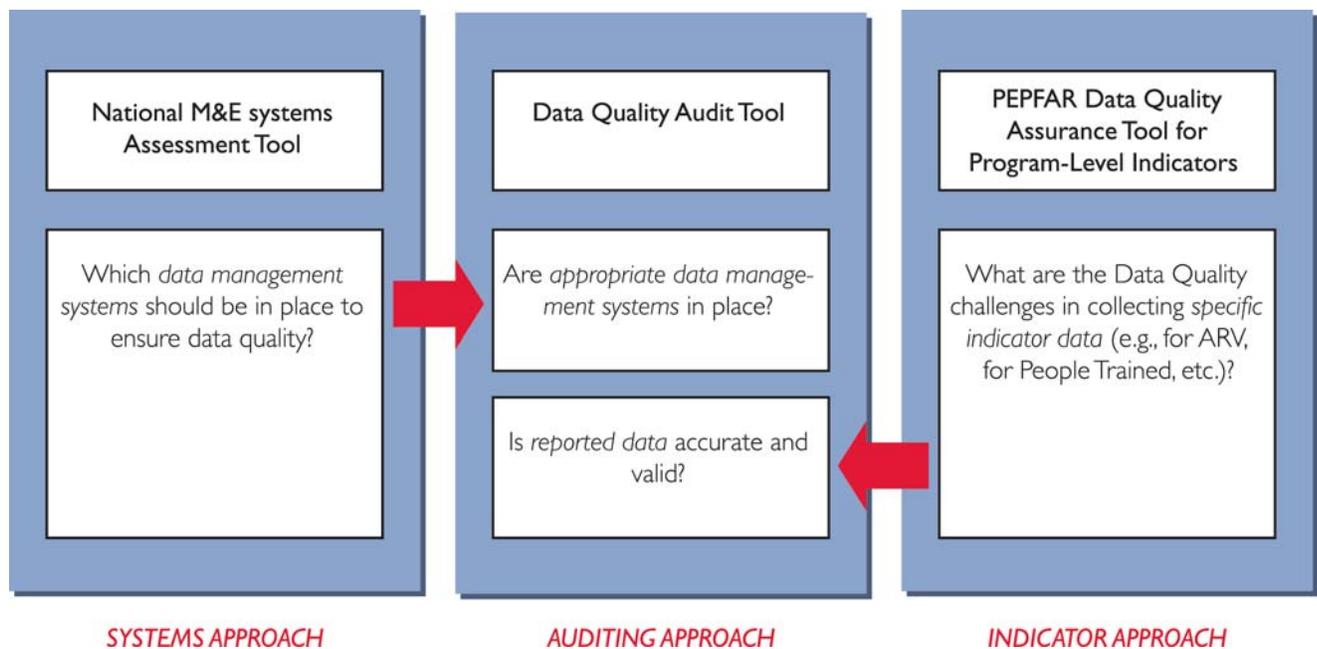
PEPFAR continues to improve and clarify target and reporting dates and associated guidance. The number of targets and reporting measures has been reduced, from the original set of 63 measures in 2004 to the current set of 41 measures.

Each year, the guidelines for measuring progress are improved and re-issued. This guidance builds upon a reporting innovation introduced by PEPFAR, which clarifies both target-setting and related results: the use of the terms upstream (indirect) and downstream (direct) to distinguish between strengthening the service delivery system (e.g., laboratory support for HIV testing) and providing direct services at the site of delivery.

Addressing data quality challenges, in 2006 PEPFAR introduced tools for ensuring data quality, such as:

- The Monitoring and Evaluation Systems Strengthening Tool;
- The Data Quality Audit Tool; and

Figure 7.4: Summary of Tools and Approaches to Data Quality Assurance



- The PEPFAR Data Quality Assurance Tool for Program-Level Indicators.

These tools were co-sponsored by PEPFAR, the Global Fund, and the Health Metrics Network.

In addition, the National M&E Systems Assessment Tool, which assists in the evaluation of M&E plans and systems (figure 7.3) and has been endorsed by the Emergency Plan, the Global Fund, UNAIDS, WHO, the World Bank, Health Metrics Network, and Roll Back Malaria, was published in December 2006. This tool was pilot-tested with the help of Global Fund and USG partners in eight countries: Bangladesh, Chile, China, Democratic Republic of Congo, Niger, Russia, and Rwanda. The tool was designed to assess data collection, reporting, and management systems to measure indicators of program/project success. This tool addresses primarily the M&E plan and systems that need to be in place to collect and report data for aggregation into indicators.

The objectives of the M&E Systems Strengthening Tool are to:

- Help identify M&E capacity gaps and corresponding strengthening measures, including through technical assistance; and

- Guide investments in M&E (to better inform the development of the M&E Budget).

The second tool, the Data Quality Audit Tool, was successfully-pilot tested in November 2006 in Tanzania and is being finalized. It provides an audit form and guidance for USG audits of their partners and was developed by MEASURE consultants, including a former USG program auditor.

The third tool, the Data Quality Assurance Tool for Program-Level Indicators, is a PEPFAR-specific tool that outlines essential parameters of data quality and how data quality fits within the Emergency Plan system of results reporting. This document provides USG country teams with the tools they need to improve the data quality of PEPFAR results reporting.

From June to August 2005, assessments of existing USG and national data collection and reporting systems were conducted in Botswana, Kenya, South Africa, and Zambia.

Following these visits the team developed the Data Quality Assessment Tool, which was then reviewed by additional USG country teams, edited, and finalized in spring 2006. The Data Quality Assurance Tool addresses three important issues in assessing and improving the quality of data:

- The completeness, accuracy, and consistency of the data;
- The upstream (indirect) and downstream (direct) framework for target setting and results reporting; and
- How to identify and resolve double-counting.

These products (figure 7.4) will help PEPFAR to ensure that systems and processes contribute to long-term, sustainable, high-quality HIV/AIDS monitoring and evaluation capacity in host nations. Together, they provide a comprehensive approach to improving PEPFAR data quality.

Data Quality Training

To initiate the use of these tools, the completed Data Quality Assessment tool was presented to USG country teams during a series of regional trainings conducted in summer 2006:

- Latin America/Caribbean Region (Port of Spain, Trinidad): June 20-22
- East/West Africa Region (Dakar, Senegal): June 28-30
- Southern Africa Region (Johannesburg, South Africa): July 11-13
- Eastern Europe Region (Kiev, Ukraine): July 17-18
- Central Asia Region (Almaty, Kazakhstan): July 20-21
- Asia Region (Bangkok, Thailand): July 25-28

The trainings, which were attended by several hundred field staff, addressed indicators and reporting to PEPFAR, data quality assessments, M&E capacity-building, agency and national coordination, and target setting. A series of follow-up distance-based trainings have followed. PEPFAR now holds monthly digital video conferences and/or conference calls with headquarters and country staff, addressing issues related to both challenges and best practices, regarding implementation, management, and strategic information (SI). These sessions give staff regular opportunities to present and exchange information.

Approximately 27,200 people from the focus countries have been trained and/or retrained as a result of 2004 and 2005 SI training. The number of people participating in SI training in 2006 continued to increase.

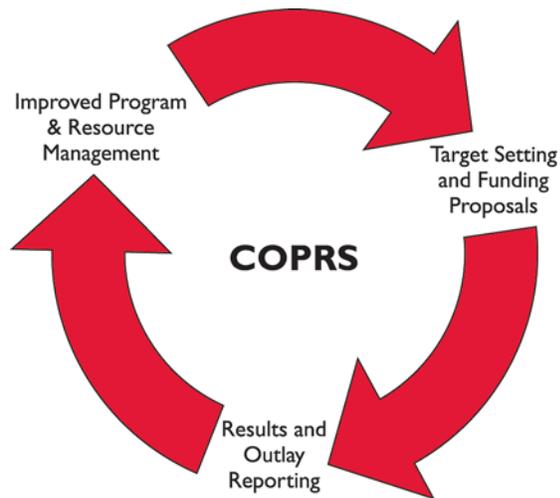
Expanded Use of PEPFAR Results Reporting

USG country teams continue to define specific HIV/AIDS prevention, treatment, and care goals and detailed strategies in Country Operational Plans (COPs) for each coming year. They then report results twice a year and annual financial obligations once a year to the Office of the U.S. Global AIDS Coordinator (figure 7.4). PEPFAR's web database, the Country Operational Plan Reporting Systems (COPRS), makes the COP and reporting process feasible across long distances and multiple time zones. In 2006, the Department of State adapted this PEPFAR planning and reporting model for all foreign assistance programs, and in future years focus country HIV planning and reporting will be incorporated into the new Foreign Assistance Operational Plans.

Table 7.2: Accountability: FY2006 Capacity-Building Results

Country	Number of individuals trained in strategic information (includes M&E, surveillance, and/or HMIS)
Botswana ¹	200
Côte d'Ivoire	800
Ethiopia	1,500
Guyana	100
Haiti ²	500
Kenya	2,900
Mozambique	2,200
Namibia	500
Nigeria	1,500
Rwanda	300
South Africa	13,200
Tanzania	4,600
Uganda	4,200
Vietnam	700
Zambia	900
Total	34,100
Note: Numbers may be adjusted as attribution criteria and reporting systems are refined. Numbers above 100 are rounded to nearest 100.	
Footnotes: ¹ Botswana results are attributed to the National HIV Program. Beginning FY2006, USG downstream contributions in Botswana are embedded in the upstream numbers, following a consensus reached between the USG and the Government of Botswana to report single upstream figures for each relevant indicator.	

Figure 7.5: Country Operational Plan Reporting System Planning and Reporting Model



Additionally, because all USG programs providing global HIV/AIDS assistance fall under the auspices of the Emergency Plan, the COPRS planning and reporting model (figure 7.5) was expanded in 2006 to cover five additional countries receiving more than \$10 million annually – Cambodia, India, Malawi, Russia, and Zimbabwe. These countries completed 2006 mini-COPs, a reduced version of the full COP. In addition, six countries that received more than \$5 million in HIV/AIDS funding annually completed five-year planning strategies – China, the Democratic Republic of Congo, the Dominican Republic, Lesotho, Senegal, and Swaziland. For fiscal year 2007, a total of 16 countries are completing mini-COPs. Development of a strategy and/or an annual COP provides an important opportunity to bring the USG country team and key host country and international partners together. This joint planning effort highlights areas for USG investments and support within the context of one HIV planning and coordinated country system.

Just as the number of countries involved in joint COP planning has expanded, the number of USG-presence countries reporting results has expanded. In 2006, USG teams in the 42 countries receiving over \$1 million in HIV funding annually reported HIV results, using a common set of indicators that measure prevention, treatment, and care activities. Data quality guidance and related training have been undertaken for these countries.

The Public Health Evaluation Strategy

The Emergency Plan's experience with focused, targeted evaluations provides the basis for transformation to a full Public Health Evaluation strategy. This step represents a broadening of studies and methodologies to include communities and populations. This reorientation comes at an important time: the scope of programs and services being delivered is unprecedented; continued expansion and improvement in quality may require new approaches and interventions; and new opportunities are arising to strengthen wraparound services with other development and humanitarian assistance programs.

The objective of this transformation is to further strengthen the Emergency Plan's strategy to support the most scientifically sound and cost-effective methodologies as the epidemic, the responses, and new opportunities develop. Of note, the Public Health Evaluation approach will not support basic or investigational clinical research activities, which are already well-supported by the National Institutes of Health within the U.S. Department of Health and Human Services.

The shift to Public Health Evaluation includes a commitment to implement a routine system to allow for identification of strategically important questions, coordination of efforts (across projects, partners, and countries) to answer priority questions, and dissemination and application of methods, tools, and findings. Key elements of the system include a multi-agency Public Health Evaluation Subcommittee, which operates under the authority of the Scientific Steering Committee, and Evaluation Teams comprised of technical experts, field staff, and partners to oversee specific questions/topical studies. The Public Health Evaluation Subcommittee was formed in late 2006, and quickly reviewed more than 200 country and centrally submitted studies, identified areas of multi-country focus, and assessed gaps in the current evaluation portfolio. The first Evaluation Teams are expected to be set up in early 2007. An annual priority-setting process will be undertaken in order to solicit priority questions from agencies, field staff, partners, and other experts.

Communicating Results and Best Practices

The 2006 HIV/AIDS Implementers' Meeting organized by PEPFAR included more than 1,000 implementers. They discussed lessons learned during the implementation of multi-sectoral HIV/AIDS programs, with a focus on scale-up of

prevention, treatment, and care, and building local capacity, quality, and coordination among partners. The meeting catalyzed an open dialogue about future directions of HIV/AIDS programs, with the goal of having a direct impact upon HIV/AIDS program implementation in the upcoming year. Participants discussed a wide range of subjects informed by knowledge gained through program monitoring and evaluation. The meeting was a primary vehicle for communicating program accountability and results, and was followed by targeted reporting and accountability trainings directed to both focus and other bilateral countries.

One new initiative announced at the Meeting was the PEPFAR Extranet. This website is an online community where USG personnel can exchange information and best practices about HIV programs. Country staff may list best practices and local presentations, and use the site for online discussions. Technical working groups also can post best practices and results. For example, information on country electronic information systems can be found on the PEPFAR Extranet.

The Implementers' Meeting was followed by regional targeted trainings in Latin America and Caribbean, East/West Africa, Eastern Europe/Eurasia and Asia. These sessions provided information about PEPFAR policies, program planning, and reporting requirements for countries receiving more than \$1 million in annual funding through PEPFAR. Technical staff from the 15 focus countries, along with headquarters advisors, acted as trainers, enabling peer-to-peer exchanges of best practices. The Asia training was jointly sponsored and conducted with UNAIDS. Participants commented that the opportunity to share information with their peers in other countries through networking, presentations, and group exercises was particularly helpful. Also helpful to participants, most of whom were new to the PEPFAR concept of "One USG Team," were the discussions of PEPFAR's organizational structure and evolving policy issues. These meetings paved the way for the fiscal year 2007 expansion of the number of countries that complete COPs and report annual program and outcome results.

In 2006, the Implementers' Meeting and the regional trainings were supplemented with postings of abstracted results from intervention research by the Cochran Group – University of California San Francisco and distance-based trainings. COP digital video trainings reached USG staff located throughout the world. Twice monthly, literature

abstracts highlighted new HIV intervention findings, to keep staff in the field current. Annual meetings with international partners on the joint analysis of treatment and care results continued, as did other joint international efforts to strengthen country SI systems. The USG also continued collaborating with the Global Fund, UNAIDS, UNICEF, the World Bank, and WHO to produce coordinated guidelines for reporting future results.

Key Challenges and Future Directions

Many of the countries in which PEPFAR currently work in historically have suffered from weak health information systems, and thus have few personnel who are trained in the area. The SI challenges of these under-resourced nations remain immense. Working with such partners as UNAIDS, WHO, Health Metrics Network, World Bank, Global Fund, and others, PEPFAR is expanding country reporting infrastructures and increasing the number of personnel who are trained in SI. An international effort to harmonize global reporting indicators also should enable countries to more easily track their HIV programs and results. In 2006, country and international SI efforts supported by PEPFAR continued to build the necessary infrastructure for accessing useful and timely information.

Disruptions to national health systems have included major setbacks to efforts to monitor and evaluate programs, since M&E activities are often the first programs to be abandoned during emergencies. For example, during fiscal year 2006, Côte d'Ivoire experienced difficult challenges due to civil unrest, which complicated the reporting task of in-country teams.