USAID
FROM THE AMERICAN PEOPLE

Striving for a Healthy Future

GLOBAL HEALTH AND CHILD SURVIVAL PROGRESS REPORT TO CONGRESS

FISCAL YEAR 2009

Striving for a Healthy Future

GLOBAL HEALTH AND CHILD SURVIVAL
FISCAL YEAR 2009 PROGRESS REPORT TO CONGRESS

U.S. Agency for International Development | 2010

This document was prepared by USAID in conjunction with the Analysis, Information Management, and Communications Activity (AIM).

Cover photograph: © 2009 PAIMAN, courtesy of Photoshare

FOREWORD

Health is at the heart of human progress. And we recognize that the well-being of people around the world is not just an important end in itself but is strongly linked to the security and prosperity of families, communities and societies. For these reasons, President Obama launched the Global Health Initiative to save the greatest possible number of lives by building on our existing health programs to help countries strengthen their own capacity to improve the health of their people. We have made great strides with investments in global health. Still, in many places a woman successfully treated for malaria may die in childbirth. An undernourished child immunized against polio may die of dehydration from diarrheal disease brought on by lack of clean water.

I am particularly pleased to introduce the U.S. Agency for International Development's report to Congress, *Striving for a Healthy Future*. The report details the dramatic progress and results of U.S. global health programs achieved in fiscal year 2009, with the expectation of continued and comprehensive progress under the Global Health Initiative.

As part of the government-wide initiative, USAID and other agencies are working more closely with countries and other donors to maximize impact, integrate programs, utilize smart science and innovation, build strategic partnerships, and improve health service delivery. We hope that all of this will mean that a woman who enters a health facility will receive the full range of services she and her children need.

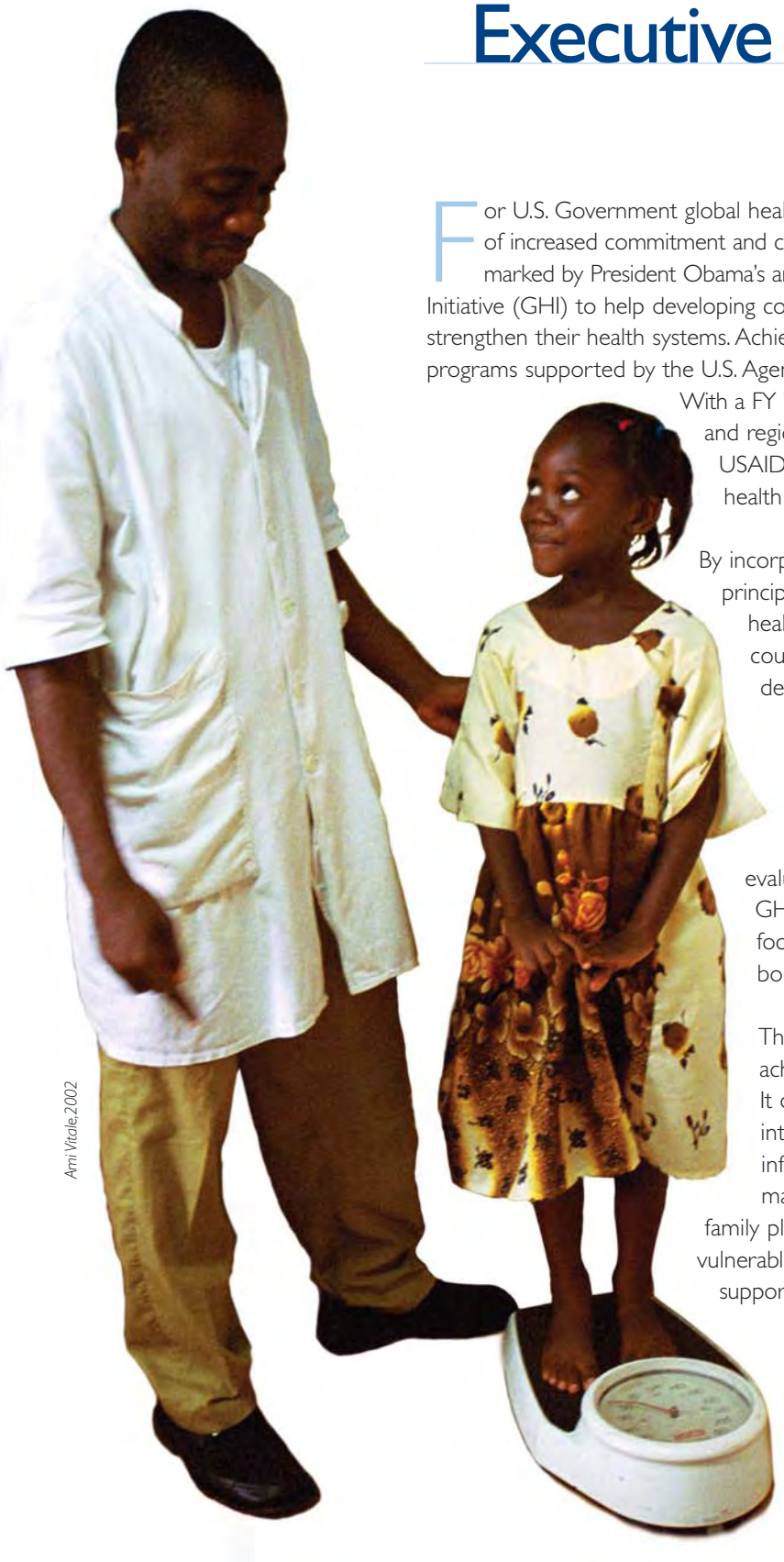
Countries have found many ways to achieve greater efficiency and impact by integrating services. The Global Health Initiative will share these innovative approaches. We will learn from a broad set of players how to reach those most in need, and we will target our approach and investments wisely in order to make full use of new technologies and practices for the benefit of the communities we serve.

Central to all of our efforts is an increased emphasis on accountability, including more rigorous monitoring and evaluation, and transparency. Through integration and efficiency in all aspects of our global health programs, we will strive to get the best value for every dollar spent, reducing deaths and improving health.

Dr. Rajiv Shah
Administrator, U.S. Agency for International Development

Table of Contents

Executive Summary



Ami Vitale, 2002

For U.S. Government global health assistance, fiscal year (FY) 2009 was a year of increased commitment and continuing achievements. The commitment was marked by President Obama's announcement in May 2009 of the Global Health Initiative (GHI) to help developing countries improve their health outcomes and strengthen their health systems. Achievements came largely through ongoing health programs supported by the U.S. Agency for International Development (USAID). With a FY 2009 health budget of $5.27 billion and bilateral and regional programs in more than 100 countries, USAID continued to take a leading role on the global health stage.

By incorporating and emphasizing a set of seven core principles, the GHI offers a foundation for achieving health improvements and for building effective, country-led platforms for sustainable health care delivery. These principles emphasize 1) country ownership, 2) women- and girls-centered programming that aims for gender equality, 3) strategic coordination and integration, 4) global partnerships and private sector support, 5) sustainability, 6) monitoring and evaluation, and 7) innovation and research. The GHI applies these principles in programs that focus on improving the health of women, newborns, and children.

This report looks at the progress and results achieved in global health by USAID in FY 2009. It describes USAID's global health strategies, interventions, and achievements in fighting infectious diseases and HIV/AIDS; protecting maternal and child health; supporting voluntary family planning; assisting programs for orphans and vulnerable children; building health systems capacity; and supporting cutting-edge technologies and research.

Highlights from USAID Intervention Areas

Over the past decade, U.S. and other donor investments in foreign assistance for global health have increased substantially, with

MAJOR USAID HEALTH RESULTS, 2009

- In six focus countries of the USAID-led President's Malaria Initiative with comparable survey data from 2005/06 and 2008/09, substantial reductions in all-cause mortality in children under age 5 were documented. Strong evidence indicates that malaria prevention and treatment played a major role in these reductions.
- USAID helped the U.S. President's Emergency Plan for AIDS Relief provide counseling and testing to 7.3 million pregnant women, antiretroviral treatment to 2.5 million patients, and care and support to 7.4 million people affected by HIV/AIDS.
- Results of a USAID-supported clinical trial in South Africa provided the first proof that a vaginal microbicide could reduce the risk of male-to-female HIV transmission.
- USAID helped community-based family planning programs in 21 countries serve 10.7 million direct beneficiaries.
- More than 1.3 million new tuberculosis patients in 20 USAID priority countries were successfully treated by USAID-supported programs.
- USAID-assisted countries continued to reduce newborn mortality, with six achieving declines of 30 percent or more since the early 1990s, and four achieving 20 to 30 percent declines.
- USAID nutrition programs reached more than 18 million infants and young children.
- In a USAID-supported program in India, private sector sales of zinc products for treating child diarrhea increased by 46 percent, from 3.15 million courses to 4.6 million courses.
- USAID programs for vulnerable children assisted more than 260,000 children and adults in 24 countries, and the Child Blindness Program screened nearly 880,000 children.
- In Nepal, USAID and 11 other donors helped the Government draft a unified health sector implementation plan to ensure the use of up-to-date evidence-based approaches and coordination of donor and partner efforts.

unprecedented and well-documented improvements in health outcomes. For example:

- In 2008, for the first time ever, the estimated number of deaths among children under age 5 worldwide dropped below 9 million, from more than 12 million in 1990.
- Recent United Nations estimates indicate the number of maternal deaths globally decreased 34 percent since 1990.
- More than 2.5 million deaths are averted each year due to basic childhood immunizations; measles deaths have dropped by almost 75 percent since 2000.

In 2009, positive outcomes continued to result from the efforts of USAID and its many partners. Some highlights, described in greater detail in the body of this report, follow.

Infectious Diseases

- *Malaria:* Launched in 2005, the President's Malaria Initiative (PMI) is a five-year, $1.2 billion, USAID-led effort to reduce the burden of malaria in 15 countries in sub-Saharan Africa. It is a key component of GHI, with the goal of reducing malaria-related deaths by 50 percent in the focus countries by expanding coverage of four interventions: insecticide-treated mosquito nets, indoor spraying, preventive treatment of pregnant women, and artemisinin-based combination therapy drugs. In six PMI focus countries (Ghana, Kenya, Rwanda, Senegal, Tanzania, and Zambia) with comparable survey data from 2005/06 and 2008/09, substantial reductions in all-cause mortality in children under age 5 have been documented. Strong evidence indicates that malaria prevention and treatment played a major role in these reductions.

- *Tuberculosis:* USAID is the leading bilateral donor for international tuberculosis (TB) control. Its TB program supports the scale-up of the global Stop TB Strategy in 20 priority countries and smaller-scale programs in 20 other countries. In the USAID priority countries, case detection of new TB cases has increased by 50 percent since 2001, and more than 80 percent of cases are successfully treated.

- *Avian Influenza and Other Emerging Threats:* USAID continued to improve its H5N1 (avian influenza) surveillance, prevention, and response activities. Detection of H5N1 outbreaks in birds was faster, with the median number of days for laboratory confirmation after an H5N1 outbreak declining from 14 days in 2006 to three days in 2009.

- *Neglected Tropical Diseases:* USAID's Integrated Neglected Tropical Disease Program is the largest global effort ever

to deliver safe and effective drugs to treat these diseases on a massive scale in the poorest and most remote populations in the world. The USAID program delivered 127 million treatments to more than 55 million people in eight countries in 2009, bringing the total number of treatments delivered since the program began in 2006 to 222 million.

HIV/AIDS

In 2009, USAID supported programs in 63 countries and managed more than half of the funds supporting HIV/AIDS programs under the U.S President's Emergency Program for AIDS Relief (PEPFAR). Prevention programs reached 77.7 million people with critical "ABC" (Abstinence, Be faithful, and correct and consistent use of Condoms) messages. With USAID support, the cumulative number of people receiving treatment under PEPFAR reached nearly 2.5 million in 2009. USAID also played a key role in helping PEPFAR provide care and support services to 7.4 million people living with HIV and to 3.6 million orphans and vulnerable children.

Child Survival and Maternal Health

- *Maternal and Neonatal Health:* In 2009, USAID worked in approximately 20 countries to expand the use of "active management of the third stage of labor" to prevent postpartum hemorrhage, the largest cause of maternal death worldwide. USAID's programs for newborns continued to reduce neonatal mortality, with reductions of 30 percent or more in six countries and between 20 and 30 percent in four others since the early 1990s. USAID's fistula repair program reached a major benchmark, surpassing 12,000 repairs since the start of the program in 2005.

- *Immunization:* USAID's primary investment in immunization is through the GAVI Alliance, to which USAID has contributed $569 million since 2001 and which has saved an estimated 4 million lives by vaccinating more than 257 million children. Outside of GAVI, USAID helps national immunization programs improve. USAID assistance in Uganda and Ghana in 2009 enabled these programs to attain, respectively, 80 and 90 percent coverage. With USAID assistance, Rwanda became the first developing country to introduce the new Prevnar vaccine for pneumococcal disease.

- *Polio Eradication:* USAID remained a leading supporter of the global polio eradication effort, which delivered more than 2.2 billion vaccine doses through 273 polio immunization campaigns in 24 countries. More than 500 million children in Africa, South Asia, and the Middle East received vaccine. The majority of campaigns were in the four remaining endemic countries: Afghanistan, India, Nigeria, and Pakistan.

USAID-Supported Trial Shows Microbicide Protects against HIV Infection

"CAPRISA 004 is a model for future research studies in which clinical trials will be led by in-country investigators backed up by the scientific and operational expertise of their U.S. colleagues."

– USAID Administrator Rajiv Shah, July 2010

Clinical trials of microbicides to prevent HIV infection in women have been the highest priority in microbicide research and development, and Congress has supported this priority with generous funding for more than a decade. The results of one such trial – the CAPRISA 004 trial of tenofovir 1% vaginal gel – has produced the first solid evidence that using an antiretroviral-based microbicide gel can significantly reduce the risk of HIV infection in women. Supported through USAID as part of the U.S. President's Emergency Plan for AIDS Relief, the trial was conducted among 889 South African women at high risk of HIV infection by the Center for the AIDS Program for Research in South Africa. It found that the tenofovir gel was 39 percent effective at reducing a woman's risk of becoming infected with HIV during sex and up to 54 percent effective in women who were more consistent in using the gel. The results were announced at the XVIII International AIDS Conference in July 2010.

- *Nutrition:* USAID nutrition programs reached more than 18 million infants and young children in Asia, Latin America, and sub-Saharan Africa. USAID helped countries plan, implement, and monitor vitamin A supplements, infant and young child feeding and breastfeeding programs, and programs in community management of acute malnutrition. In nine countries, USAID's Child Survival and Health Grants Program contributed to increases in exclusive breastfeeding ranging from seven to 63 percentage points.

- *Pneumonia and Diarrhea:* USAID continued to advocate for expanded community case management of child pneumonia. In Nepal, USAID helped scale up community-based management to cover 64 of 75 districts, and more than 875,000 children under age 5 received antibiotic treatment from trained health workers. USAID helped 12 countries introduce zinc for child diarrhea treatment. In India, private sector sales of pediatric zinc products increased from 3.15 million courses to 4.6 million.

- *Water, Sanitation, and Hygiene:* USAID supported hygiene and sanitation improvements in a number of countries. In Ethiopia's Amhara region, USAID and the World Bank

supported community mobilization and household behavior changes to reach approximately 1.2 million people, and 600,000 people achieved the goal of no open defecation. In India, a USAID project reached 1.1 million people with point-of-use water treatment options, and 28 percent of households began treating their drinking water.

Family Planning and Reproductive Health

USAID is the world's largest bilateral donor to family planning programs. In 2009, USAID helped community-based family planning programs in 21 countries serve 10.7 million beneficiaries, with one-year increases in couple-years of protection in the assisted countries averaging 60 percent. USAID achieved notable successes through high-level policy guidance, private sector engagement, communication and outreach, expanded contraceptive choice, innovative service delivery approaches, male involvement, and new technologies.

Vulnerable Children

USAID's Displaced Children and Orphans Fund supported projects in 24 countries and provided services or training to 790 organizations and more than 260,000 children and adults. Activities included innovative market-based pilot projects in Afghanistan, Liberia, Mozambique, and the Philippines designed to reduce young people's economic vulnerability.

Health Systems Strengthening

Health systems strengthening activities in 2009 included helping Armenia, Azerbaijan, Georgia, and Senegal strengthen health care financing with national health accounts; helping nine countries implement human resource information systems; and instituting performance assessments to raise standards for HIV services in six Central American countries.

USAID Health Budget, Fiscal Year 2009

Technical Area	Total Health Budget	From Global Health and Child Survival Account
Infectious Diseases	$781.3 million	$715.0 million
HIV/AIDS	$3.29 billion	$450.0 million
Child Survival and Maternal Health	$651.0 million	$495.0 million
Family Planning and Reproductive Health	$522.4 million	$455.0 million
Vulnerable Children	$30.5 million	$15.0 million
TOTAL	**$5.27 billion**	**$2.13 billion**

Note: Funding for health systems strengthening and research and technical innovation included in the above amounts.

Research and Technical Innovation

In 2009, USAID-supported research included a study in Zambia that showed that community health workers can effectively manage childhood pneumonia and malaria and a major study of malaria drugs in sub-Saharan Africa. USAID also supported AIDS vaccine research that discovered antibodies that could be of potential use in vaccine development.

In a mass drug administration in Mali's neglected tropical diseases program, these community drug distributors stand by with their dosing poles and medicines. The poles are used to measure a person's height, which is used to determine drug dosages.

Global Health Initiative

Over the past decade, U.S. and other donor investments in foreign assistance for global health have increased substantially, with unprecedented and well-documented improvements in health outcomes. For example:

- In 2008, for the first time ever, the estimated number of deaths among children under age 5 worldwide dropped below 9 million, from more than 12 million in 1990.
- Recent United Nations estimates indicate the number of maternal deaths globally declined by 34 percent since 1990.
- More than 2.5 million deaths are averted each year due to basic childhood immunizations; measles deaths have dropped by almost 75 percent since 2000.

Urgent needs remain, however, in fighting preventable and treatable diseases, undernutrition, and unintended pregnancy. The challenge of the next decade and beyond will be to capitalize on past accomplishments by helping partner countries achieve long-term sustainability in meeting these needs.

Through the six-year Global Health Initiative (GHI) announced by President Obama in 2009, the United States is building on the legacy of past U.S. health assistance – much of it provided through the U.S. Agency for International Development (USAID) – to help countries improve health outcomes and strengthen health systems. GHI's paramount objective is to achieve major improvements in health outcomes, with a special focus on improving the health of women, newborns, and children through programs targeting infectious disease, nutrition, maternal and child health, and safe water. GHI's success will improve the lives of millions, maximize the impact of every dollar invested, and contribute to a stronger future for America.

Core Principles

Through GHI, the United States is pursuing a comprehensive approach to global health. GHI promotes a model based on core principles to achieve the dual objectives of significant health improvements and effective, efficient, and country-led platforms that deliver essential health programs in a sustainable manner. The Initiative's core principles are to:

- Support country ownership and invest in country-led plans
- Apply a woman- and girl-centered approach that focuses on gender equality to improve women's health outcomes, recognizing that women are central to the health of families and communities
- Increase coordination and integration across health issues and among partners
- Improve metrics, monitoring, and evaluation of health and health assistance
- Promote innovation and research to identify ways to improve health outcomes
- Strengthen and leverage key multilateral organizations, global health partnerships, and private sector engagement
- Build sustainability through health systems strengthening

"We will not be successful in our efforts to end deaths from AIDS, malaria, and tuberculosis unless we do more to improve health systems around the world, focus our efforts on child and maternal health, and ensure that best practices drive the funding for these programs."

– President Barack Obama, May 5, 2009

Adhering to these principles enables GHI to bring stronger coordination to U.S. Government global and country-level health efforts as well as those of other donors, governments, and civil society. GHI also emphasizes health systems strengthening as a component of disease- and issue-specific programs; builds upon existing plans and programs (rather than duplicate existing efforts); and generates greater capacity in partner countries to manage and operate programs.

Implementation

While specific disease and system priorities vary by country, GHI implementation will have four main components:

(1) **Doing more of what works:** GHI rapidly scales up the most relevant high-impact interventions and, where possible, integrates across health programs through a common delivery platform. Priorities vary by country but include such interventions as women's health, information and services for adolescent girls, newborn care, and child health.

(2) **Building on and expanding existing platforms to foster stronger systems and sustainable results:** GHI strengthens health systems through close coordination with government, private sector, and development partners. Activities include identifying and implementing strategies to address health system bottlenecks, strengthening data collection systems, and improving human resources for health.

(3) **Innovating for results:** GHI introduces, evaluates, and, where appropriate, scales up new interventions and approaches that have shown promise in small studies, as in the following examples:

- Increased appropriate diagnosis and treatment of diarrhea, pneumonia, and malaria (where endemic), emphasizing integrated community case management
- School-based deworming and safe water, sanitation, and hygiene interventions
- Clinic-based handwashing and drinking water stations to prevent health facility-acquired infections
- "Reaching Every District" strategy for key interventions integrated with immunization and HIV/AIDS services
- Community-based programs to encourage women and children to use health services and increase women's and girls' participation in health decisionmaking
- Expanded provision of essential newborn care and management of newborn asphyxia, infections, and low birthweight in communities and health facilities
- Improved coverage of immunization programs, including introduction of new vaccines, accelerated measles control, and polio eradication

(4) **Collaborating for impact:** GHI implements a new business model for providing U.S. funding and technical assistance that promotes coordination of health strategies across health programs among country-level stakeholders, U.S. Government agencies, and other agencies and funders. The ultimate goal is to enable countries to plan, coordinate, manage, and oversee their own health systems.

Accelerating Impact: GHI Plus

While GHI applies everywhere U.S. Government global health programs are at work, the Initiative has launched an intensified effort in a subset of up to 20 "GHI Plus" countries that provide significant opportunities for impact, evaluation, and partnership with governments. Bangladesh, Ethiopia, Guatemala, Kenya, Malawi, Mali, Nepal, and Rwanda are the first set of GHI Plus countries.

Countries selected for GHI Plus receive additional technical, management, and financial resources to accelerate the implementation of GHI's innovative approach, including integrated programmatic interventions and investments across infectious disease, maternal and child health, family planning, and health systems activities. GHI Plus provides opportunities to learn how to build upon existing platforms; how to best use program inputs to deliver results; and how to work in close collaboration

Women in Development

Since its inception, USAID has recognized that women and girls represent a tremendous untapped resource in the developing world. The Agency's half century of experience has shown that health programs targeting women improve development outcomes overall.

USAID's technical experience and expertise confer on the Agency a leading role in the implementation of President Obama's visionary Global Health Initiative (GHI), which calls for an even greater focus on women-centered health programming. The President's six-year GHI helps partner countries improve health by strengthening health systems and by focusing on women, newborns, and children through programs in infectious diseases, nutrition, maternal and child health, family planning, and safe water.

Since 1965, the Agency has provided women and couples with voluntary family planning programs and services. Maternal and child health programming became an important focus in the early 1980s, and HIV/AIDS prevention and treatment programs have been adjusted to focus on women's particular vulnerabilities to infection. Other health interventions that serve women include malnutrition, malaria, and pandemic diseases programs. These programs have enjoyed positive results and set the global standard for health care delivery to women.

Focusing on women is critical to fulfilling U.S. development priorities as well as many other internationally agreed upon objectives, including the U.N. Millennium Development Goals. When women are educated and can earn and control income, infant mortality declines, child health and nutrition improve, agricultural productivity rises, population growth slows, economies expand, and cycles of poverty are broken.

Source: Excerpted from USAID, Improving Global Health Improves the World, 2010; http://www.usa.gov/our_work/global_health/

with partner governments, with global partners, and across U.S. Government agencies. Robust monitoring and evaluation efforts are central to the learning process. Knowledge gained is shared with other GHI countries, informs future decision-making, and fulfills the imperative of accountability. These activities are carried out in close collaboration and coordination with country governments, local civil society organizations, international organizations, and other donors.

Phil Grabowski/CRWRC Malawi

■ *Lifa Zakeyo of Matate village, Malawi, holds an insecticide-treated mosquito net she received through the President's Malaria Initiative. Following training on malaria prevention provided through a Malaria Communities Program grant, she and her family now sleep under a net every night.*

Partnering with Churches in Rural Malawi to Prevent Malaria

Lifa Zakeyo of Matate village in Mchinji district, Malawi, has changed her behavior in preventing malaria, thanks to her neighbor Godfrey Nkhoma. Mrs. Zakeyo and many others in her community receive regular visits from Mr. Nkhoma, who has been trained to educate his neighbors about malaria prevention and treatment. He has taught them about the importance of using an insecticide-treated mosquito net every night; of seeking early treatment for children with fever; and, for pregnant women, of taking intermittent preventive treatment. Mr. Nkhoma also shares messages about malaria at large gatherings in his area, where he uses a variety of communication techniques, including songs and drama or dance performances. Now Mrs. Zakeyo uses her mosquito net every night to protect herself and her four children from malaria: "In the past, we only used our net in the rainy season, when the mosquitoes keep us from sleeping well. Now we understand the importance of using a net every night of the year to prevent malaria."

Mr. Nkhoma's training was provided by his community's Presbyterian church with funding and support from the Christian Reformed World Relief Committee (CRWRC). A grant from PMI's Malaria Communities Program allows CRWRC to address malaria prevention and treatment through local churches, which provide access to some of Malawi's most remote communities. This project has mobilized a total of 1,320 volunteers in 13 congregational areas. A representative of Mr. Nkhoma's village expressed his appreciation of CRWRC's work, stating, "Thank you for reaching our area with more education – we have a large population and a small health center."

Infectious Diseases

KEY RESULTS

- Since 2006, the President's Malaria Initiative (PMI) has helped 15 high-burden countries in Africa dramatically scale up effective malaria prevention and treatment interventions; during 2009 alone, PMI reached more than 50 million people.
- More than 41,000 health workers received training in case management; more than 2,800 in laboratory diagnosis; and more than 14,000 in malaria prevention and treatment for pregnant women.
- More than 1.3 million new sputum smear-positive tuberculosis patients were successfully treated in USAID's 20 priority countries.
- Detection of H5N1 outbreaks in birds was faster in 2009, with the median number of days for laboratory confirmation after an H5N1 outbreak declining to three days (compared with 14 days during peak levels in 2006).
- 127 million drug treatments for neglected tropical diseases were delivered to more than 55 million people in eight countries, bringing the total number of treatments delivered with USAID support in just three years to 222 million.

The burden of infectious diseases continues to incur huge human and economic costs, particularly in the world's poorest countries. Tuberculosis (TB) and malaria kill more than 2.6 million people worldwide every year and afflict millions of others. Avian influenza continues to present worldwide public health concerns. More than 1 billion people are affected by neglected tropical diseases (NTDs) that cause severe disability and sickness, compromise mental and physical development, and hinder economic productivity. Most people affected by infectious diseases live in developing countries, and the most vulnerable groups – pregnant women, children, and people who are immunocompromised – are often the most affected.

In 2009, USAID continued to take a leading role in reducing the mortality and morbidity associated with infectious diseases. During the year, the Agency released new strategies for malaria and TB, thereby renewing its commitment to fighting these diseases. The strategies emphasize the importance of partnering with country governments, building local capacity, integrating with other programs, strengthening health systems, innovating through new tools and approaches, and strengthening monitoring and evaluation. They will result in broader prevention and treatment services, stronger local capacity, and expanded global alliances working together to curb these diseases.

Malaria

In an indoor residual spraying program in Uganda, a spray operator applies insecticide under the house's eaves as the final step in protecting the home from mosquitoes.

Abt Associates

Globally, an estimated 300 million to 500 million cases of malaria cause about 900,000 deaths each year, with 90 percent of those deaths among children under age 5. Malaria especially remains a major public health problem in Africa, placing tremendous burdens both on individual families and entire health systems. Economists estimate that malaria causes an annual loss of $12 billion, or 1.3 percent of the continent's gross domestic product. Malaria and poverty are closely linked, and the greatest burden of malaria usually falls on residents of rural areas.

Launched in 2005, the U.S. Government's President's Malaria Initiative (PMI) is a five-year, $1.2 billion expansion of U.S. resources to reduce Africa's malaria burden (table 1). Working closely with governments and other donors, as well as the private sector and nongovernmental, faith-based, and community groups,[1] PMI is helping partner countries scale up malaria control measures. PMI supports four proven cost-effective prevention and treatment interventions: insecticide-treated mosquito nets, indoor residual spraying with insecticides, intermittent preventive treatment for pregnant women, and prompt treatment with artemisinin-based combination therapies (ACTs). The goal of PMI is to reduce malaria-related deaths by 50 percent in 15 high-burden countries by expanding coverage of these four interventions in pregnant women and children under age 5, the two most vulnerable populations.

1 Other donors include the Global Fund to Fight AIDS, Tuberculosis and Malaria; the World Bank; the Roll Back Malaria Partnership; the World Health Organization; and the United Nations Children's Fund. Private sector groups include the Bill & Melinda Gates Foundation, the Clinton Foundation, the ExxonMobil Foundation, the Carter Center, and Malaria No More.

Table 1: PMI Funding Summary		
Fiscal Year (FY)	**Budget**	**Focus Countries**
2006	$30 million[1]	Round 1: Angola, Tanzania, and Uganda
2007	$135 million[2]	Round 2: Malawi, Mozambique, Rwanda, and Senegal (in addition to Round 1 countries)
2008	$300 million[3]	Round 3: Benin, Ethiopia (Oromia region), Ghana, Kenya, Liberia, Madagascar, Mali, and Zambia (in addition to Round 1 and Round 2 countries)
2009	$300 million	All 15 PMI focus countries
2010	$500 million	All 15 PMI focus countries
TOTAL: $1.265 billion		

[1] Angola, Tanzania, and Uganda also used $4.2 million in FY 2005 funds for malaria activities.
[2] This total does not include $25 million of additional FY 2007 funding, of which $22 million was used for malaria activities in the 15 PMI focus countries. In addition, Malawi, Mozambique, Rwanda, and Senegal used $11.9 million in FY 2006 funds for malaria activities as allocated by the U.S. Global Malaria Coordinator.
[3] The Round 3 countries also used $23.6 million of FY 2006 and $42.8 million of FY 2007 funding (of which $2.8 million was included in the $25 million additional FY 2007 funding) as allocated by the U.S. Global Malaria Coordinator.
Source: President's Malaria Initiative, 2010

PMI is a key component of the Global Health Initiative (GHI) announced by President Obama in May 2009. As part of GHI, the United States has developed an expanded U.S. Government Malaria Strategy for 2009–2014 aimed at:

- Achieving Africa-wide impact by halving the burden of malaria in 70 percent of sub-Saharan Africa's at-risk populations (approximately 450 million people)
- Increasing the emphasis on integrating malaria prevention and treatment with maternal and child health, HIV/AIDS, NTD, and TB programs, and on multilateral collaboration
- Intensifying efforts to strengthen partner-country health systems
- Helping partner countries revise and update malaria control strategies and plans to reflect the declining burden of malaria
- Linking programming of U.S. malaria control resources to partner-country strategies
- Ensuring a women-centered approach to malaria prevention and treatment at the community and health facility levels
- Limiting the threat of malaria multidrug resistance in Southeast Asia and the Americas

PMI activities are a cornerstone of comprehensive maternal and child health services. Insecticide-treated nets are distributed principally through integrated campaigns that include interventions such as vitamin A supplementation or vaccinations. Preventive treatment for pregnant women is a key element of antenatal care, and antenatal and child health services also provide treatment drugs. In addition, PMI supports the integrated management of childhood illnesses, including malaria, diarrhea, and pneumonia.

PMI Highlights

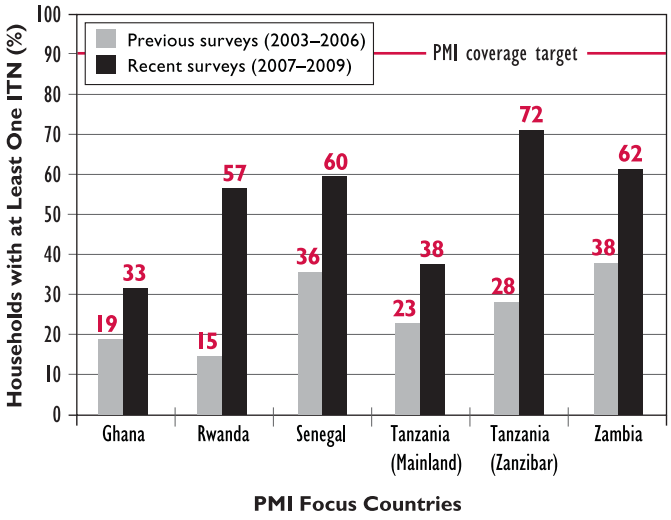
- In 2009, more than 41,000 health workers received training in case management, more than 2,800 in malaria laboratory diagnosis, and more than 14,000 in malaria prevention and treatment for pregnant women.
- Nearly 27 million people were protected by PMI-supported indoor residual spraying in 2009.
- Since PMI began, more than 27 million insecticide-treated mosquito nets have been procured and more than 19 million distributed.
- More than 57 million lifesaving antimalarial treatments have been procured and more than 40 million distributed since PMI began.
- PMI support for improved management of antimalarial drugs and other essential medical commodities has resulted in significant improvements in supply chain systems in all 15 PMI focus countries.

Scaling Up Coverage of Malaria Interventions

Since 2006, substantial progress has been made in scaling up training, capacity building, and prevention and treatment measures across the 15 PMI focus countries. In 2009 alone, PMI procured more than 15 million long-lasting nets, protected approximately 27 million residents through spraying, and procured more than 29 million ACT treatments. Effective and growing collaboration with other donors was evidenced by the nearly 3 million long-lasting nets and 8.8 million ACT treatments procured by other partners, which PMI helped to distribute. In 2009, PMI also trained tens of thousands of people in malaria control, including more than 41,000 health workers in the use of ACTs. In all 15 focus countries, PMI supported improved management and delivery of antimalarial drugs and other essential medical products.

After four years of PMI, dramatic increases in malaria coverage are being documented, representing the combined contributions of PMI, prior U.S. Government assistance, other donors, and national governments. In the past three years, six PMI countries – **Ghana**, **Kenya**, **Rwanda**, **Senegal**, **Tanzania**, and **Zambia** – reported the results of national household surveys comparable with earlier surveys. In these six countries, household ownership of one or more insecticide-treated nets increased from the baseline 2003–2006 range of 15 to 38 percent to a 2007–2009 range of 33 to 72 percent (figure 1). Use of an insecticide-treated net the night before a survey by children under 5 almost doubled from an average of 22 to 41 percent, and there was a similar increase for pregnant women. With these increases in net ownership and use, coupled with an average of 22 million residents protected each year in PMI countries by spraying, large proportions of at-risk populations are benefiting from one or more prevention measures. The percentage of pregnant women receiving two or more preventive treatments also increased in the surveys, from a baseline average of 24 percent to 37 percent. In addition, access to ACTs appears to have increased dramatically. In **Angola**, for example, ACTs were only available in public health facilities in about 10 of the country's 164 districts in 2005. By 2008, public health facilities in all 164 districts were using them.

Figure 1: Increases in Insecticide-Treated Mosquito Net Ownership in Selected PMI Countries



Source: President's Malaria Initiative, 2010

Achieving Impact

In all six PMI countries with paired household surveys, substantial reductions in all-cause mortality in children under age 5 have been documented; these reductions range from 19 to 36 percent (figure 2). Strong evidence indicates that malaria prevention and treatment played a major role in these reductions. For example:

- In **Senegal**, a dramatic 30 percent reduction in all-cause mortality in children under 5 between 2005 and 2008 is likely due in part to increased coverage of malaria interventions. Ownership of insecticide-treated nets increased from 36 percent of households in 2006 to 60 percent in 2008. The proportion of pregnant women who received two or more preventive treatments increased from 12 to 52 percent between 2005 and 2008.

- Coverage with insecticide-treated nets in **Zambia** increased from 38 percent of households in 2006 to 62 percent in 2008. More importantly, net use by children under 5 increased from 24 to 41 percent. Zambia's National Malaria Control Program estimates that since 2003 more than 7 million nets have been distributed. During the same period, anemia prevalence in children 6 months to 5 years old declined from 14 to just 4 percent, and malaria parasite prevalence dropped from 22 to 10 percent. It is highly likely that these results contributed significantly to the drop in all-cause under-5 mortality from 168 deaths per 1,000 live births in 2002 to 119 in 2007.

- Net use by children under 5 in **Rwanda** increased from 13 to 58 percent between 2005 and 2008. Over approximately the same period, the proportion of hospital deaths attributed to malaria fell from 41 to 16 percent, and all-cause under-5 mortality also declined by 32 percent.

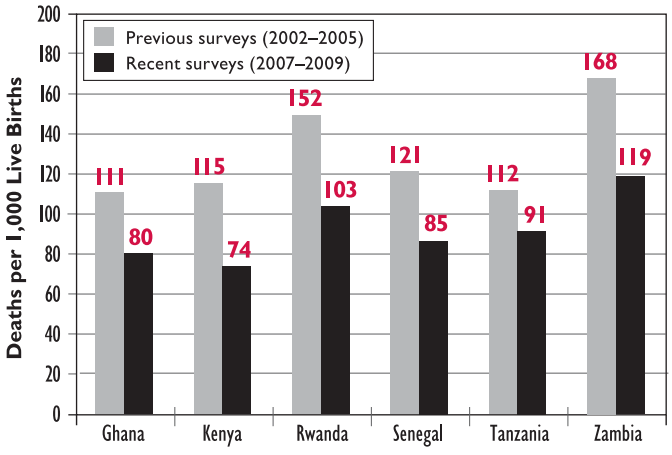
USAID also assisted non-PMI countries. In **Zimbabwe**, USAID supported emergency spraying in partnership with the National Malaria Control Program, the World Health Organization

"In Africa, where the disease burden is the greatest, many countries are making dramatic gains in reducing the terrible burden of malaria, particularly for the benefit of those most vulnerable, so that malaria is no longer an intractable fact of life. Today, I recommit to work with our partners in this fight."

– President Barack Obama, World Malaria Day, April 24, 2009

(WHO), and the U.K. Department for International Development. Targeting the 20 most malaria-prone districts, 651,340 rooms were sprayed, meeting 84 percent of the target and protecting 929,600 people. In **Nigeria**, USAID collaborated with the Canadian Red Cross and health authorities of Cross River state to carry out the first statewide campaign to distribute long-lasting insecticide-treated nets to vulnerable groups. USAID provided and helped distribute 115,000 nets. A follow-up survey demonstrated that 86 percent of the households owned nets and 63 percent of children under 5 had slept under a treated net the night before. Before the campaign, national coverage of net use by children under 5 was only 5 percent, and the highest coverage in any state in Nigeria was 21 percent.

Figure 2: Reductions in All-Cause Mortality Rates of Under-5 Children in Six PMI Countries



Note: The countries included in this graph are those PMI focus countries for which there are two data points from nationwide household surveys for the indicator.

Source: President's Malaria Initiative, 2010

Outside of Africa, USAID conducted malaria activities in Asia through the Mekong Malaria Program (covering **Burma**, **Cambodia**, **the Lao People's Democratic Republic**, **Thailand**, **Vietnam**, and Yunnan province, **China**) and in Latin America through the Amazon Malaria Initiative (covering **Bolivia**, **Brazil**, **Colombia**, **Ecuador**, **Guyana**, **Peru**, and **Suriname**). Working with numerous partners, the Mekong program has established a network to monitor drug quality and resistance. It has also supported pharmaceutical management and a common regionwide monitoring and evaluation framework. The Amazon initiative helped introduce ACTs between 2000 and 2005, leading to lower transmission rates. Since 2000, reported malaria cases have dropped by 33 percent.

Building Capacity of National Health Systems

PMI resources help build health systems and strengthen capacity in health ministries and national malaria control programs. PMI's goal is to enable partner governments to control malaria on their own. Ministries and programs must be able to provide leadership combined with technical and managerial skills to plan, implement, evaluate, and adjust malaria control efforts. In 2009, PMI support included improving the quality of diagnostic testing, integrating malaria activities with maternal and child health services, building capacity in national malaria control programs, strengthening monitoring and evaluation, and supporting policy changes.

More than 41,000 health workers received PMI-funded training in malaria case management with ACTs; more than 2,800 were trained in laboratory diagnostics and more than 14,000 in treatment during pregnancy. In **Tanzania**, PMI-supported operations research studied health workers in 20 clinics and showed that rapid diagnostic tests, along with training in case management, improved prescribing practices and reduced use of antimalarial drugs by 50 percent. To solve problems of limited access to facility-based care in **Malawi**, **Rwanda**, and **Senegal**, PMI supported community case management of childhood illnesses, including malaria. This involved training and

supervising community health workers to provide an integrated package of services and strengthening supply chain management down to the village level. In **Ghana** and **Tanzania**, PMI worked with the national malaria control programs, WHO, and the United Nations Children's Fund (UNICEF) to establish the first national malaria monitoring and evaluation plans.

Malaria Research

The U.S. Government is committed to supporting research to reduce the burden of malaria. The mission of USAID's Malaria Vaccine Development Program is to develop vaccines to reduce malaria mortality and morbidity in endemic countries, especially among children under 5 and pregnant women. Over the past six years, Phase I/II/IIb trials of the RTS,S candidate vaccine have shown it to be promising and safe, with 50 percent efficacy in preventing severe malaria in African infants and children. It can also be safely co-administered with routine childhood vaccinations. If this candidate vaccine continues to show promising results, RTS,S could be the first malaria vaccine licensed and available for use. Trials with the U.S. Military Vaccine Program in **Mali** and **Kenya** showed that the *P. falciparum* blood-stage candidate vaccines FMP2.1/AS02A and FMP010/AS01B provided protection against malaria (see this report's "Research and Technical Innovation" chapter). Another trial provided evidence that cellular immunity can protect against malaria.

USAID also continued drug development activities through its Medicines for Malaria Venture. More than 40 academic and pharmaceutical organizations in 10 countries carried out research and development.

Andre Rousse/USAID

In Benin, a couple and their newborn baby receive a free insecticide-treated mosquito net from a member of the Ministry of Health's net distribution team. Across Africa, the President's Malaria Initiative supports a broad range of strategies to prevent and treat malaria, targeting two vulnerable populations – children under age 5 and pregnant women.

Tuberculosis

A laboratory technician in Bangladesh prepares sputum smear slides.

Tuberculosis is a major public health threat worldwide. WHO estimates there were nearly 9.4 million new TB cases and 1.3 million TB deaths in 2008. TB is the leading cause of death in people who have HIV infection. The global TB situation is further complicated by multidrug-resistant TB (MDR-TB), which does not respond to the standard first-line drug treatment, and extensively drug-resistant TB, which is resistant to most second-line TB drugs. There were an estimated 440,000 MDR-TB cases in 2008.

On World TB Day, March 24, 2010, the Lantos-Hyde U.S. Government Tuberculosis Strategy, a critical component of GHI, was launched and established the following targets for 2009–2014:

- 50 percent reduction in TB deaths and disease burden from the 1990 baseline
- 70 percent or higher case detection rate of new sputum smear-positive cases
- 85 percent treatment success rate
- Treatment of 2.6 million new smear-positive patients
- Diagnosis and treatment initiation of 57,200 new MDR-TB cases

USAID is the leading bilateral donor for international TB control. The major focus of USAID's program is to support the scale-up of the Stop TB Strategy in 20 priority (Tier One) countries. USAID also supports smaller-scale programs in an additional 20 countries.

Through implementation of the Stop TB Strategy, USAID's TB activities seek to:

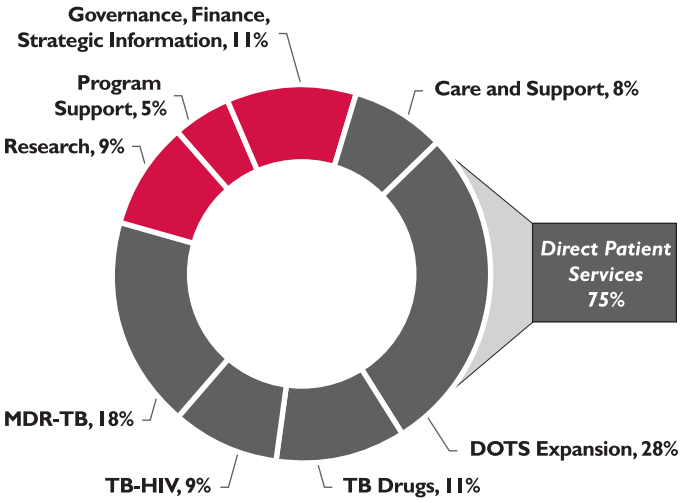
- Pursue high-quality DOTS (directly observed treatment, short course) expansion and enhancement
- Address TB-HIV/AIDS, MDR-TB, and the needs of poor and vulnerable populations
- Contribute to health systems strengthening based on primary health care
- Engage all care providers
- Empower people with TB and communities through partnerships
- Enable and promote research

USAID collaborates with national TB control programs, multilateral institutions, nongovernmental organizations (NGOs), and the private sector. The Global Fund to Fight AIDS, Tuberculosis and Malaria provides 57 percent of all international financing for TB, and the U.S. Government continues to be the largest bilateral donor to the Global Fund, having provided more than $4.3 billion of its total received contributions of more than $16 billion as of April 2010. USAID fosters the success of the Global Fund at multiple levels. At the global level, USAID engages in policy development. At the country level, USAID Missions participate in the Global Fund's Country Coordinating Mechanisms and provide technical assistance for proposal development and grant implementation. Working with technical partners, USAID helped TB proposals achieve a 59 percent success rate of approved proposals in Round 9, compared with 55 percent for malaria and 41 percent for HIV/AIDS, and an increase from 49 percent in Round 8. For grant implementation, USAID has helped TB grants earn a grant rating of 84 percent with "A" or "B1" ratings, compared with 79 percent for HIV/AIDS and 70 percent for malaria.

USAID staff members are active on the Stop TB Partnership's coordinating board and technical working groups, and USAID remains the leading bilateral donor to the Partnership's Global TB Drug Facility. The Facililty provides grants for TB drugs to countries in need, operates a direct procurement service, and provides technical assistance to improve drug management. In 2009, the Facility used USAID funds to provide drugs to treat approximately 450,000 TB patients.

In FY 2009, USAID's TB investment was nearly $176.6 million. As figure 3 shows, 75 percent was allocated to direct patient services, including DOTS, anti-TB drugs, MDR-TB, TB-HIV/AIDS, and care and support for TB patients. Overall, a total of 86 percent was dedicated to health systems strengthening, including direct patient services, health governance and financing and host country strategic information (11 percent).

Figure 3: USAID Tuberculosis Funding Allocations (%) FY 2009



Source: Foreign Assistance and Coordination Tracking System (FACTS)

Nine percent of the budget was allocated to research and 5 percent to program support costs.

USAID's TB programs and partners have made impressive achievements in providing countries with high-quality tools for scaling up TB and MDR-TB interventions. To address weak laboratory capacity, in 2009 USAID launched a "laboratory toolbox" containing standard operating procedures, a logistics and supply management tool, an external quality assurance package, a culture and drug sensitivity testing package, and a management information system.

To meet the challenge of drug resistance, USAID provided technical assistance and training and developed normative tools to accelerate MDR-TB diagnosis and treatment, collectively known as programmatic management of drug-resistant TB. Fifteen USAID priority countries are piloting or scaling up programmatic management activities. USAID also helped launch programs such as e-TB Manager, a comprehensive Web-based tool for managing TB and MDR-TB. The **Philippines** integrated e-TB Manager into its scale-up of programmatic management. Seven other countries have adopted e-TB Manager, and WHO's European region has endorsed it for regionwide implementation. USAID also continued to support the Green Light Committee, which enables countries and programs that meet international standards to access quality-assured second-line TB drugs at discounted prices.

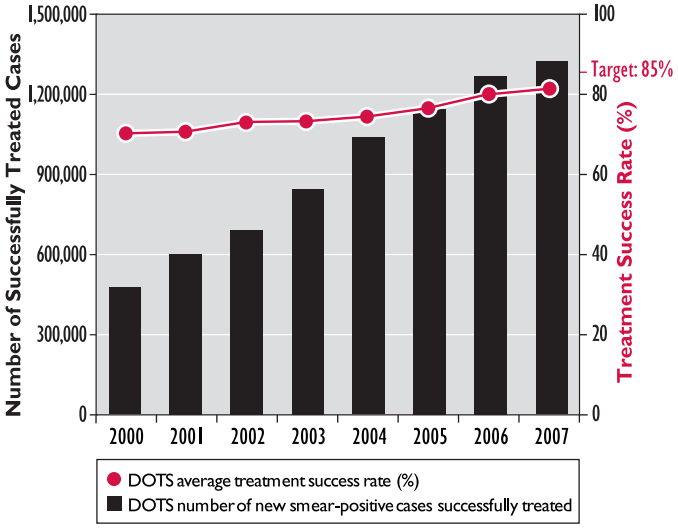
"I am grateful for the care and support provided to me by the dedicated staff at the hospital. As a result of the treatment and medicine I received, my condition improved dramatically, and six months after I was admitted, I was lucky enough to be discharged, as my sputum tests turned negative."

– 26-year-old Lukas E., Namibia

USAID's programs are making a difference. In USAID Tier One countries, the case detection rate for new smear-positive TB cases increased from 40 percent on average in 2001 to 60 percent in 2008. Tier One countries achieved a treatment success rate of 82 percent in 2007.[2] These achievements made an important contribution to the increase in global case detection to 62 percent in 2008 and the increase in treatment success to 86 percent in 2007, because the Tier One countries include most of the world's high-TB burden countries. In these countries, the 2008 TB prevalence and mortality rates were, respectively, 26 and 21 percent lower than in the 1990 baseline year of Stop TB's Global Plan, demonstrating good progress toward the goal of a 50 percent reduction by 2015.

The number of new smear-positive TB patients successfully treated in USAID Tier One countries increased from 1,264,100 in 2006 to 1,329,455 in 2007 (figure 4). In addition, 11,700 patients with MDR-TB initiated treatment. Expanded DOTS and MDR-TB services, the engagement of private sector health care providers, community-based activities, and extensive capacity building were the key factors in this progress. USAID also trained more than 63,000 health workers in DOTS and other components of the Stop TB Strategy.

Figure 4: Trends in DOTS Treatment Success Rate, Globally and for USAID Tier 1 (Priority) Countries, 2001–2007



Source: WHO Global Tuberculosis Control Report Update, 2009

In **Mozambique**, USAID helped expand community-based DOTS from eight to 16 districts and provide MDR-TB diagnosis and treatment. Community volunteers referred 11,516 persons with TB symptoms to health facilities; 2,197 of these referrals were diagnosed as positive and began treatment. USAID also helped the national TB program train clinicians and develop a manual on programmatic management of drug-resistant TB; train clinicians on infection control; and begin treatment for nearly 300 MDR-TB patients. USAID also supported renovation of a reference laboratory in the northern part of the country, thus increasing access to culture and drug sensitivity testing. In partnership with the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), renovations also started at the national reference laboratory in Maputo.

In **Indonesia**, USAID addressed gaps that stood in the way of MDR-TB services. USAID supported the development of a national MDR-TB response plan, guidelines, and training materials, and helped five reference laboratories achieve international standards for culture and first-line drug sensitivity testing. Infection control assessments were conducted in 16 facilities, and environmental and engineering improvements were made in two pilot hospitals for programmatic management of drug-resistant TB. Laboratory technicians were trained in the HAIN test for MDR-TB, and if the validation is successful, the test will be rolled out to enable more rapid MDR-TB diagnosis. Enrollment of patients began in August, with activities also under way to introduce e-TB Manager.

2 WHO's Global Tuberculosis Control Report 2010 reports data from 2008 for case detection and 2007 for treatment success.

Jan van den Hornbergh/Stop TB

Children in Ethiopia read an information leaflet on TB.

Increasing Impact through Strategic Coordination and Integration

USAID is making great strides to integrate TB programs with other community development activities while also contributing to the success of grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria. In India, USAID funded the TB Advocacy, Communications, and Social Mobilization Project, which targets 80 high-TB burden districts in 14 states with a population of 176.6 million. The dual goals of the Project, commonly known as the "Jump Start Project," are to 1) accelerate integration of TB activities into areas such as maternal and child health and women's empowerment and 2) pave the way for a grant from the Global Fund. Led by the NGO TB Consortium, the Project has engaged smaller NGOs and community-based organizations to integrate TB activities into their work. The results have been impressive. In 2009, the Consortium engaged 984 nongovernmental and community-based organizations; 971 community support groups were formed; nearly 39,000 persons with TB symptoms were referred for tests; and almost 2,900 persons were diagnosed with TB and began treatment. USAID also helped the Consortium prepare a Global Fund Round 9 grant proposal, and India's Country Coordinating Mechanism selected the Consortium to be a principal recipient. The approved grant mobilized approximately $69 million for community-level activities.

Addressing TB-HIV/AIDS co-infection is a key component of USAID's TB program. In **Tanzania**, where approximately 47 percent of TB patients are HIV positive, USAID and PEPFAR expanded their TB-HIV/AIDS collaborative activities. Health personnel were trained in HIV counseling and testing, and HIV testing services were colocated in health clinics near TB services. In 2009, 136 public and private service facilities began TB-HIV/AIDS activities, bringing the number of such facilities to 457. More than 93 percent of 18,682 new TB patients were tested for HIV, exceeding the national target of 80 percent.

USAID also supports strategic TB-related research. In 2009, USAID helped the Global Alliance for TB Drug Development, a public-private partnership, continue Phase II and III clinical trials of three drug regimens aimed at shortening TB treatment. A protocol to evaluate the efficacy of a nine-month standardized treatment regimen for MDR-TB (shortened from the current 1.5-year regimen) was completed and endorsed by WHO and other global partners.

Avian Influenza and Other Emerging Threats

Bats, rodents, and nonhuman primates are major sources of new zoonotic diseases, as they interact closely with humans and their domestic settlements. This bat was photographed near a residential area in Siem Reap, Cambodia.

Following outbreaks of the H1N1 influenza virus that first appeared in Mexico and spread rapidly across the globe, in June 2009 WHO declared the world's first influenza pandemic in 40 years. Building on programs and partnerships developed since 2005 to combat highly pathogenic H5N1 avian influenza and bolster pandemic preparedness, USAID responded immediately with support for global outbreak control efforts. While the H1N1 virus has remained relatively mild, vigilance is of utmost importance, particularly in areas where H5N1 is endemic, because a combination of the two subtypes could generate a new pandemic virus.

Significantly, both H1N1 and H5N1 – as well as diseases such as HIV/AIDS and severe acute respiratory syndrome – highlight the dynamics that increase the risk of zoonotic diseases (diseases of animal origin) impacting human health. In fact, research shows that most new, emerging, or re-emerging diseases currently affecting humans have originated in animals. The speed with which these diseases can emerge and spread presents serious public health, economic, and development concerns.

To address these concerns, USAID launched its Emerging Pandemic Threats (EPT) program in 2009. The program expands on the successful platforms developed for the H5N1 and H1N1 responses to build capacity in geographic "hot spots" where disease emergence is most probable in order to pre-empt or combat, at their source, newly emergent zoonotic diseases that could pose a risk to human health.

With the introduction of the EPT program, USAID's strategy for avian influenza and other emerging threats includes the following lines of activity:

- Preventing and controlling H5N1 outbreaks among animals and minimizing human exposure
- Strengthening global preparedness for a severe pandemic
- Supporting response to 2009 H1N1 pandemic influenza and monitoring for changes in the disease that could impact its severity
- Increasing surveillance and response capacity in geographic hot spots for newly emergent zoonotic disease threats

In implementing this strategy, USAID collaborates with other U.S. Government, international, NGO, and private sector partners to ensure program activities are technically sound and well coordinated.

H5N1 Avian Influenza

At the peak of its spread in 2006, H5N1 was reported in 53 countries. By the end of 2009, the number of countries affected had declined to 12, nine fewer than in 2008. Total poultry outbreaks declined from 535 in 2008 to 260 in 2009, down from 1,342 during peak levels in 2006.

Although reported cases of human infections increased in 2009 from 2008 – perhaps a result of better surveillance – deaths resulting from H5N1 infection remained basically constant, down from the 2006 peak of 115 cases and 79 deaths (table 2). Detection of H5N1 outbreaks in birds was faster in 2009, with the median number of days for laboratory confirmation after an H5N1 outbreak declining to three days from 14 days during peak levels in 2006. USAID continued to supply countries with personal protective equipment for surveillance workers and first responders and transported approximately 600,000 sets to 38 countries in 2009.

The geographic range of highly pathogenic H5N1 avian influenza remained well contained in 2009, with 95 percent of poultry outbreaks and 99 percent of human cases occurring in just five countries (Bangladesh, China, Egypt, Indonesia, and Vietnam). USAID remained committed to fighting H5N1 in these countries, with concentrated efforts to increase awareness and strengthen disease surveillance and response capacity. In **Egypt**, improved community outreach and disease surveillance contributed to earlier detection and treatment of human cases, resulting in a dramatic reduction in the case fatality rate from 56 percent in 2006 to 10 percent in 2009. In **Indonesia**, a USAID-supported mass media campaign to raise H5N1 awareness reached more than 100 million people. In an area where nearly 70 percent of Indonesia's cases have been reported, community empowerment activities increased risk reduction practices.

USAID and its partners expanded poultry surveillance across nearly 50 percent of **Bangladesh** and piloted cleaning and disinfection programs in live bird markets. These programs significantly decreased the H5N1 virus' ability to infect new hosts. Cleaning and disinfection activities were also introduced in **Egypt** and **Indonesia**. Activities to track the movement of poultry from farms through live bird markets in **China** and **Indonesia** strengthened detection and response, and good poultry production practices were introduced in **Vietnam**.

Pandemic Preparedness

With the threat of the H5N1 virus possibly mutating into a devastating pandemic strain, USAID invested in global pandemic planning and preparedness well before the 2009 H1N1 pandemic. Through its Humanitarian Pandemic Preparedness (H2P) Initiative, USAID supported activities to mitigate humanitarian needs and excess mortality in areas most vulnerable to a pandemic. Comprehensive national- and community-level plans for effective humanitarian response

Table 2: Results of the USAID Response to H5N1

Year	Countries Reporting H5N1	Poultry Outbreaks	Human Cases	Human Deaths	Detection Time from Suspected Outbreak in Birds to Disease Confirmation (median number of days)
2006	53	1342	115	79	14
2007	32	612	88	59	5
2008	21	535	44	33	7.5**
2009	12	260	73*	32	3

*Increase due to detection of more cases in Egypt, possibly as a result of better surveillance. **The 2008 increase is primarily due to a high median detection time (3.5 days) in Bangladesh, which accounted for more than half of the data. If the Bangladesh data are subtracted, the median detection time for 2008 was four days.

Source: Based on reports from the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations, and WHO.

were developed through collaborations with the International Federation of Red Cross and Red Crescent Societies, United Nations agencies, international NGOs, private sector partners, and national governments. These included training first responders in order to build capacity for a fully deployable local pandemic response. USAID also collaborated with the U.S. Department of Defense to provide technical assistance for military-to-military policy reform, pandemic planning, and operational readiness for countries in Asia and Africa.

When the 2009 H1N1 influenza pandemic struck, USAID activated pandemic preparedness plans that H2P had developed in targeted countries. Activities emphasized nonpharmaceutical interventions, including identifying most-at-risk populations; training staff and volunteers to identify H1N1 symptoms and provide home care for the ill; and providing response-related tools and information to governments, civil society organizations, and NGOs. USAID also provided communities with prevention messages to reduce disease spread and limit mortality.

Communication Project Targets H1N1 in Egypt

"CHL has been doing incredible work on H1N1. Communication has been the best part of Egypt's response."

– Executive director of Epidemiology and Disease Surveillance Unit, Egyptian Ministry of Health

As H1N1 outbreaks spread across the world in the first half of 2009, USAID's Communication for Healthy Living (CHL) project in Egypt foresaw the need to mobilize immediately and disseminate public information about H1N1. Working with Egypt's Ministry of Health, CHL adapted a public service announcement on influenza prevention and pandemic readiness to the reality of impending H1N1 and used it to develop a full-spectrum media campaign. When WHO raised the global pandemic alert level in late April, CHL delivered – in three days – nearly 3 million posters and brochures about H1N1, with an additional 2 million distributed in the following three months. Materials featuring the familiar characters and messages contained in the public service announcement were posted on buses and subways, handed out at international airports and ports, hung in aisles in supermarkets, and placed on pharmacy counters. In May, the campaign presented information at 300 meetings for public and local leaders. By the time WHO declared the H1N1 pandemic in June, the announcement had reached two-thirds of all television viewers in Egypt. CHL then worked with one of Egypt's largest mobile phone companies to send text messages with H1N1 prevention tips to 4 million subscribers.

In the following months, CHL and its partners continued the campaign, disseminating messages at village events, summer camps, university campuses, and private sector workplaces. The campaign reached more than 1,000 community health workers, pharmacists, physicians, and nurses at training events. Additional outreach continued throughout the summer, reaching 300 employees in workplace wellness programs and more than 6,000 youths at summer camps. At the end of the summer, CHL and the Egyptian Government produced 53,000 H1N1 education kits for delivery to grade schools throughout the country and 7,000 for universities.

Claudia Wiens, CHL

A teacher at Coptic College for Girls in Cairo discusses information presented in a poster on flu prevention produced by USAID's Communication for Healthy Living project in Egypt.

Pandemic Response

USAID provided immediate financial and technical assistance to WHO and the Pan American Health Organization to support outbreak response and surveillance activities to characterize the the pandemic H1N1 virus' transmission dynamics. USAID also provided 150,000 sets of protective equipment, two-thirds of which were delivered to **Mexico** within 48 hours of the request. In line with President Obama's pledge of international vaccine assistance, USAID supported WHO in providing vaccine to developing countries and assisting in planning, logistics and cold chain transport, procurement and delivery of ancillary vaccine supplies (including syringes, needles, and safety boxes), training, and development of communication materials. USAID also supported WHO's Global Influenza Surveillance Network in strengthening surveillance, laboratory capacity, transport of samples, local planning, and post-marketing surveillance of vaccination efforts. USAID placed particular emphasis on monitoring changes in the virus that could indicate changes in its severity.

Emerging Pandemic Threats Program

Using a risk-based approach and drawing on expertise from the animal and human health sectors, the EPT program builds on USAID's experience and successes in surveillance, training, and response to diseases like H5N1 and H1N1 influenza. The program includes several comprehensive projects that work harmoniously to provide technical assistance and expertise in geographic hot spots where zoonotic disease threats are likely to emerge, including the Congo Basin of East and Central Africa, the Mekong region and other hot spots in Southeast Asia, the South American Amazon region, and South Asia's Gangetic Plain. EPT is partnering with the U.S. Centers for Disease Control and Prevention and the U.S. Department of Agriculture to build robust coordinated outbreak surveillance and response capacities in hot spot areas. This includes supporting field epidemiology and training programs and laboratory strengthening. These efforts are critical to the sustainability of long-term pandemic prevention and preparedness and will develop predictive models for identifying future viral and other biological threats.

EPT's areas of emphasis are:

- Expanded surveillance for wildlife pathogen detection
- Development of laboratory networks and strengthened diagnostic capacities in geographic hot spots
- Characterization of potential risks and methods of disease transmission
- Promotion of healthy behavior change and communication approaches to reduce disease threats
- Integration of a multisector approach to public health objectives
- Support for timely and sustainable outbreak response capacity by animal and human health workers at the country level
- Promotion of actions that eliminate the potential for the emergence and spread of new disease threats

As EPT develops, its investments in disease detection and response will also benefit the management of diseases such as malaria, cholera, and meningitis. These contributions support tenets outlined in WHO's International Health Regulations and the international health standards of the World Organization for Animal Health.

Neglected Tropical Diseases

A boy in Burkina Faso receives praziquantel, procured with USAID funds, for treating schistosomiasis.

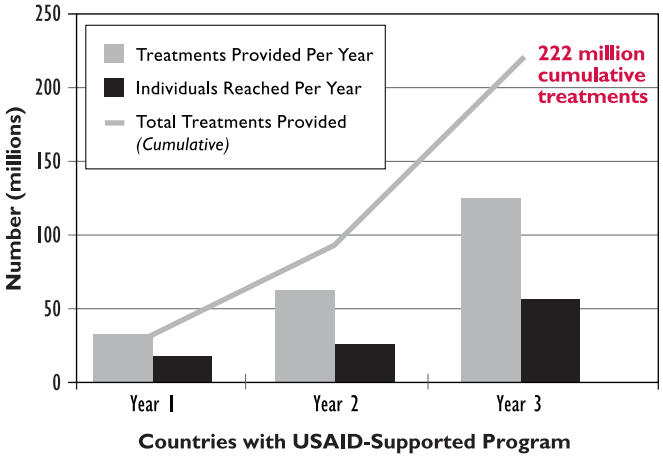
USAID's Integrated Neglected Tropical Disease (NTD) Program is the largest global effort ever to deliver safe and effective drugs on a massive scale to target NTDs in some of the world's poorest and most remote populations. With a congressional earmark of $15 million, the USAID program delivered 127 million treatments to more than 55 million people in eight countries in FY 2009, bringing the total number of treatments delivered since the program began in 2006 to 222 million. The Program, which now covers 14 countries, has achieved this rapid start by building on existing country-level capacity for implementation and service delivery platforms, including school-based health programs, child health days, and community volunteer networks.

With pharmaceutical companies donating most of the treatment drugs, the Program is also one of the largest global public-private partnerships to integrate disease-specific treatment programs in order to expand care to millions of people. The diseases targeted by USAID's program include lymphatic filariasis, schistosomiasis, onchocerciasis, blinding trachoma, and soil-transmitted helminthiasis. These diseases are targeted as a group for several reasons:

- Safe and effective drug treatment exists for each disease.
- Most of the drugs are donated by pharmaceutical companies.
- Individual diagnosis is not required – entire communities[3] can be treated through mass drug administration conducted only once or twice per year.

3 This refers to eligible people within communities.

Figure 5: Treatment Scale-Up in NTD Control Program Countries, Years 1–3



Source: USAID NTD Control Program

- The drugs can be safely administered by nonhealth professionals, such as trained community volunteers and teachers.
- The drugs can be delivered through existing platforms at the country level through an integrated approach.

In 2009, the value of the donated drugs exceeded $500 million. In response to the U.S. Government investments in NTD control and the increased capacity now present in many high-burden countries, several of the pharmaceutical partners have expanded their donation programs.

The success of USAID's NTD program is based on:

- Integrated control of NTDs through mass drug administration
- Country ownership combined with specialized technical support for disease-specific country programs
- Partnerships with pharmaceutical donation programs
- State-of-the-art integrated NTD control tool development
- Translation of successes into program scale-up and policy formulation

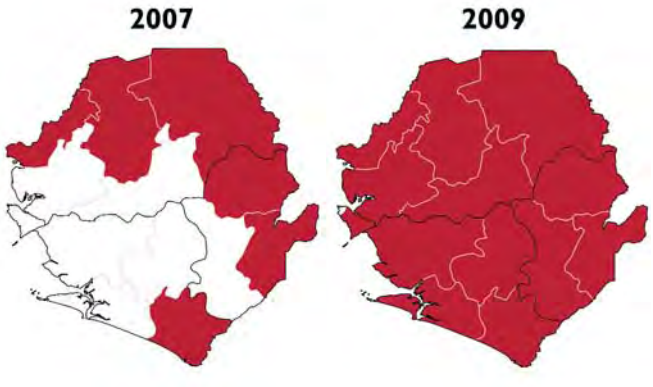
The Program contributes to the GHI objective of reducing the prevalence of seven NTDs by half among 70 percent of the affected population, contributing to the elimination of leprosy, onchocerciasis in Latin America, and lymphatic filariasis globally.

NTDs affect both genders, and coverage results consistently demonstrate that the USAID program is reaching women and men equally. Average coverage rates in USAID-supported countries were greater than 85 percent of the population eligible for treatment. More than 221,500 workers were trained at the central, regional, and district levels. In addition to drug distributors, who made up approximately 90 percent of the trainees, a cadre of nearly 23,000 trainers, laboratory technicians, surveyors, program managers and finance staff from ministries of health, monitoring and evaluation specialists, and supervisors received training, a significant human capacity resource for integrated NTD control in Africa.

USAID funding has helped national programs increase treatment coverage and bring their efforts to national scale (figure 5). In **Burkina Faso**, the number of endemic districts benefiting from preventive chemotherapy for trachoma went from zero in 2006 to 18, or half of the 36 endemic districts, in 2009. In **Niger**, preventive chemotherapy for lymphatic filariasis, which USAID support helped initiate in 2006, was implemented in 72 percent (21 of 29) of endemic districts in 2009. Even in **Sierra Leone**, a post-conflict country, USAID's NTD program has dramatically expanded drug coverage. In 2009, Sierra Leone's national NTD control program succeeded in treating the entire country (with the exception of urban Freetown, which was slated for treatment in 2010) with one or more NTD medicines (figure 6).

In **Uganda**, mass drug administration for NTD control and elimination is embedded as part of Child Days Plus, a national initiative to integrate child health interventions in primary schools. By coordinating planning, teacher training, health personnel support, and distribution schedules, the strategy aims to mitigate redundant costs and facilitate access to health care. In FY 2009, USAID enabled approximately 3.6 million children to receive cost-effective treatment for lymphatic filariasis, 3.2 million for soil-transmitted helminthiasis, 1.7 million for schistosomiasis, 1.2 million for trachoma, and 1.1 million for onchocerciasis.

Figure 6: Expanded Drug Coverage in Sierra Leone before and after USAID Assistance, 2007 and 2009



Source: USAID NTD Control Program

"I used to think that having a big stomach was a sign of having enough food in the house and that you fed your children well. Now I have come to know that big stomachs can mean that my child has worms. The health education I received has helped me realize that though I may look healthy, I may have bilharzia [schistosomiasis], which will gradually make me sick."

– Daniel Deng Deng, 62, a resident of Maker village in Southern Sudan

Urban populations are particularly challenging to reach with NTD treatments. Tracking the whereabouts of those eligible for treatment can be difficult because of frequent population movements. Strategies that are successful in rural areas, such as distributing drugs house to house, are less effective in the urban context. USAID's NTD program has responded by using alternative drug distribution sites at fixed locations, including schools, health centers, and public places, as well as door-to-door distribution to homes and workplaces. Engaging high-level community leaders to advocate and campaign for the Program at mosques, churches, city halls, and conferences has also been effective. These leaders can also encourage residents to volunteer as drug distributors.

Community Group in Mali Takes Ownership of NTD Treatment Efforts

The 15,000 inhabitants of Cinzana, Mali, are spread over 39 villages in an area with a high burden of NTDs. When, in partnership with the Mali Ministry of Health, USAID's NTD control program was launched in 2007 to help communities distribute NTD drugs, it became obvious that reaching every person in Cinzana eligible for treatment would be a difficult undertaking. For example, poor road infrastructure makes it difficult to reach outlying villages, especially during the rainy season.

The community realized the importance of the NTD health initiative, however, and recognized that more people could be treated faster and more efficiently if there were more community drug distributors available to provide treatments. In response, the local community health association mobilized an additional 200 drug distributors and equipped them with materials such as notebooks, pens, and dosing poles (wooden poles with markings used to determine correct drug dosage). Everyone from the director to the security guard of the NTD program supported the association's efforts by volunteering to prepare tablet poles and patient registers.

At the end of drug distribution in 2009, Cinzana achieved outstanding results, with 100 percent geographic coverage. The community, with its sacrifice of human and material resources, succeeded in taking ownership of NTD control efforts and in doing so enhanced national efforts. Cinzana has pledged to continue its support of the USAID program and achievement of its goals.

■ *Tsion's radiating smile leaves little doubt that she is a strong, happy, successful woman.*

Urban Garden Program Propels Single Mother in New Directions

Four years ago, Tsion was a homemaker in Ethiopia caring for her three children while her husband brought in the sole income. Tsion's life changed dramatically when her husband left after admitting that he was HIV positive. Learning that she too was HIV positive, Tsion struggled with her illness and was bedridden for several months. After trying traditional medicines with no effect, Tsion began antiretroviral therapy upon the advice of a local nurse. She also began to participate in USAID's Urban Gardens program, which encourages self-sufficiency by providing education on gardening techniques, health, and nutrition as well as tools needed to start a garden.

Almost immediately, Tsion felt mental relief because her life again had purpose. "Spending time in my garden relieves my mind. ... The only time I feel infected is when I take my pills," she says. She continued to face daily discrimination, however. Undeterred, Tsion tackled this by holding weekly meetings at a local church to educate the public on HIV/AIDS. She understood she could fight ignorance by setting a positive example.

With the 200 birr a month (around US$16) her garden harvest provides, Tsion has diversified her income. Partnering with other landowners Tsion increased the size of her garden and her salary. Today, she sells sheep at the local market, seedlings to other gardeners, and compost to flower shops. She also bakes bread for religious ceremonies.

Through her efforts to educate the community and her many business endeavors, Tsion has changed her community. "These days there is no problem," she says. "I am valuable to this community."

Not only has Tsion been able to educate her community, she also sends her three children to school, and, perhaps most impressively, pays her own tuition to study law at a local institution. Twenty-four years after leaving high school, she will graduate in less than two years.

HIV/AIDS

KEY RESULTS

In FY 2009, USAID managed $2.2 billion, or more than 55 percent, of the funds of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). With USAID support, key PEPFAR results included the following:

- 2.5 million patients received antiretroviral treatment.
- 7.4 million HIV-infected individuals received care and support services.
- 7.3 million pregnant women received HIV counseling and testing services, and 510,000 HIV-positive pregnant women received antiretroviral prophylaxis, preventing 97,000 infant infections.
- 3.6 million orphans and vulnerable children received support.

According to the Joint United Nations Program on HIV/AIDS, 33.4 million people worldwide were living with HIV in 2008, about half of them women. Children under age 15 account for one in seven AIDS-related deaths and one in six new HIV infections – the vast majority through mother-to-child HIV transmission. The epidemic appears to have stabilized in most regions, although prevalence continues to rise in Central Asia and Eastern Europe. Sub-Saharan Africa is most affected, accounting for 71 percent of new infections in 2008. Some national epidemics are expanding as the overall regional incidence stabilizes. In southern Africa, incidence appears to have peaked in the 1990s, and in most countries, prevalence has stabilized. In rural Angola, however, HIV incidence continues to rise.

Investments in the global AIDS fight remain necessary. Millions of children have been orphaned by AIDS. Women and girls continue to face disproportionate impacts of new infections. Most-at-risk populations, including sex workers, men who have sex with men (MSM), and injecting drug users, continue to face stigma that limits their ability to obtain services.

In this climate of a changing global epidemic, the U.S. Government renewed its commitment to fighting HIV/AIDS in 2008 with the reauthorization of PEPFAR under the Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008 (Public Law 110-293). This second phase of PEPFAR is committed to strengthening multilateral collaboration and cooperation and more fully incorporating principles of the Paris Declaration of Aid Effectiveness. These include donor support of partner country

"My children will be witness to how strong I can be with this disease and what can be done."

– Tsion, a single mother in Ethiopia

ownership and shared accountability for results. These goals are key to PEPFAR's new "Partnership Framework" process, which promotes a more sustainable approach to fighting AIDS at the country level. Partnership Frameworks provide a five-year joint strategic framework for cooperation among the U.S. Government, the partner government, and other partners to combat HIV/AIDS in the partner country through service delivery, policy reform, and coordinated financial commitment. Angola, Lesotho, Malawi, and Swaziland have Partnership Frameworks, and several other countries are in the process of creating frameworks. GHI builds on many of the lessons learned from the PEPFAR approach and aligns with Partnership Framework principles.

PEPFAR's goals are to:

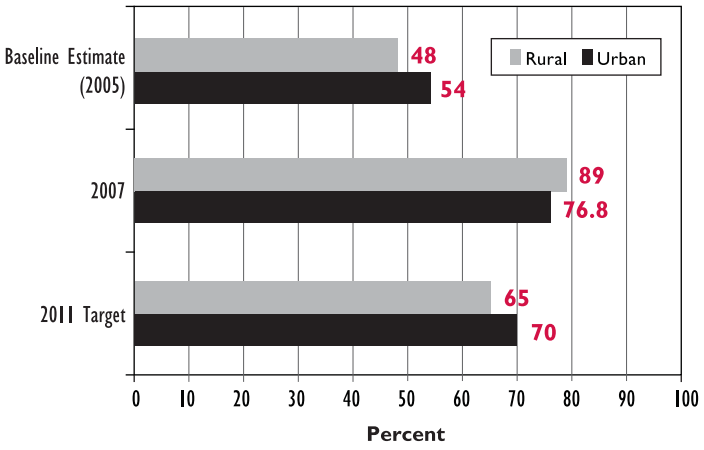
- Transition from emergency response to promotion of sustainable country programs
- Strengthen partner government capacity to lead the response to the epidemic and other health demands
- Expand prevention, care, and treatment in both concentrated and generalized epidemics
- Integrate and coordinate HIV/AIDS programs with broader global health and development programs to maximize impact on health systems
- Invest in innovation and operations research to evaluate impact, improve service delivery, and maximize outcomes

Within these goals, PEPFAR will (1) support the prevention of more than 12 million new HIV infections; (2) provide direct support for more than 4 million people on treatment; and (3) support care for more than 12 million people, including 5 million orphans and vulnerable children.

In 2009, USAID, with an HIV/AIDS budget of $2.2 billion, supported programs in 63 countries and managed more than 55 percent of PEPFAR funds. The key components of its program included prevention, care and support, treatment, health systems strengthening, and strategic information.

Health workers in Uganda conduct HIV testing as community mobilizers look on.

Figure 7: Increase in Access to Counseling and Testing Services, Zimbabwean Youth (16 Yrs and Older), 2005–2007



Source: Population Services International/Zimbabwe

Prevention

Preventing HIV transmission remains a key challenge. USAID programs effectively target sexual transmission and the transmission of HIV through unsafe blood and medical injections. In 2009, USAID contributed to the prevention of sexual transmission of HIV by reaching 77.7 million people with critical messages on the "ABC" approach of Abstinence, Be faithful, and correct and consistent use of Condoms. USAID also contributed to PEPFAR's expanded services for prevention of mother-to-child HIV transmission (PMTCT). During 2009, PEPFAR supported PMTCT services for women during 7.3 million pregnancies, providing antiretroviral prophylaxis for 510,000 HIV-positive pregnancies, and prevented an estimated 96,900 newborn infections. Also during 2009, 21.2 million individuals received counseling and testing services in settings other than PMTCT. In **Zimbabwe**, the portion of the target population in rural areas reporting access to counseling and testing services increased from 48 percent in 2005 to 89 percent in 2007, surpassing the 65 percent 2011 target four years early (figure 7).

USAID projects tailored behavior change communication for prevention to different audiences and groups. In **Benin**, mass media campaigns and community outreach activities included radio, television, a youth magazine, and community awareness and education activities. Almost 300 NGO staff, community members, theater groups, and students received training in promoting HIV/AIDS prevention and conducting interpersonal and group activities with messages focused on delaying the start of sexual activity, correct and consistent use of condoms, and reducing the number of sexual partners. Community outreach activities reached more than 270,000 people, and more than 1 million were reached through radio, TV, print, and phone text messaging.

In **Swaziland**, where HIV prevalence is 26 percent, USAID is implementing a campaign to urge couples to be tested together, using love as a motivator instead of fear. The campaign is targeting men directly and attempting to change the stigma associated with being tested. More than 106,000 individuals, including 14,700 pregnant women, received counseling and testing. The campaign has resulted in a 25 percent increase in couples being tested and a 400 percent increase in overall testing.

In a number of countries, PMTCT services led to increased testing and antiretroviral treatment for pregnant women. In **Burundi**, nearly 60,000 pregnant women attending antenatal clinics received PMTCT services, and 44,000 of them agreed to HIV testing. Of those tested, 93 percent received their results and 96 percent of women who tested positive agreed to treatment to prevent HIV transmission to their infants. In **Cameroon**, the Cameroon Baptist Convention Health Board reached 95,900 pregnant women, of whom 98 percent agreed to be tested. The Board provides PMTCT services at 423 sites representing 70 percent national coverage. In **South Africa**, 666,100 pregnant women received counseling and testing services; 172,100 were tested for HIV; and an estimated 32,700 infant infections were averted.

Male circumcision is another promising strategy to prevent HIV infection. Fifteen PEPFAR countries requested $38 million in assistance for male circumcision activities in FY 2009. In **Kenya**, the Government, PEPFAR and the Bill & Melinda Gates Foundation implemented programs that circumcised approximately 50,000 males, with five mobile teams completing training at a new male circumcision research and training center. These teams trained 287 personnel in circumcision services at 28 facilities in Nyanza province. An estimated 60,000 circumcisions will be performed each year as a result of this training program.

USAID also supported prevention for populations at the highest risk of contracting HIV, including commercial sex workers, MSM, and injecting drug users. In **Ukraine**, USAID scaled up prevention services; reached nearly 200,000 injecting drug users, 33,000 people involved in commercial sex work, and more than 22,000 MSM; and supplied more than 62 million male condoms and 450,000 female condoms. USAID also facilitated policy achievements and legislation, including the national AIDS law, voluntary counseling and testing for most-at-risk populations, drug and commodity procurement, and support for vulnerable children.

In **Honduras**, USAID provided financial and technical assistance to 10 local NGOs to reduce high-risk behaviors among MSM, female sex workers, and the Garífuna population, an Afro-Caribbean population with 4.5 percent HIV prevalence. USAID's condom social marketing program reached nearly 202,000 people (including 82,000 women) with prevention messages. In the adult Garífuna population, condom use with an occasional partner rose from 32 percent in 2004 to 98 percent in 2009. The percentage of MSM who received counseling, testing, and test results increased from 68 percent in 2004 to 98 percent in 2009. Among female sex workers, testing increased from 53 to 99 percent.

Care and Support

In 2009, USAID played a key role in helping PEPFAR provide basic care and support services to 7.4 million people living with HIV. By training health care workers and colocating HIV/AIDS services with other health services, PEPFAR expanded access to care and support, with special emphasis on women and children. PMTCT was a critical area of convergence between HIV/AIDS and maternal and child health activities. In **India**, USAID supported state governments in mainstreaming HIV/AIDS activities into reproductive health and urban health interventions, with counseling and testing expanded in primary health care centers to improve women's access to HIV testing and PMTCT services.

Care and support services also serve as a critical link between counseling and testing and treatment. Care and support encompasses palliative care, services for orphans and vulnerable children, and nutrition support. In 2009, 3.6 million orphans and vulnerable children received support from the U.S. Government. In **Uganda**, the emphasis was on comprehensive care (including education, health, nutrition, livelihoods, protection, conflict, and psychosocial support) with a focus on improving quality of care through family-based approaches and strengthened linkages between facility- and community-based service providers. Crosscutting focal areas included scaling up education assistance, increasing access to care for HIV-positive children, leveraging private sector resources, targeting hard-to-reach communities, and building capacity of faith-based institutions. The program served 262,400 orphans and vulnerable children. In **Vietnam**, USAID support led to the passage of the National Plan of Action for Orphans and Vulnerable Children in June and the First National Symposium on Alternative Care in August.

In **Ethiopia**, USAID included nutrition assistance as part of care and support. The United States provided 8,304 metric tons of food for approximately 15,200 people receiving antiretroviral treatment; 2,300 pregnant women receiving PMTCT services; and 241,200 orphans and vulnerable children. The improved nutritional status of people receiving treatment

Health Systems Strengthening through Training of Health Workers and Decentralization

Central America: In Belize, Costa Rica, El Salvador, Guatemala, Nicaragua, and Panama, HIV services have been available only at primary-level hospitals in urban centers. Working with health ministries in each country to increase access, USAID supported the decentralization of HIV services to secondary hospitals and the development of performance standards for delivering decentralized care and treatment. The intervention contributed to notable changes in provider performance. A baseline assessment reported that participant hospitals achieved 55 percent, 35 percent, and 43 percent of performance standards for HIV services. A follow-up assessment demonstrated that those figures had risen to 90 percent, 84 percent, and 91 percent, respectively.

Central Asia: In Uzbekistan and Tajikistan, USAID cooperated with the ministries of health to build the primary health care system's capacity to provide HIV/AIDS services. This included training and educating providers on clinical aspects of HIV/AIDS, HIV prevention, and overcoming HIV/AIDS-related stigma and discrimination, with good results. In Tajikistan, trainee knowledge increased from 29 percent at the beginning of training to 85 percent at the end; in Uzbekistan, it increased from 43 to 85 percent.

Kenya: USAID supported activities with the Ministry of Health to implement an Emergency Hiring Plan for the public health sector to rapidly hire, train, and deploy 830 health workers to underserved rural health facilities. An analysis of evaluation data revealed enhanced services. Post-exposure prophylaxis availability increased from 74 to 100 percent of facilities. Outpatient voluntary counseling and testing availability increased from 75 to 84 percent of facilities, and outpatient PMTCT services increased from 85 to 94 percent of facilities.

Peer educators give basic literacy classes to fellow female sex workers as part of adult education in an HIV/AIDS program in Karnataka state, India.

increased their treatment adherence, and food distribution for children reduced stunting and school dropout.

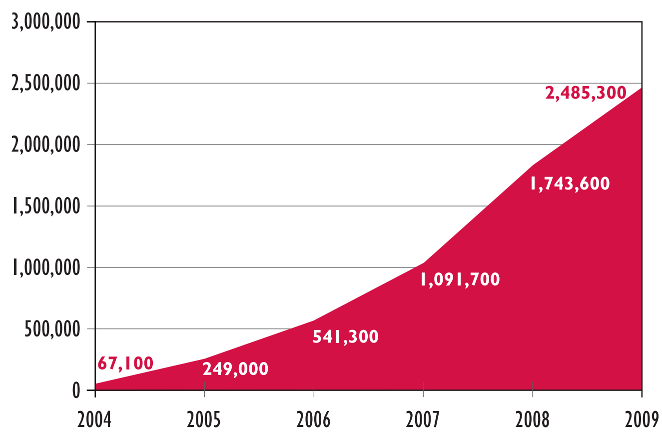
Through PEPFAR, USAID scaled up its support for care for opportunistic infections. HIV-TB co-infection is especially important because TB is the leading cause of death among HIV-positive people in the developing world. From FY 2005 to FY 2009, annual bilateral funding for HIV-TB activities increased from $20 million to $149 million, directly supporting TB treatment for nearly 309,000 HIV-positive patients through September 2009. In **Haiti**, more than 1,400 HIV-positive individuals diagnosed with TB are enrolled in TB treatment services. U.S. Government-assisted TB clinics tested 47 percent of their patients for HIV this year, compared with the national level of 18.5 percent. In **South Africa**, USAID developed and implemented a tool to encourage TB screening at HIV testing centers. About 75 percent of TB cases in 212 USAID-supported facilities received HIV testing, and 77 percent of HIV clients received TB testing.

Treatment

Since 2003, the number of HIV-positive people receiving treatment has increased significantly, with USAID supporting PEPFAR in providing treatment for nearly 2.5 million men, women, and children through September 2009 (figure 8). Pediatric treatment expanded rapidly in 2009 to 201,500 children, up from 85,900 in 2007.

To help partner nations increase their capacity to deliver treatment medications and supplies, a USAID project strengthened supply chains in 17 countries and supported about 1 million patients on antiretroviral treatment. To date, USAID has delivered $459 million worth of HIV-related

Figure 8: Number of People Directly Supported on Treatment by PEPFAR



Note: PEPFAR defines direct treatment support as treatment services provided through service delivery sites or providers directly supported by U.S. Government interventions or activities at the point of service delivery. An intervention or activity is considered to be direct support if it can be associated with counts of uniquely identified individuals receiving treatment services at a unique program or service delivery point benefiting from the intervention or activity.

Source: PEPFAR

© 2008 Bob Mungai/Photoshare

A group of women and young girls in Tanzania listens to an HIV/AIDS radio program as part of the Strategic Radio Communication for Development program.

commodities. USAID's HIV/AIDS activities also support child survival in a number of ways, including procurement of pediatric antiretroviral drugs and PMTCT medications. In 2009, USAID launched a new program to support food procurement by prescription, which is often provided to children. Food-by-prescription programs are now active in a number of countries, including **Ethiopia**, **Haiti**, and **Tanzania**.

In **Nigeria**, USAID is building on the success of an innovative program that pools procurement of antiretroviral drugs for all PEPFAR implementing partners. The program is expanding to include HIV test kits. In addition to the potential cost savings of pooled procurements, the partners are also collaborating on a cost-saving plan for coordinated commodity distribution.

Health Systems Strengthening

Through PEPFAR, USAID is helping developing countries build and sustain health workforces that can implement and sustain high-quality HIV/AIDS programs. One goal of this effort is to train an additional 140,000 health care workers. USAID is also addressing financing, service delivery, laboratory strengthening, institutional capacity, monitoring and evaluation, health information systems, pharmaceutical management, procurement, health governance, and public-private partnerships.

Strategic Information

As PEPFAR transitions to support sustainable country-led systems, it will attempt to strengthen the evidence base for HIV interventions. Good data are fundamental, serving as the basis for identifying the epidemic and appropriate responses and for documenting needs, activities, and results.

In 2009, USAID supported three separate but highly integrated strategic information technical areas: health management information systems, monitoring and evaluation, and surveys and surveillance. To improve monitoring and evaluation and policy decisionmaking, USAID supported nationally representative Demographic and Health Surveys and AIDS Indicator Surveys that collect data on HIV/AIDS knowledge, attitudes, and behavior data for 60 countries. USAID also supported the development and application of data quality assessment tools that measure data quality and identify the type of assistance and capacity building that could improve data collection and use. In **Tanzania**, the results of data quality assessments were used to develop technical assistance and capacity building plans with low-performing partners. A follow-up assessment will monitor changes in data quality.

USAID has established five regional training institutions in **Ethiopia**, **Senegal**, **India**, **South Africa**, and **Mexico** to deliver high-level monitoring and evaluation workshops in English, French, and Spanish. USAID also helped these institutions establish monitoring and evaluation tracks in their master degree programs and build their capacity to conduct workshops independently. In 2009, 135 people received training at eight regional workshops. Three of the institutions independently offered monitoring and evaluation courses as a result of capacity building efforts.

USAID's Regional Development Mission for Asia implemented a data analysis and advocacy project in **Thailand**, **Bangladesh**, **Vietnam**, and **China** to bridge the "evidence-policy divide," build sustainable capacity to develop clear understandings of HIV/AIDS epidemics, and translate these understandings into effective policies and programs. Teams from health ministries, disease control centers, provincial AIDS committees, and NGOs led a process of collecting and synthesizing data; modeling and projecting epidemics; assessing the impacts of program choices and resource allocations; and incorporating strategic information into action plans.


ACCESS/Nepal

■ *With a boost from "kangaroo mother care," the low-birthweight Rai twins are now thriving.*

"Kangaroo Mother Care" Saves Low-Birthweight Twins in Nepal

Four days after giving birth in Kathmandu to low-birthweight twins – the boy weighed just 3.7 pounds and the girl just 4.4 – Mrs. Rai and her husband brought the newborns to Kathmandu Medical College. There, USAID-trained staff taught both parents "kangaroo mother care" (KMC), which uses skin-to-skin contact to prevent hypothermia, facilitate breastfeeding, and stabilize the infant's heartbeat and breathing. After 17 days of KMC, both the Rai babies had gained weight, the boy up to almost 4.5 pounds and his sister to 4.8. When the Rai family returned home, they continued to receive support and advice from hospital staff, and by the time the twins reached 6 months of age, both weighed more than 14 pounds. The twins are now thriving.

Low birthweight is the most important indirect cause of death among newborns, and KMC can reduce neonatal mortality among low-birth-weight infants by 51 percent. As in the case of the Rai babies, USAID supports the use of KMC interventions in health facilities and their continuation at home with supervision.

Child Survival and Maternal Health

KEY RESULTS

- In a USAID project in the Sylhet area of Bangladesh, 11,711 (33 percent) of newborns received all three components of essential newborn care (clean cord cut, immediate drying and wrapping, and initiation of breastfeeding within the first hour) and 26,102 (74 percent) received a health checkup by a trained community health worker within three days of birth.
- Rwanda received a donation of 2.5 million doses of the pneumococcal vaccine Prevnar from Wyeth Pharmaceuticals to cover all children under age 1 and incorporated the vaccine into the national routine immunization program.
- In 15 of northern Nigeria's 19 states, increased engagement of state politicians and traditional leaders helped reduce the proportion of never-immunized children to less than 10 percent.
- In Afghanistan, endemic polio persisted in just 10 southern districts out of 329 districts nationwide. For the first time, the proportion of inaccessible children in the July and September immunization campaigns was reduced to 5 percent, down from more than 20 percent at the start of the year.
- In India, private sector sales of pediatric zinc products for treating child diarrhea increased by 46 percent in 2009, from 3.15 million courses to 4.6 million courses.
- In 2009, USAID's nutrition programs reached more than 18 million infants and young children across Asia, Latin America, and sub-Saharan Africa.
- In six countries, USAID programs targeting children under age 5 and other vulnerable populations increased point-of-use water treatment by 75 percent, from 595 million liters in 2008 to 1.05 billion liters in 2009.

For 40 years, USAID has helped children and mothers by providing lifesaving interventions during pregnancy, childbirth, and childhood. The Agency's programs have contributed to striking improvements, as deaths of children under 5 years of age fell to 8.8 million worldwide in 2008, down 30 percent from 12.5 million in 1990. Recent evidence suggests substantial declines in maternal mortality as well.

Disparities among regions and populations persist, however. While the proportion of births attended by a skilled attendant has increased globally, fewer than half of births in Africa and Southeast Asia have a skilled attendant present. While there has been success in improving child mortality, newborn deaths (deaths within the first 28 days of life) increased as a proportion of all child deaths, from 37 percent globally in 2000 to 41 percent in 2008.

USAID approaches these and other challenges by developing, introducing, implementing, and evaluating new high-impact interventions and programs while strengthening health systems. To achieve healthy pregnancy outcomes, USAID advances evidence-

based interventions in maternal and newborn programs that are feasible in low-resource environments, including:

- Family planning
- Birth preparation through antenatal care and household practices
- Safe delivery
- Postpartum and newborn care
- Treatment of complications

To protect child health, USAID supports:

- Immunizations
- Promotion of breastfeeding and appropriate quality and quantity of complementary foods
- Vitamin A supplementation and other nutrition interventions
- Community-level antibiotic treatment of pneumonia
- Diarrhea treatment with oral rehydration and zinc
- Improvements in water supply, sanitation, and hygiene

The U.S. Government's new Global Health Initiative addresses the challenges needed to improve maternal and newborn health outcomes and has identified the following goals and targets:

- Reduce maternal mortality by 30 percent across assisted countries
- Reduce under-5 mortality rates by 35 percent across assisted countries

A core objective of the Initiative is to improve health outcomes among women and girls, who are particularly vulnerable to ill health because of gender discrimination and reproductive roles. The primary motivation for improving their health is to safeguard their well-being. At the same time, given the central role of women in the health of families and communities, their health is intimately linked to the health of their own children and of future generations. Improving the health of women and girls, in addition to reducing maternal, child, and newborn mortality, will thus have long-term benefits.

Maternal and Child Health Support for "Critical Priority Countries" in Middle East and South Asia

USAID considers maternal and child health assistance a crucial part of development assistance to the "critical priority countries" of Afghanistan, Iraq, and Pakistan. In 2009, maternal and child health results reported from these countries included the following:

Afghanistan:

- The midwife workforce was three and a half times larger than in 2002, and 676 students were enrolled in midwifery schools. Five new schools were near to opening.
- Maternal and neonatal health standards benefited from USAID quality improvement initiatives.
- In July and September polio immunization campaigns, only 5 percent of children were inaccessible, down from more than 20 percent at the start of the year.

Iraq:

- A five-year maternal and child health project concluded, having carried out interventions in diarrhea control, infant and young child feeding, and integrated management of childhood illnesses.

Pakistan:

- USAID's maternal and child health program expanded to 14 new districts and increased its target population from 13 million people to 34 million. The program treated more than 934,000 cases of child pneumonia and 1.6 million cases of child diarrhea; trained 2,503 master trainers; and upgraded 152 health facilities.
- USAID supported 10 national polio immunization campaigns that vaccinated more than 32 million children.

Maternal and Neonatal Health

A recognition ceremony celebrates improvements in reproductive health care as a result of implementing the Standards-Based Management and Recognition quality improvement approach in Malawi.

JHPIEGO

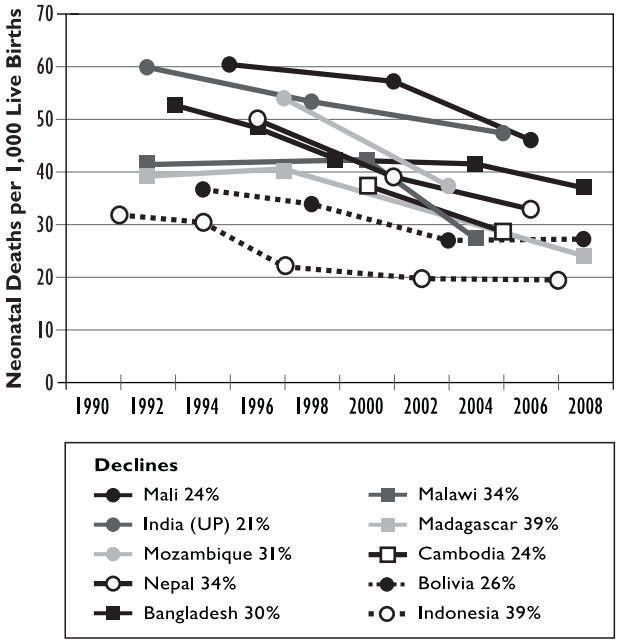
For more than two decades, USAID has saved the lives and improved the health of mothers and newborns in many of the world's poorest countries. Recent evidence indicates that substantial declines in maternal mortality over time have resulted. Since the early 1990s, USAID's newborn health programs have helped reduce neonatal mortality by 30 percent or more in six countries and between 20 and 30 percent in four others. Madagascar and Indonesia had the largest declines of 39 percent (figure 9).

Despite this progress, pregnancy and childbirth nonetheless remain leading causes of death and disability among women in developing countries, and neonatal deaths still make up half of all infant deaths. To rapidly and significantly decrease maternal and neonatal mortality and support the Millennium Development Goal of improving maternal health, USAID focuses on delivering high-impact interventions at scale to address the major direct causes of maternal and neonatal mortality while also strengthening health systems for long-term progress. USAID programs target the high-mortality complications of pregnancy and birth. For mothers, these include hemorrhage, pre-eclampsia and eclampsia, infections, and complications of unsafe abortion. For newborns, they include infections, asphyxia, and complications of prematurity and low birthweight.

USAID's strategy for mothers and newborns emphasizes scaling up low-cost, proven approaches to essential care and treatment of complications. Interventions are carried out through:

- Family planning to prevent unintended pregnancy

Figure 9: USAID-Assisted Countries with Greatest Declines in Neonatal Mortality, 1990–2008



Note: Data are for the five-year period preceding the survey. Only countries with a decrease of more than 20 percent are presented.

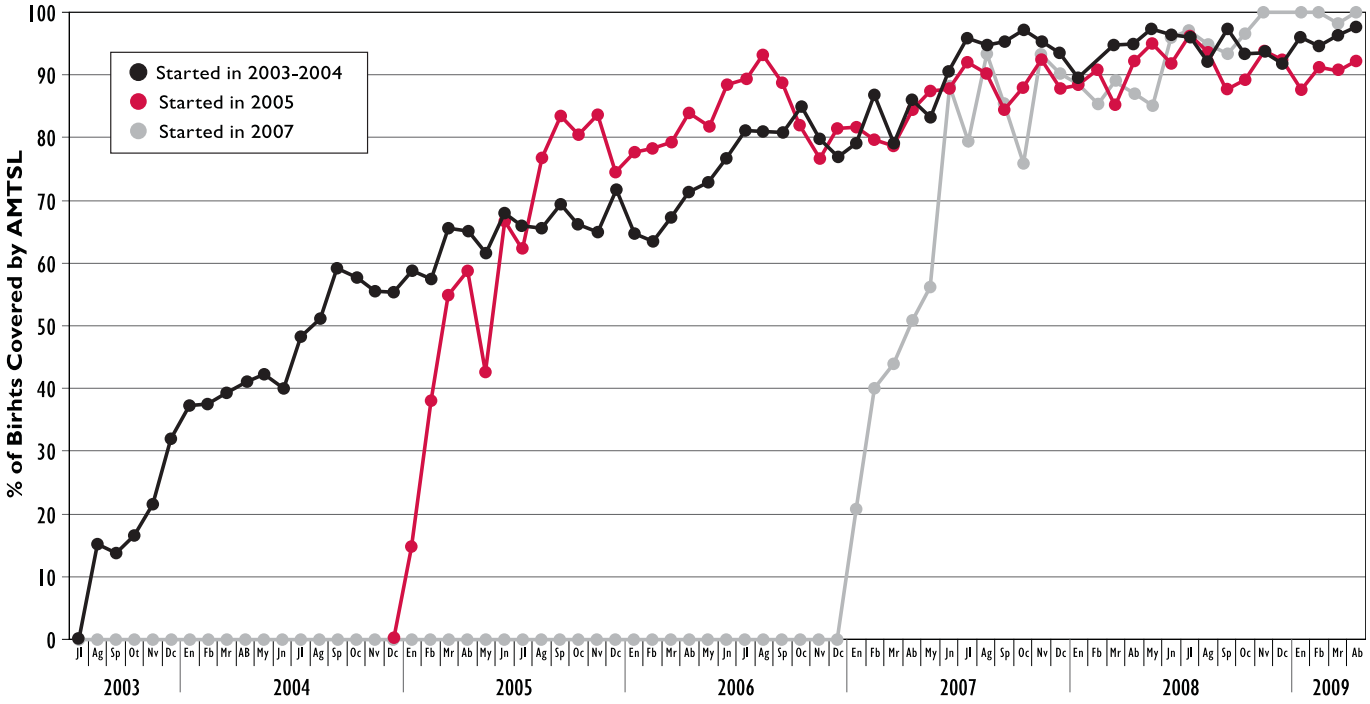
Source: Demographic and Health Surveys, 1990–2008

- Care during pregnancy, birth, and the postnatal period
- Care for obstetric and newborn complications and emergencies
- Health systems strengthening, including elimination of barriers of access to quality services
- Linkages with programs that address social and cultural determinants of maternal and neonatal mortality

USAID's programs for newborns target the three major causes of neonatal death: infections, asphyxia, and prematurity/low birthweight. In 2009, USAID supported high-impact interventions in 31 countries, including essential newborn care (consisting of clean cord care, immediate and exclusive breastfeeding, and warmth), infection management, and warming with "kangaroo mother care." USAID's strategy also focused on community-based approaches, systems strengthening, and private sector partnerships.

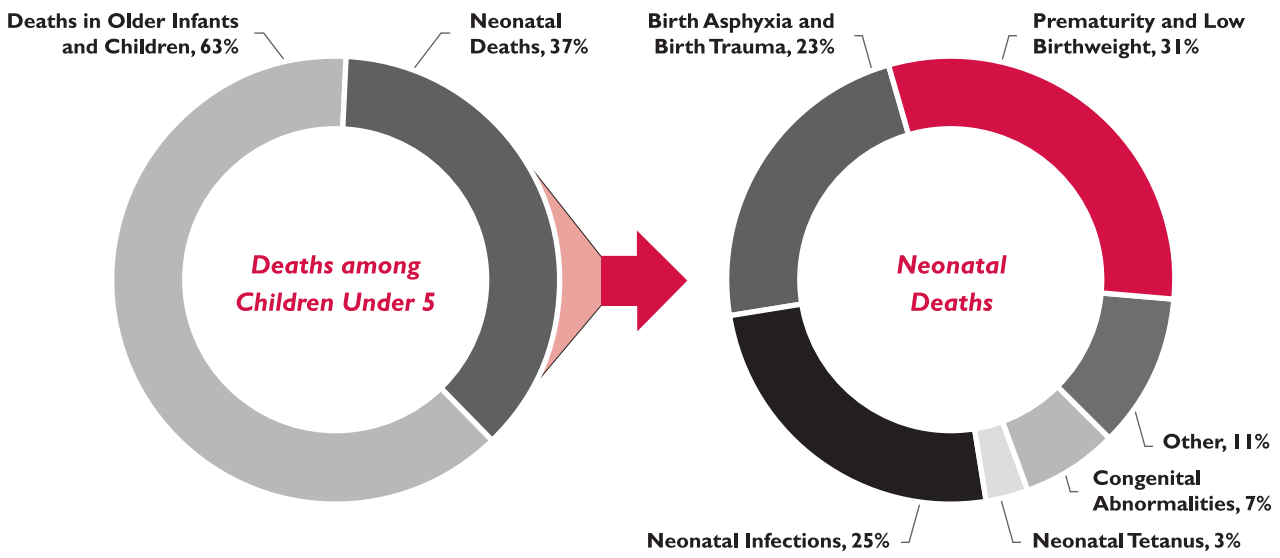
To prevent postpartum hemorrhage (the largest cause of maternal death), USAID programs provided oxytocin in pre-filled injection devices and misoprostol, which can be taken orally. Both drugs reduce the amount of blood lost during childbirth and placental delivery. In addition, programs in 21 countries expanded the use of "active management of the third stage of labor" (AMTSL), a proven low-cost, high-impact intervention that can decrease hemorrhage by 60 percent. In

Figure 10: Deliveries with Active Management of the Third Stage of Labor, Ecuador, June 2003–April 2009



Source: Health Care Improvement Project, USAID

Figure 11: Causes of Neonatal Deaths



Note: Neonatal death = death in first 28 days of life.
Source: WHO, The Global Burden of Disease 2004, Update 2008

Mali, USAID-supported research demonstrated that *matrones* (auxiliary nurse midwives) are capable of practicing AMTSL, resulting in a policy change authorizing them to provide it, including oxytocin injections. The number of providers trained and qualified in AMTSL is rising as nationwide training rolls out. In areas targeted by USAID, AMTSL coverage ranged from 65 percent in community health centers to 100 percent in reference health centers. In **Ecuador**, a phased approach has rapidly scaled up use of AMTSL to nearly 100 percent of deliveries in 86 hospitals in fewer than six years (figure 10).

While essential newborn care programs address major causes of neonatal mortality such as hypothermia and asphyxia (figure 11), preventing newborn infections is an area of special emphasis. USAID-supported research in **Nepal** has indicated that handwashing with soap by mothers, caretakers, health facility workers, and birth attendants can significantly decrease newborn mortality by reducing infections. To increase this practice in other countries, USAID coordinated a global alliance with Unilever to increase knowledge and practice of handwashing with soap by birth attendants and family members through culture-specific communication campaigns and behavior change strategies.

In 10 sub-Saharan African countries, USAID built on community- and facility-level relationships to support 14 professional and faith- and community-based organizations in mobilizing communities and increasing demand for and access to better maternal and neonatal services. Programs focused on preventing and managing postpartum hemorrhage, expanding antenatal care and malaria-in-pregnancy services, and increasing awareness of and care for obstetric fistula. They were designed to build capacity and use local connections to better reach communities.

In 2009, USAID's fistula repair program reached a major benchmark in surpassing 12,000 surgical repairs for women since the start of the program in 2005. USAID focuses on preventing fistula; identifying, referring, and treating women who have fistula; and reintegrating women who have undergone fistula repair into communities. To meet these goals, in 2009 USAID supported 34 surgery sites in 11 countries. USAID programs worked to raise community awareness about fistula and its prevention and to train midwives to conduct outreach and train other midwives. In rural **Uganda**, radio talk shows reached 1 million people, and 2,000 community members, including government officials, NGO members, and community leaders, were sensitized through community meetings and advocacy. Three districts drafted legislation to protect girls against circumstances that may lead to fistula, such as child marriage and early childbearing.

USAID also developed programs to train, retain, and recognize midwives and other personnel. USAID efforts reached

most midwifery schools and trained hundreds of tutors and preceptors in **Ghana**, **Ethiopia**, **Tanzania**, and **Malawi**. Technical support for preservice training included revising curricula, updating tutors and preceptors on high-impact maternal and neonatal interventions, upgrading effective teaching skills, and strengthening clinical training sites. In **Nicaragua**, USAID focused on preservice and in-service training in safe pregnancy and management skills. Maternal deaths in 10 hospitals that received USAID-supported training in essential obstetric care fell by 17 percent, compared with a 4 percent drop in non-USAID-supported hospitals. According to preliminary reports, neonatal deaths declined by 5 percent, the first decrease in nearly two decades.

In **Ukraine**, where maternal and infant deaths occur at twice the rate as in Western Europe, USAID technical assistance for maternal and infant care reached 80 percent of all regions of the country. USAID worked with the Ministry of Health to align perinatal practices with WHO recommendations and evidence-based practice. With strengthened preservice and postgraduate standards and curricula, 22 medical universities and training institutions implemented a new "effective perinatal care" curriculum. As a result, outcomes improved in nearly half of all deliveries in Ukraine in 2009, and the maternal mortality ratio fell by 2.9 percent from its 2005 level. In the **Kyrgyz Republic**, USAID collaborated with the United Nations Population Fund on a training-of-trainers program in order to build a national team to support training, mentoring, and policy development for perinatal care. The collaboration trained obstetricians, neonatologists, and midwives from oblasts with high mortality rates. USAID also supported the national roll-out of the Safe Motherhood program in collaboration with the Ministry of Health and other donors. As a result of these activities, 62 percent of maternity hospitals received training in effective perinatal care.


Save the Children

A midwife in Banda Aceh, Indonesia, examines a client.

USAID also supported information technology and services to improve maternal and neonatal care and outcomes. In **Jordan**, equipment was procured and installed in 10 hospitals in support of a perinatal information system, and staff members at the Ministry of Health received system training. In **Colombia**, four priority districts implemented a Web-based pilot study of real-time reporting of maternal mortality. To foster timely quality improvements, maternal deaths and autopsies are reported and hospital, community, and family deaths are audited within 45 days.

USAID also supported quality improvement initiatives that monitored and enforced standards of care in a variety of clinical areas and integrated health care services. In **Nigeria**, **Afghanistan**, **Kenya**, **Malawi**, **Nepal**, **Rwanda**, and **Tanzania**, USAID supported the Standards-Based Management and Recognition (SBM-R) quality improvement approach. The SBM-R tool is a list of verifiable standards that is adapted for

Training Programs Expand Midwife Workforce in Afghanistan

Maternal mortality has been recognized as a public health priority in Afghanistan since 2002, when the Ministry of Public Health was revitalized. In 2003, there were only 467 midwives in the country, and fewer than 10 percent of births were attended by a skilled birth attendant. With the second highest maternal mortality ratio in the world, the need was clear.

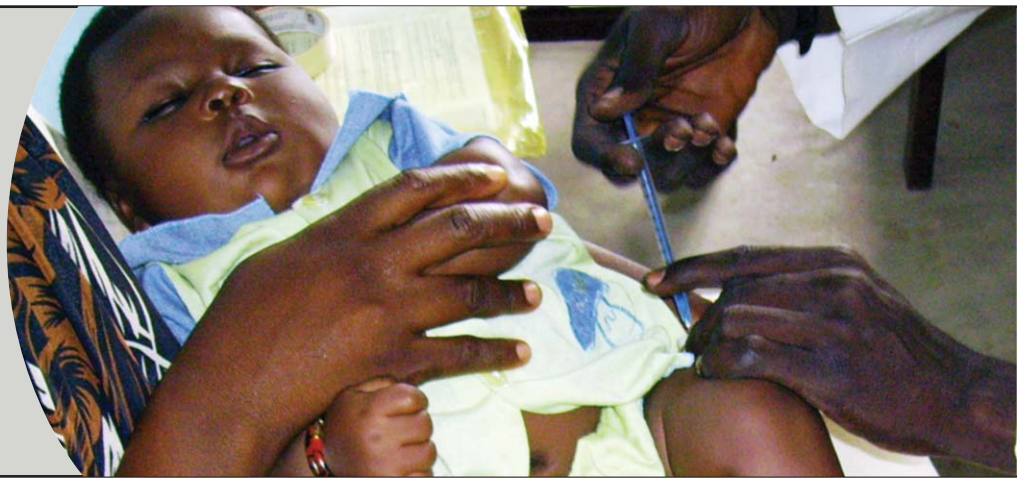
In response, major donors, including USAID, the World Bank, and the European Commission, supported two preservice programs to train and graduate new midwives.

Since 2002, 25 schools of midwifery serving 29 provinces have been established, with another five near to opening or becoming functional in another five provinces. By May 2009, the midwifery workforce had increased three-and-a-half-fold from 2002 levels. Furthermore, as of May 2009, an additional 676 students were enrolled as student midwives. So far, 85 percent of graduates have been deployed or taken employment, and of these, 86 percent were working as midwives.

a specific country through a process of stakeholder involvement and endorsed and applied by the ministry of health. Facilities can use SBM-R to analyze their performance against national standards. In **Nepal**, the SBM-R approach focused on treatment of severe pre-eclampsia and eclampsia. A baseline assessment of 22 sites revealed an average score of 26 percent against the standards; an endline assessment showed that 50 percent of sites had achieved 80 percent of standards. In **Malawi**, SBM-R was implemented for reproductive health services in 16 of 28 district hospitals and all four central hospitals. After six months, the six hospitals where SBM-R was initially implemented had moved from an average baseline score of 35 percent to an average of 71 percent.

Immunization

A child in Nigeria receives a vaccine during a routine immunization session.



Immunization is a proven cost-effective intervention that annually averts 2.5 million deaths among children under age 5. Each year, immunization programs reach more than 100 million children under age 1, protecting them against common childhood diseases such as diphtheria, pertussis (whooping cough), measles, polio, tetanus, TB, hepatitis B, and meningitis and pneumonia caused by *Haemophilus influenzae* type b (Hib). Annually, about 80 percent of children worldwide under age 1 receive three doses of the diphtheria-pertussis-tetanus (DPT) vaccine, and the ability to provide children with three DPT vaccinations (DPT3) is the general measure of how well an immunization program is functioning.

Despite the successes of immunization programs, nearly 20 percent of all children born every year do not get the complete set of basic immunizations scheduled for their first year of life. In 2009, WHO reported that 23.5 million children under age 1 did not receive the complete DPT3 series and that 2.65 million children under 5 years of age died from diseases preventable by vaccines (figures 12 and 13).

Childhood immunization is a major component of USAID's strategy to reduce infant and child mortality. USAID's primary investment in immunization is through the global GAVI Alliance.[4] From 2001 through 2009, USAID contributed $569 million to GAVI, as directed by Congress. GAVI is a partnership of developing-world and donor governments, multilateral organizations, private sector philanthropies, research and technical insti-

4 Other major GAVI supporters include WHO, UNICEF, the World Bank, and the Bill & Melinda Gates Foundation.

tutes, civil society organizations, financing entities, and vaccine manufacturers. GAVI's mission is to save lives and protect health by increasing access to immunization in poor countries.[5] It focuses on ensuring that vaccines with high potential to achieve progress toward the Millennium Development Goals are available to the world's poorest countries. Notable GAVI achievements, projected through the end of 2009, include:

- More than 257 million children immunized with GAVI-supported vaccines
- Nearly 4 million future deaths prevented with GAVI support
- An estimated 59.6 million children cumulatively supported with three doses of Hib vaccine, an increase of 20.8 million from the end of 2008
- An estimated 233.2 million children cumulatively provided hepatitis B vaccine, up from 194.4 million at the end of 2008

USAID is supporting GAVI in introducing pentavalent vaccines and rolling out pneumococcal and rotavirus vaccines against forms of high-mortality pneumonia and diarrhea that together kill approximately 1.25 million children under age 5 annually.

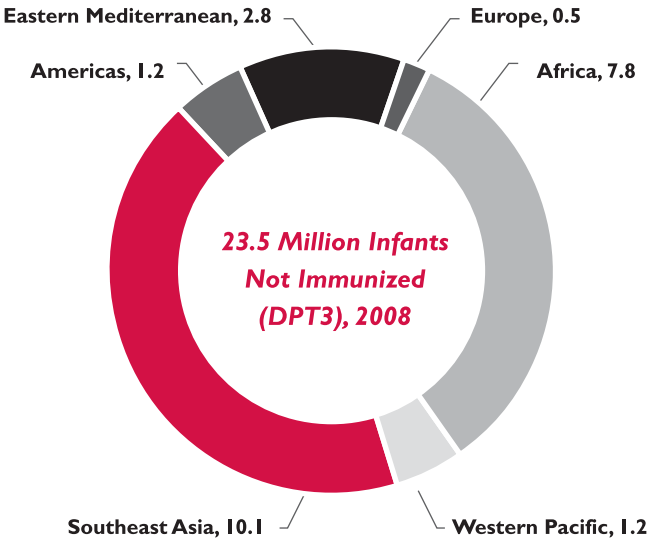
Outside of GAVI, USAID's immunization programs help countries make optimal, effective, and efficient use of their GAVI investments. USAID's immunization strategy has three critical elements:

- Targeting high-burden countries with large populations of underimmunized and unimmunized children
- Targeting children who are routinely missed due to fragile or ineffective routine immunization systems
- Providing technical assistance to help priority countries facing declining immunization rates address these declines

In **Southern Sudan**, USAID technical support in 2009 enabled the Ministry of Health to engage key stakeholders in drafting and reviewing the country's first national immunization policy. The policy elevates the country's Expanded Program on Immunization to priority status. USAID also provided technical assistance in creating terms of reference for program positions, management and service delivery guidelines, and job aids, thereby establishing a program structure that will enable health workers to perform their roles effectively and fulfill their responsibilities.

5 GAVI Alliance support currently focuses on the 72 countries with gross national income per capita of less than $1,000 per year (according to 2003 World Bank data).

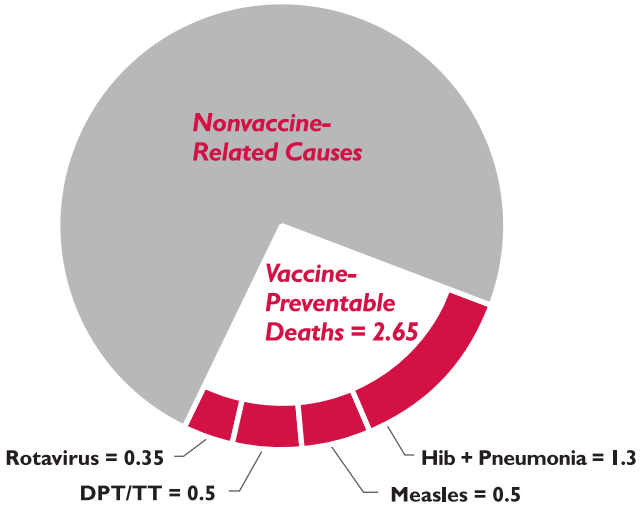
Figure 12: Infants Not Immunized (DPT3), 2008 (millions)



Source: WHO/UNICEF Coverage Estimates 1980–2008, July 2009

Note: Regional figures do not add to total due to rounding.

Figure 13: Vaccine-Preventable Deaths, Children under Age 5 (millions)



Source: IMMUNIZATION Basics, based on WHO, 2004

Rwanda Is First to Launch Pneumococcal Vaccine

On April 25, 2009, Rwanda became the first developing country to launch Prevnar, a vaccine that protects children from pneumococcal disease, the leading vaccine-preventable killer of young children worldwide. Pneumococcal disease kills more children than AIDS, malaria, and measles combined, and 90 percent of these deaths occur in the developing world. Rwanda received a donation of 2.5 million Prevnar doses from Wyeth Pharmaceuticals to cover all children under age 1 and incorporated the vaccine into the national routine immunization program. USAID, along with GAVI, WHO, UNICEF, and Wyeth, supported Rwanda's effort to reach all children under age 1 by the end of 2009 by providing a cold room facility, cold chain equipment, and technical assistance to the Ministry of Health. Rwanda's introduction of Prevnar promises to help it achieve a significant reduction in child deaths by 2015 and marks a major milestone for disease prevention in the developing world.

USAID assistance in **Uganda** and **Ghana** enabled the national immunization programs to reach high coverage by keeping vaccines safe and effective. To ensure potency, vaccines must be kept at specific temperatures through the stages of production, transport, and storage until use. Adequate, regular energy supplies are needed to keep vital "cold chain" storage equipment operating without interruption. USAID's financial support for purchasing cold chain equipment helped Uganda achieve 80 percent DPT3 coverage and Ghana 90 percent.

In **Russia**, USAID's partnership with the Rostropovich Vishnevskaya Foundation demonstrated the need to include Hib vaccination in the national vaccine calendar. Hib is the most common cause of bacterial meningitis in children under 5 years of age and the second most common cause of serious bacterial pneumonia in children worldwide. The Foundation garnered strong support for Hib vaccinations by demonstrating that Hib prevalence was significant in the Russian Federation and then piloted the Hib vaccine in three regions to demonstrate its effectiveness and safety. Cases of Hib meningitis among children under age 5 fell sharply in the three pilot regions. As a result, the Government agreed to include Hib vaccinations for vulnerable groups. It is expected that the vaccine will eventually be added for all groups.

Polio Eradication

A child receives oral polio vaccine during a campaign in Kandahar, Afghanistan.

The international effort to eradicate polio has made incredible progress since its inception in 1988. Reported cases in 2009 numbered only 1,604, compared with 350,000 in 1988 (figure 14). Polio remains endemic in only four countries – Nigeria, India, Afghanistan, and Pakistan – which accounted for 78 percent of reported cases worldwide. Poliovirus transmission was known or suspected to have been re-established in Angola, Chad, the Democratic Republic of the Congo (DR Congo), and Sudan. An additional 15 countries in Africa had a few imported cases. The increase in non-endemic countries reporting cases was primarily due to the 2008 outbreak in West Africa.

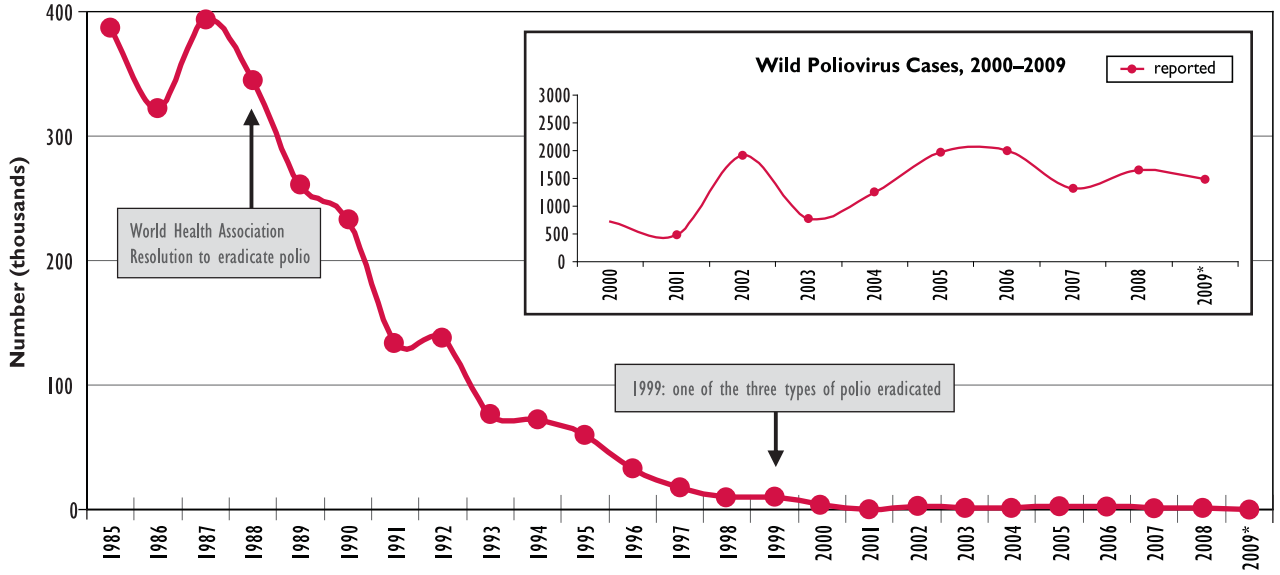
In countries where polio remains endemic or has re-established transmission, efforts to vaccinate every child face such operational challenges as security concerns, vaccine refusal, population migration, and funding. The prospects for eradication remain bright, however, as more effective vaccines and diagnostic tools and innovative approaches to polio education, communications, and immunizations are available to countries committed to stopping polio transmission.

The Global Polio Eradication Initiative (GPEI) was established in 1988.[6] USAID has supported GPEI since 1996 and has been a major partner in efforts to achieve a polio-free world. Its ongoing support focuses on:

- Developing partnerships to support polio eradication and vaccination

6 GPEI partners include USAID, WHO, UNICEF, Rotary International, and the Child Survival Collaborations and Resources (CORE) Group Polio Project.

Figure 14: World Polio Cases, 1985–2009



Source: WHO polio database (193 countries) as of December 2009

- Strengthening immunization delivery systems
- Improving planning, implementation, and monitoring of supplemental immunization campaigns
- Improving acute flaccid paralysis (AFP) surveillance and response
- Supporting certification, containment, and post-certification policy development
- Improving information dissemination

In 2009, USAID provided $32 million for polio eradication, administered through WHO, UNICEF, and USAID implementing partners. The majority of USAID's funds support AFP surveillance. AFP is polio's signal condition, and surveillance includes active case search; stool specimen collection, transport, and analysis; laboratory accreditation; and data analysis. Limited but strategic USAID support for immunization campaigns in about 30 countries included planning, community mapping, training, supervision, communications, transportation, vaccine and other supply provision, and monitoring and evaluation. USAID continued to support diplomacy on behalf of GPEI and assistance to national polio eradication programs and community organizations. It also supported coordination between countries with affected common border areas. Polio campaigns have cumulatively mobilized more than 20 million volunteers and workers worldwide, and international donors have invested more than $5 billion in total. Through these efforts, polio incidence has declined to approximately three cases per day, down from 1,000 per day in 1988. Experts predict that with adequate funding and continued political will, polio eradication can be achieved.

Globally, 273 polio campaigns in 24 countries delivered more than 2.2 billion vaccine doses in 2009, and more than 500 million children in Africa, South Asia, and the Near East received vaccine during the year. The majority of campaigns were in the four remaining endemic countries. In **Nigeria**, improved vaccination coverage resulted in a 50 percent decline from 2008 in the overall number of cases and a 90 percent decline in cases due to type 1 poliovirus. In Bihar state, **India**, the immunization of more than 5 million migrant children eliminated all but one lineage of wild poliovirus type 1. In neighboring Uttar Pradesh, more than 95 percent of very young children (up from 85 percent at the end of 2007) were protected against type 1 polio as a result of immunization campaigns. Together, the Bihar and Uttar Pradesh campaigns immunized more than 70 million children under age 5. In **Pakistan**, USAID contributed to 10 national campaigns that vaccinated more than 32 million children.

In other countries, intensive USAID support helped stop a polio outbreak in **Uganda**, northern **Kenya**, and **Southern Sudan**, which held 14 national and subnational immunization days that vaccinated more than 3 million children and received scaled-up support for AFP detection and supplementary immunization campaigns that are critical for responding to outbreaks and creating the "herd immunity" needed to stop

transmission. Many countries carried out multiple national immunization days in 2009. In **Angola**, more than 5.7 million doses of vaccine were administered on special immunization days.

USAID also supported other activities to assist national and regional programs. In **Ethiopia**, USAID worked with government officials to strengthen state support for eradication, and educational messages reached 1.8 million people. By late 2009, no new case had been reported for more than three months. In **India**, USAID supported UNICEF training for approximately 100 journalists and broadcasters, whose reporting helped increase awareness and acceptance of polio vaccine and reduce resistance to immunization. USAID also continued to support the global polio laboratory network and polio surveillance in more than 25 countries.

The CORE Group continued its work coordinating U.S.-based private voluntary organizations and local community-based organizations to carry out polio activities. The Group's 11 partners in **Ethiopia** worked in 54 districts in seven regions, reaching 4.4 million people. CORE's successes enabled partners to leverage funds from other organizations, including GAVI, the Gates Foundation, and the Global Fund. In **Nepal**, the local CORE partners were designated to "graduate" at the end of 2009, as trained female community health volunteers from the Ministry of Health now implement all CORE-supported community-based polio eradication efforts. This represents a major step in building local capacity.


Chris Morry

Polio campaign volunteers, like these in Bihar state, India, have proved invaluable in bringing polio eradication closer.

In addition to national activities, USAID helped WHO regional offices bring outbreaks in the Horn of Africa under control and minimize the spread of poliovirus to other countries. Following President Obama's announcement that the United States would work closely on polio eradication with the Organization of the Islamic Conference, USAID sent a representative to **Saudi Arabia** to work with the Conference and health ministers from Gulf Cooperation Council countries. As a result, a fatwa supporting polio eradication was issued, and the Conference Secretary-General visited **Pakistan** and wrote to the heads of state of polio-endemic countries.

Nutrition

In this role-playing exercise in an infant and young child nutrition program in Haiti, a community health worker explains breastfeeding's benefits to a father who does not want his wife to breastfeed.

Today, more than 1.2 billion people worldwide are hungry or undernourished. Since the food price increases of 2006–2008 and the more recent global financial crisis, the problem of global malnutrition has worsened. Annually, undernutrition contributes to more than 3 million deaths among children under age 5. Chronic undernutrition leads to stunting, a condition affecting 200 million children. Stunting leaves these children vulnerable to disease, their families burdened with care, communities less resilient, and has significant social and economic costs.

Long-term solutions to undernutrition come from multidisciplinary approaches that tackle the underlying determinants of nutritional status. Among these interlinked determinants are poverty, agriculture, the policy environment, health care, maternal and child care practices, and inequity, especially gender inequity. Combating undernutrition in women and children (the most vulnerable populations) requires maximizing synergies across agriculture, economic growth, social safety nets, and health strategies. Investing in and scaling up proven nutrition interventions will help countries meet Millennium Development Goal 1, which focuses on eradicating extreme poverty and hunger, and contribute to Goals 4 and 5.

Pregnancy and the first two years of life are the critical "development window of opportunity" for improving survival, educational, and productivity outcomes. Developmental damage caused during fetal and young child growth can be irreparable. USAID therefore supports interventions that promote and strengthen maternal and young child nutritional status, including maternal nutrition, exclusive breastfeeding, use of appropriate foods and feeding practices beginning at age 6 months, targeted micronu-

trient supplementation, and improved hygiene and sanitation. These interventions seek to achieve a 30 percent reduction in child undernutrition across supported food-insecure countries, which is a target of both GHI and Feed the Future. Nutrition is the link between these two presidential initiatives due to the multisectoral causes, consequences, and solutions to undernutrition. In addition to inclusive agriculture sector growth, improved nutritional status of women and children is a high-level objective of Feed the Future and will be integrated into comprehensive country strategies to address all components of food security – availability, access, and utilization/consumption.

USAID's strategic approach to comprehensively addressing undernutrition stresses:

- Implementing evidence-based prevention interventions that focus on the "development window of opportunity"
- Delivering critical nutrition services, including targeted micronutrient supplementation and community management of acute malnutrition, to the most vulnerable
- Galvanizing government and community commitment and capacity to address nutrition

This strategy elevates nutrition on national agendas as a vital part of economic growth and development. USAID supports evidence-based interventions that act at scale, target the most vulnerable groups, use data for decisionmaking, and build technical and operational capacity at the country and community levels.

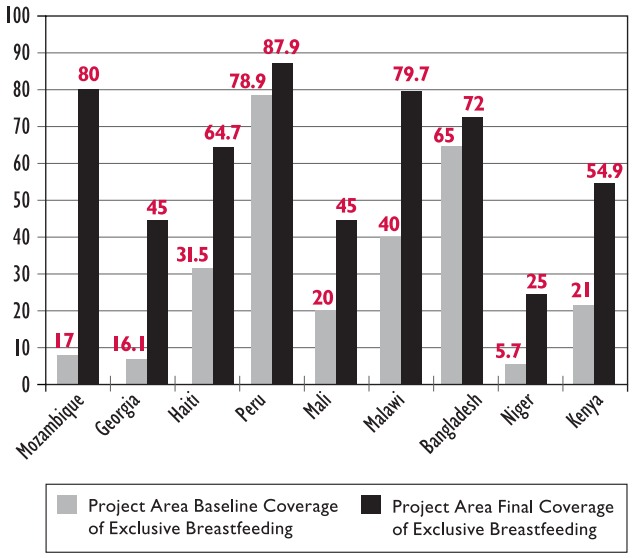
In 2009, USAID nutrition programs reached more than 18 million children across Asia, Latin America, and sub-Saharan Africa. USAID remained a global technical leader in nutrition and helped countries plan, implement, and monitor nutrition and food security programs. USAID investments also contributed to expanded and improved nutrition activities and service delivery systems. In **Tanzania**, the **Philippines**, and Jharkhand state, **India**, USAID support helped achieve greater than 90 percent vitamin A supplementation coverage for children under age 5. These countries focused their efforts on systems strengthening for improved planning, budgeting, and sustainability. Tanzania developed a planning and budgeting tool for its vitamin A rounds and a district-level sustainability checklist. In the Philippines, USAID helped develop an operations manual to better standardize and implement micronutrient programs across provinces. The manual also offers guidelines for iron, zinc, and iodine. In India, a simple adaptive tool was developed for states to estimate their vitamin A commodity needs.

In **Uganda**, USAID intensified efforts to address stunting and underweight and engaged the Ministry of Health to shift its emphasis from treatment of malnutrition to prevention. This led to a revised national policy and guidelines; public-private partnerships to advance the guidelines; national communications for improved nutrition practices; and increased political will for a nutrition agenda. With UNICEF and WHO, USAID helped develop infant and young child feeding guidelines and a complementary counseling training manual. A national trainers team received training in building capacity for treating malnutrition, monitoring and evaluation, community mobilization, and procurement.

In **Cambodia**, USAID completed a successful handover to local NGOs, ensuring that provincial and district plans included activities and budgets for vitamin A supplementation and reducing maternal anemia. The program achieved a national standardized vitamin A program and supported vitamin A rounds in 39 districts that reached more than 600,000 children.

Through its Child Survival and Health Grants Program (CSHGP), USAID also contributed to increases in exclusive breastfeeding in project areas in nine countries (figure 15).[7]

Figure 15: Increases in Exclusive Breastfeeding in CSHGP Project Areas, 2004–2009



Source: USAID CSHGP grantees, 2004–2009

7 The participating grantees were World Relief Mozambique, 2004–2009; ACTS Georgia, 2004–2009; AME-SADA Haiti, 2005–2009; Future Generations Peru, 2005–2009; Helen Keller International Mali, 2005–2009; World Relief Malawi, 2005–2009; Concern Worldwide Bangladesh, 2004–2009; Helen Keller International Niger, 2004–2009; and PLAN Kenya, 2004–2009.

The increases ranged from seven to 63 percentage points between the 2004 baseline and 2009 final surveys. CSHGP grantees used formative research to determine barriers to exclusive breastfeeding for the first six months and developed behavior change and community mobilization approaches to increasing this proven cost-effective practice.

Tackling the root causes of undernutrition requires a multisectoral approach. In **Malawi**, USAID trained Ministry of Agriculture staff to train 496 home economists, extension officers, agricultural assistants, and parents. In Berea district, all ministry staff at resource centers received training in infant and young child feeding, as did 757 community health workers, traditional healers, members of men's groups, and home economists. USAID supported supervision visits with 118 of the trainees to promote appropriate infant feeding, follow-up of children and their mothers, and outreach to health facilities.

USAID supported integrating community management of acute malnutrition into national health systems in **Ghana**, **Sudan**, and **Southern Sudan**. More than 630 national and regional health managers, health care providers, and community health workers received training to bring the treatment and prevention of malnutrition directly to where they are needed.

Ready-to-use therapeutic foods are an integral and effective part of the management of severe and moderate acute malnutrition. The foods are usually fortified peanut spreads containing milk and other ingredients that provide a proven but relatively high-cost product. To identify a more cost-effective composition, USAID supported a study of malnourished children in **Malawi** that compared the standard formula of 25 percent milk with a 10 percent formulation that costs 30 percent less. The study found the formulation with less milk resulted in slower growth and poorer recovery rates than the more costly 25 percent product. When all costs and benefits were considered, the cheaper milk product provided only a slight benefit. This type of implementation research is important for USAID in refining its program approaches and developing cost-effective therapeutic foods.

USAID also contributed to the study and measurement of food insecurity. Food security has many dimensions, and understanding it and monitoring interventions requires simple, quick, reliable measures. USAID has been supporting the development and testing of the Household Food Insecurity Access Scale, building on work by the U.S. Department of Agriculture and others. It is based on the notion that the experience of food insecurity causes predictable and universal responses that can be captured and quantified through surveys. The Scale provides a standard instrument and tabulation plan for food-insecure settings in developing countries. In 2009, validity testing of the Scale indicated that a reduced set of questions and revised tabulation method could achieve the aim of a simple, streamlined, culturally invariant scale to assess household hunger at the population level. The resulting Household Hunger Scale was presented at an international food security conference in September and is being adopted by international agencies and country programs. USAID also completed an analysis of the relationship between simple indicators of diet diversity derived from Demographic and Health Surveys and the micronutrient adequacy of women's diets. These tools will be used to track progress toward the high-level goals of GHI and Feed the Future. See the "Research and Technical Innovation" chapter of this report for more details on these nutrition-related research activities.


Elaine Menotti

An infant in Cambodia receives vitamin A as part of a growth promotion and nutrition program.

Pneumonia and Diarrhea

A community health worker in the Democratic Republic of the Congo teaches a mother about common child illnesses. The country now has nearly 1,400 such workers practicing integrated community case management for childhood illness.

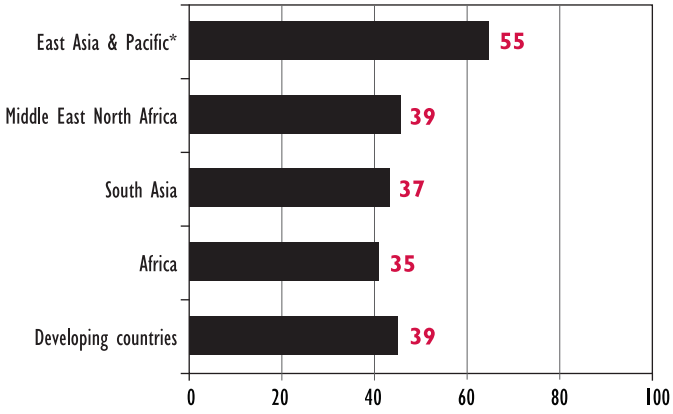
Every year, 150 million or more episodes of pneumonia occur in young children in developing countries. These pneumonia cases account for more than 95 percent of all new cases globally, and more than half occur in South Asia and sub-Saharan Africa. Between 11 million and 20 million of these children require hospitalization, and more than 2 million die. Approximately 60 percent of pneumonia cases in developing countries are caused by bacteria that can be treated with antibiotics, but fewer than 20 percent of children get antibiotics in time.

Diarrhea is another leading cause of death among children under age 5. Despite the availability of effective low-cost prevention and management interventions, it causes about 1.5 million child deaths each year and is also a substantial contributor to child malnutrition. According to UNICEF, each year an estimated 2.5 billion cases occur among under-5 children, with more than half occurring in Africa and South Asia. These two regions also account for more than 80 percent of diarrhea-related child deaths – just 15 countries account for almost three-quarters of these deaths. Although the use of oral rehydration therapy (ORT) to manage child diarrhea has led to substantial reductions in diarrhea-related mortality and morbidity, efforts to increase ORT have lagged as the world turned to other health emergencies. A 2009 UNICEF report states that only 39 percent of children with diarrhea in developing countries receive the recommended treatment (figure 16), and limited trend data suggest that there has been little progress since 2000.

"Community health workers can be trained to assess sick children for signs of pneumonia; select appropriate treatments; administer the proper doses of antibiotics; counsel parents on how to follow the recommended treatment regimen and provide supportive home care; and follow up sick children and refer them to a health facility in case of complications. There is strong scientific and program evidence to support the effectiveness of this approach."

– WHO/UNICEF Joint Statement, Management of Pneumonia in Community Settings, May 2004

Figure 16: Children Under Age 5 with Diarrhea Receiving Recommended Treatment,* 2005–2008



Source: UNICEF, The State of the World's Children 2010. Data are insufficient for Latin America and the Caribbean, Central and Eastern Europe, and the Commonwealth of Independent States.

*Excludes China

USAID provides leading-edge technical support to governments and other partners to demonstrate effective, feasible programs for community-based treatment of pneumonia and, for diarrhea, use of oral rehydration solution (ORS) and effective home treatment. Specific elements of USAID's strategy include:

- Research and analysis in the areas of:
  - Community-based pneumonia treatment by community health workers
  - Home oral antibiotic treatment of severe pneumonia
  - Zinc supplementation in treating pneumonia
  - Causes of declining ORT/ORS use
  - Development of alternative strategies to revitalize ORT/ORS, especially in high-burden priority countries
- The development of models for expansion, as programs progress to larger scale, in such areas as:
  - Combined treatment strategies for malaria and pneumonia in malaria-endemic areas
  - Community case management of pneumonia, malaria, and diarrhea as an integrated platform
  - Advocacy and planning to mobilize and coordinate ministry of health and partner resources in diarrhea case management
  - Behavior change communication to reinforce appropriate behaviors and practices
  - Improvements to facility- and community-based platforms for expanding access to and use of ORT
  - Revitalized ORT programming, twinned with zinc, as countries adopt new diarrhea control guidelines

Expanding community-based programs also requires overcoming barriers to use of antibiotics by community health workers, as well as efforts to ensure that flexible policies, plans, and resources are in place.

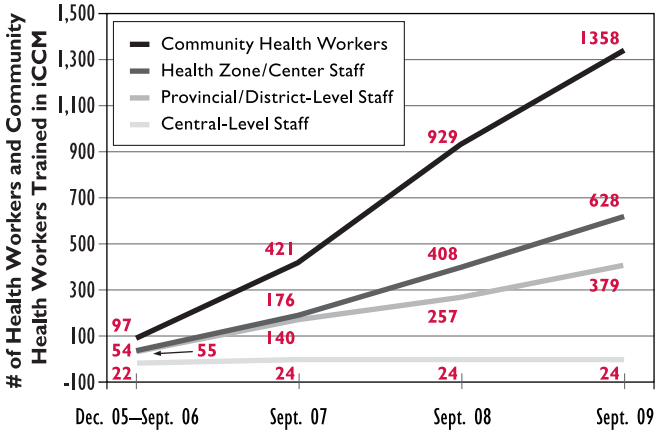
In 2009, USAID continued its work with global partners to build tools, document lessons learned, and advocate for expanded community case management of pneumonia. USAID advocated for community case management at two national planning workshops in **Mali**; initiated documentation of a case study of integrated community case management in **Senegal** (one of three such studies); and helped develop metrics for assessing and evaluating integrated community case management. In **Nepal**, USAID supported the scale-up of

community-based management of childhood illness to cover 64 of 75 districts, and more than 875,000 children under age 5 received antibiotic treatment for pneumonia from trained health workers. Pneumonia treatment in the **Philippines** exceeded its target by 4 percent under the Government's unified maternal, newborn, and child health strategy.

For control of diarrheal diseases, USAID continued to support existing strategies while incorporating the revised WHO/UNICEF clinical management strategy. USAID also prepared to focus on countries with declining ORT use to help them expand and integrate its use with hygiene improvement activities. To revitalize ORT, USAID and other donors have focused on increasing the global availability of quality zinc products that reduce the frequency and severity of diarrhea episodes. By 2009, there were three pre-approved zinc manufacturers meeting UNICEF's global quality assurance standards and more than 20 manufacturers in four countries with registered products meeting national quality standards. USAID also worked with partners to ensure that zinc was adopted as policy in diarrhea case management. By 2009, 46 countries had zinc policies, and 66 had updated national diarrhea management policies to include low-osmolarity ORS.

In **DR Congo**, USAID was a major contributor to the Ministry of Health's revitalized diarrhea strategy, supporting training on zinc in diarrhea treatment for 384 doctors, nurses, and pharmacists from 36 hospitals in three provinces. USAID helped launch a national campaign to revitalize diarrheal disease case management, including the use of zinc, and supported successful advocacy for purchasing and distributing zinc tablets to all provincial medical stores. USAID helped DR Congo expand

Figure 17: Increases in Integrated Community Case Management (iCCM) Workforce, DR Congo January 2006–September 2009



Source: Integrated Community Case Management Program, DR Congo

integrated community case management to Katanga province, thereby establishing coverage in 10 of the country's 11 provinces for nearly 240,000 under-5 children. There are now 568 sites nationwide and nearly 1,400 community health workers, up from fewer than 100 in early 2006. The workforce cadres of health zone/center staff and provincial and district staff also increased substantially from January 2006 to September 2009 (figure 17).

USAID helped 12 countries implement programs to introduce zinc with ORS for child diarrhea treatment. In **India**, USAID-assisted programs promoted improved prevention and treatment by expanding access to both zinc and point-of-use water disinfection. Partnerships with pharmaceutical

Care Group Volunteers Sustain Success in Mozambique

From 2004 to 2009, a USAID-supported project in an isolated rural area of Mozambique's Gaza province reached one-quarter of a million people with community-based primary health care and achieved dramatic improvements in child health practices. The project reached every household every two weeks by training more than 4,000 "care group volunteers," each responsible for 10 households. The volunteers met in "care groups" of 10 and learned key child survival educational messages that they then shared with neighbors. The project achieved its most notable improvements in pneumonia and malaria treatment, with the percentage of children with symptoms of pneumonia treated within 24 hours at a health center increasing from 10 to 64 percent and the percentage of children with malaria symptoms treated within 24 hours at a health center increasing from 24 to 62 percent. Nutrition also improved significantly, with the percentage of mothers exclusively breastfeeding for six months increasing from 17 to 80 percent. The percentage of malnourished children declined by a little more than half, from 17 to 8 percent. The project set in motion powerful examples of women's empowerment. One woman learned how to rehabilitate malnourished children with locally available foods and then volunteered to join the project, became a care group volunteer, and helped other mothers rehabilitate their malnourished children. As one village leader shared, "The seed has been planted because of the care group volunteers. After the project ends, they will remain and continue teaching us."

companies and NGOs increased the availability of quality zinc treatment products. More than 20 companies produced, marketed, and distributed zinc brands through commercial distribution networks throughout India. Pharmaceutical detailers reached approximately 15,000 out of 20,000 pediatricians and 75,000 out of 100,000 licensed general practitioners nationwide with messages on improved diarrhea treatment. Partner NGOs reached rural medical providers, who often lack formal training, and drug sellers, who treat the majority of rural diarrhea cases. Private sector sales of pediatric zinc products increased by 46 percent, from 3.15 million courses to 4.6 million courses. Water treatment programs were expanded to offer consumers greater options for water storage and treatment, including filters, chlorine tablets, solar disinfection, and boiling.

In **Madagascar**, USAID's strategy empowered civil society, community organizations, and community health workers to provide a full range of services, including integrated management of childhood illness, to more than 2.7 million mothers and 1.8 million children in 12 regions. In addition, a new private sector program marketed two diarrhea treatment kits containing zinc and flavored ORS – a full cost-recovery kit through the national network of pharmacies and drug counters and a subsidized kit through community-based sales in partnership with local and international NGOs. In its first six months, the program sold more than 26,000 kits, trained more than 400 community-based sales agents from six NGOs, and reached 1,800 doctors through pharmaceutical detailing.

USAID's maternal and child health program in **Pakistan** expanded to 14 new districts, including some in the Federally Administered Tribal Areas, which increased the program's target population from 13 million people to 34 million. USAID-trained health care workers treated more than 934,000 cases of child pneumonia with antibiotics and 1.6 million cases of child diarrhea. The program trained 2,503 master trainers; provided 76 ambulances; established 152 ORT corners; and upgraded 152 health facilities in 10 districts, staffing them to function around the clock seven days a week. In the accelerated maternal, newborn, and child health program in the **Philippines**, diarrhea treatment exceeded targets by 11 percent largely due to increased procurement of ORS by local government units.

Water, Sanitation, and Hygiene

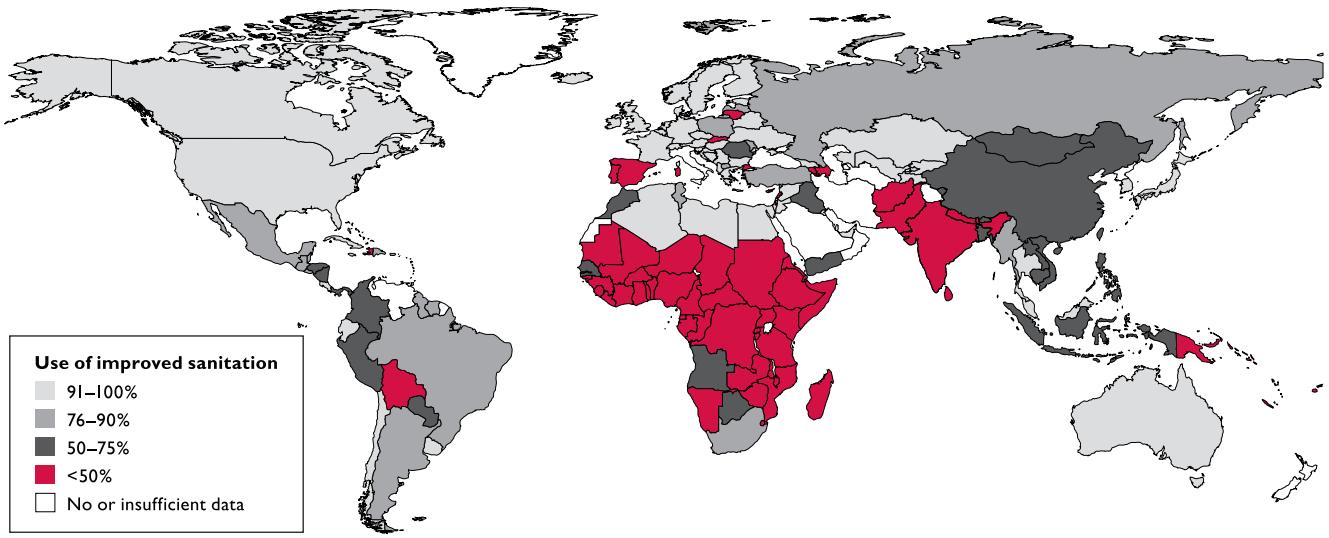
Members of a community in Madagascar check on the construction of a latrine with a pit and Sanplat, a washable reinforced concrete slab.

Almost one-tenth of the global disease burden – and 88 percent of the diarrheal disease burden – could be prevented by improving water supply, sanitation, hygiene, and management of water resources. Diarrheal diseases cause about 1.5 million preventable child deaths per year. In 2009, UNICEF and WHO included access to clean water, sanitation, and good hygiene practices in their seven-point plan to save the lives of children stricken by diarrhea. However, the use of improved sanitation, a key intervention in preventing diarrhea, remains low in many parts of the world (figure 18).

Three interconnected components – hardware, improved hygiene and sanitation practices, and an enabling environment – are necessary to implement effective water, sanitation, and hygiene (WASH) programs. Vulnerable populations require improved access to hardware. Along with this, there is a need to promote and support improved hygiene and sanitation practices. Finally, successful programs require an effective enabling environment of supportive policies and structures for sustainability.

While large-scale infrastructure provision falls outside the scope of USAID's health programs, these programs exploit opportunities to complement hardware through interventions in behavior change and enabling environments. Activities focus on promoting three evidence-based improved hygiene behaviors, each demonstrated to reduce diarrhea prevalence by at least 30 percent:

Figure 18: Worldwide Use of Improved Sanitation Facilities, 2008



Source: WHO/UNICEF Joint Monitoring Program for Water Supply and Sanitation, 2010 Progress on Sanitation and Drinking Water - 2010 Update

- Treatment of drinking water at the point of use and safe water storage
- Optimal technique and timing of handwashing with soap
- Sanitary disposal of human feces at the household level

Point-of-Use Water Treatment and Safe Storage

Many USAID-supported countries saw substantial increases in the number of liters of water treated with point-of-use products in 2009 (figure 19). In poor urban enclaves and rural villages of Uttar Pradesh, **India**, a USAID-funded project is making a range of water treatment options available to low-income families through sustainable partnerships with microfinance institutions, NGOs, community organizations, and companies that produce water treatment products. In 2009, the project reached 1.1 million people, with 28 percent of households initiating water treatment.

Handwashing

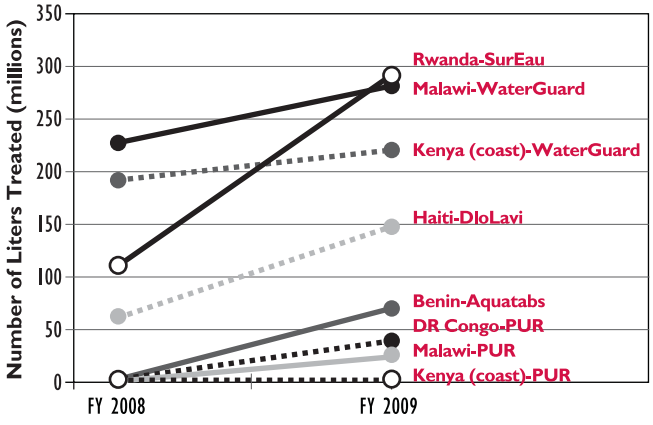
Through participation in the Public-Private Partnership for Handwashing, USAID supported capacity building and leveraged more than $19 million for global and national handwashing initiatives in 17 countries. USAID Missions also organized activities for Global Handwashing Day. More than 200 million children, teachers, parents, doctors, nurses, government and civil society representatives, religious leaders, and celebrities on six continents washed hands with soap to remind the world that "Clean Hands Save Lives!"

Sanitation

USAID supported large- and small-scale hygiene and sanitation improvements through partnerships in a number of countries. In **Ethiopia**, USAID and the World Bank's Water and Sanitation Program supported community mobilization and more intensive household-level behavior change actions in 47 of 150 districts in Amhara region to reach approximately 1.2 million people and end open defecation. An estimated 600,000 people achieved the goal of no open defecation and adopted improved hygiene behaviors. The implementation model, guidelines, and capacity building materials used in Amhara were used to develop a national approach to total sanitation and hygiene.

In **Madagascar**, **Uganda**, and **Peru**, USAID programs created demand for improved sanitation through community mobi-

Figure 19: Number of Liters of Water Treated with Point-of-Use Products in Selected Countries, 2008–2009



Source: USAID POUZN Project

lization, household-level activities, and mass media channels. They also stimulated local supply of a range of hygiene and sanitation products through commercial channels such as hardware stores, small cement factories, and trained masons. In Madagascar, USAID facilitated financing mechanisms between a local bank and local hardware producers and vendors who qualified for WASH loans to invest in and sell sanitation products and services. More than 300 local masons received training in producing, installing, maintaining, and marketing latrines. All programs linked handwashing with soap with sanitation promotion to maximize the health impact from improved household and community facilities.

What Kids Learn in School

Fewer than half of the world's schools have adequate water supply and sanitation. Schools that teach their students about the importance of drinking safe water, using clean sanitation facilities, and washing hands with soap, and provide the enabling infrastructure, can become beacons of hygiene promotion in their communities. Students from such "WASH-friendly" schools are champion promoters in their homes and can influence parents and siblings.

School Programs

In **Ethiopia**, USAID supported stakeholder meetings in Amhara region to establish consensus on the components of WASH-friendly schools, plan an action agenda, and develop guidelines and teaching materials. Participating schools became WASH-friendly by improving facilities, integrating WASH themes into classrooms, and reaching out through homework and school clubs to households and the community. USAID programs constructed 114 ventilated improved pit latrines for schools and health centers, and nearly 43,000 schoolchildren gained access to gender-appropriate latrines.

Integration of WASH into HIV/AIDS Programming

Because diarrheal disease is one of the most common opportunistic infections in people with HIV/AIDS, especially in resource-limited settings, USAID's Bureau for Global Health worked with PEPFAR to promote including WASH programming in the operational plans of more than 12 PEPFAR countries. In **Uganda** and **Ethiopia**, USAID supported integrating WASH into home- and community-based care for people living with HIV/AIDS. As part of these efforts, USAID developed an HIV/AIDS-WASH integration tool kit containing guidelines, a training manual, and job aids, and also trained cadres of trainers who are strengthening home care workers' abilities to teach WASH practices to people who have HIV/AIDS and their families.

Partnerships

In March 2009 at the World Water Forum in Istanbul, USAID and Rotary International announced a new partnership to save lives by bringing clean drinking water and basic sanitation to communities in the developing world. The public-private alliance leverages a minimum of $1 million per partner to implement sustainable, long-term WASH projects in the **Dominican Republic**, **Ghana**, and the **Philippines**. Other countries will follow based on the success of these pilot experiences.

■ *Nurse Susan Kajuju, one of the nurses hired as part of Kenya's Emergency Hiring Plan, educates women and men about their family planning options from her rural outpost.*

USAID Expands Family Planning Options in Rural Kenya

In Ijara district of Kenya's remote and conservative North Eastern province, nurse Susan Kajuju provides family planning services. When she first arrived in Ijara, USAID had no family planning program there, and the modern contraceptive prevalence rate was less than 1 percent, compared with the national rate of 39 percent. Hired by USAID's CAPACITY Project under Kenya's Emergency Hiring Plan program, Kajuju was one of 830 health workers deployed to 219 sites across the country to meet the growing health care needs of a country suffering from a chronic health care worker shortage.

Kajuju began her work by meeting with local groups, visiting people in their homes, and attending social events. Little by little, she made her mission known. Quickly she learned that "here the men must be involved – they're the ones that make the decision as far as the community is concerned." She heard that men would be more likely to accompany their wives to the clinic during the evening, so she started an evening shift, and then even sheiks started to show up. She also gave health talks and sensitized people to different methods. Educating and being available to the community were both essential. Above all, she discovered that establishing trust and maintaining confidentiality were keys to success in Ijara. To earn the trust of her clients, Kajuju offered services through her home and at unusual hours, shared her personal experiences with family planning methods, and used creative approaches to deal with challenging situations.

Before Kajuju arrived in Ijara, women were only using the injectable contraceptive Depo-Provera and had not been introduced to other methods. "When I came here, there was only one method given to the clients," she recalls, "and I found very few were taking the method – five in a month, 10 in a month." Now, women in Ijara are aware of and using a variety of methods. The number of women Kajuju counsels has grown to 100, sometimes even 170 a month, a giant leap from five or 10.

Family Planning and Reproductive Health

KEY RESULTS

- Between 2000 and 2009, USAID-supported family planning programs in priority developing countries contributed to increases in the percentages of:
  - Married women of reproductive age using a modern method of contraception, from 20 to 27 percent
  - Demand satisfied for contraception, from 39 to 43 percent
  - Births spaced at least 36 months apart, from 41 to 46 percent
- In FY 2009, USAID provided contraceptives worth $88 million to 51 countries and leveraged more than $117 million in additional resources for service delivery from the private sector.
- A public-private partnership with Johnson & Johnson and the World Wildlife Fund leveraged $563,000 to implement integrated population, health, and environment services in remote, ecologically sensitive areas of DR Congo, Kenya, and Nepal. Nearly 243,000 people in these remote communities now have better access to family planning information and services.
- USAID entered into a partnership with Bayer-Schering to market oral contraceptives in developing countries at an affordable price. The company will provide 110 million cycles of oral contraception annually, providing a reliable modern means of family planning for 8 million women a year.

Delivering voluntary family planning services to enable couples to determine whether, when, and how often to have children is vital to safe motherhood and healthy families and also contributes to economic growth and development. USAID has played a key role providing such services since the 1960s, resulting in profound health, economic, and social benefits for families and communities. Between 1965 and 2009, the proportion of women of reproductive age in developing countries (excluding China) using a modern method of family planning rose from less than 10 percent to 43 percent. The result has been a significant decline in fertility rates in these countries from around six children per woman in 1960 to an average of 3.1 in 2009.

An estimated 215 million women in developing countries still have an unmet need for family planning services, however, and there are stark differences among regions – in Africa, only 23 percent of married women use modern contraception, compared with 47 percent in Asia. While use of modern family planning has increased, large numbers of women still use traditional methods or have an unmet need for family planning (figure 20), and approximately 75 million pregnancies in developing countries (one-third of the total) are unplanned.

In 2009, the Obama administration repealed the Mexico City Policy[8] and reinstituted support for the United Nations Population Fund. The decision by the United States to re-engage with international agencies and donors at the global level to coordinate family planning and reproductive health inputs and programs bolstered efforts to meet the needs of the 1.3 billion women of reproductive age living in the developing countries where USAID has programs.

The Obama administration's Global Health Initiative (GHI) has given additional priority to family planning by including the reduction of unintended pregnancies among its goals. Over the 2009–2014 period, GHI aims to:

1) Prevent 54 million unintended pregnancies
2) Attain a modern contraceptive prevalence rate of 35 percent on average across U.S.-assisted countries (reflecting an average annual 2 percentage point increase by 2014)
3) Reduce the proportion of women who have their first birth before age 18 from 24 to 20 percent

USAID's Office of Population and Reproductive Health in the Bureau for Global Health helps achieve these goals through international leadership, global programs, support to country Missions, and support for research and development. In its family planning and reproductive health programs, USAID employs the following strategies and interventions:

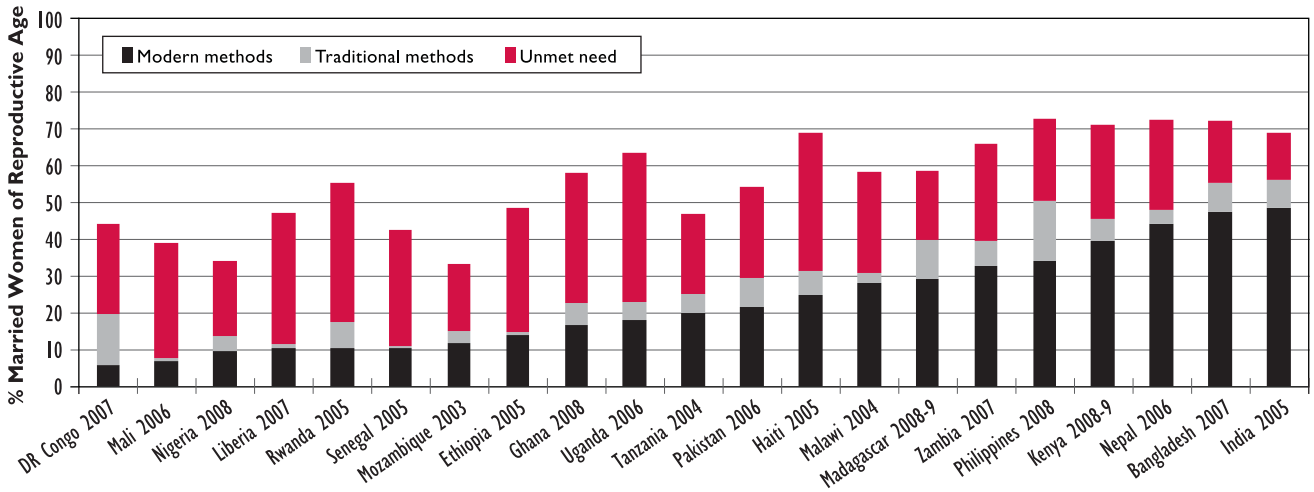
- Emphasizing voluntarism and informed choice for clients
- Developing high-level policy guidance
- Leveraging the private sector
- Engaging in communication and outreach
- Expanding contraceptive choices
- Varying service delivery approaches
- Involving men in decisions
- Using new technologies

In all its programs, USAID regularly monitors family planning indicators, including the modern contraceptive prevalence rate, met need for family planning, the total fertility rate, and birth-to-birth intervals, through national Demographic and Health Surveys.

In 2009, a number of policy and financing initiatives supported improved access to family planning services. At the global level, USAID played a leadership role in developing a consensus statement from three international professional associations on family planning as a key component of postabortion care. In **Kenya**, a new National Reproductive Health Strategy aims to reduce unmet need and increase modern contraceptive use among the poor by 20 percent by 2015 (from 12 percent in 2003). The strategy was informed by a number of USAID-supported activities, including a review of policies and financing mechanisms, market segmentation studies, and a qualitative study to identify barriers that the poor face in accessing family planning services. Building on the inclusion for the first time of

8 The Mexico City Policy required foreign NGOs to certify they would not perform or actively promote abortion as a method of family planning using funds generated from any source as a condition for receiving USAID family planning assistance.

Figure 20: Contraceptive Use and Unmet Need for Contraception, GHI Family Planning Priority Countries



Source: Most recent Demographic and Health Survey for each country

A woman in Ethiopia's Oromiya region proudly shows off her arm where she received a contraceptive implant through a community-based family planning project.

a family planning and reproductive health line in the Kenya national budget, USAID supported high-level advocacy and policy dialogue on the new strategy that led to a more than doubling of the family planning/reproductive health budget from approximately $2.6 million in 2005 to $6.5 million in 2009.

In **Guatemala**, the Reproductive Health Observatory, created in 2008 by USAID-funded women's groups, signed an agreement with the Guatemalan Congress to monitor Government compliance with legal, policy, and financial commitments to women's health. The Observatory was responsible for the implementation of the Law for Universal Access to Family Planning, the creation of reproductive health monitoring boards in three regions, and the leveraging of $1.3 million for reproductive health programs in the Ministry of Health budget.

Evidence-based guidelines on healthy timing and spacing of pregnancy were integrated into national policies and programs throughout Africa, Asia, and the Middle East. In **Tanzania**, a USAID partner established the first secretariat for addressing pregnancy timing and spacing by working with a private women's medical professional organization. In **Egypt**, **Nepal**, **Bangladesh**, **Indonesia**, **India**, and **Yemen**, low-income postpartum women now routinely receive counseling on healthy timing and spacing of pregnancies.

USAID supported public-private partnerships and expanded access to financing for private health care providers to improve their capacity to deliver family planning services. In **Kenya**, government, business, and NGO representatives created the first partnership roadmap, outlining priorities and committing to fund promising partnerships throughout the country. The growing support from other sectors will help Kenya continue its success in expanding contraceptive use.

In the Africa and Latin America/Caribbean regions, partnerships with financial institutions leveraged more than $204 million for the health sector, and partnerships with private providers strengthened operations. In **Zambia**, **Uganda**, and **Peru**, these activities increased the number of family planning service providers. Other countries saw increases in the number of services provided. In **Nicaragua**, family planning visits to private providers tripled, and in **Uganda** and **Peru**, they increased by 57 and 42 percent, respectively.

USAID programs also conducted highly effective communication and outreach in FY 2009. In **DR Congo**, a toll-free telephone line helped raise family planning awareness and bridge information gaps. In 2009, 84 percent of the line's 20,000 callers were men, and the line contributed to a 173 percent increase in couple-years of protection from 2008. In **Yemen**, trained male and female community educators mobilized nearly 29,000 community members to take action against child marriage. A law passed by Parliament to increase the legal age of marriage to 17 is now awaiting presidential approval.

USAID-supported research and development expanded contraceptive choice and use. Field trials of a new self-contained and disposable unit of the three-month injectable Depo-Provera moved along, and the product will be available for

"It is very important for clients to be able to make their own choice. They have a right to information; they have a right to choice of service."

– Senior Nurse Rita Nijiru, Embu Hospital, Kenya

use within a year. Phase III clinical trials and two pivotal studies required for U.S. Government approval were completed on the vaginal ring, the first woman-controlled long-acting contraceptive that does not require daily attention from the user. Preliminary results showed that the product is effective and safe, with favorable bleeding patterns and high user satisfaction. It can be used for a year without physician follow-up.

A mix of service delivery approaches also enabled programs to improve family planning outcomes. Two governorates in Upper **Egypt** introduced scaled-up family planning messaging for pregnant and postpartum women. About 80 percent of pregnant women received family planning counseling during home visits. Of postpartum women who were visited at home, more than 60 percent began using a family planning method within 40 days of delivery, and knowledge of the benefits of healthy pregnancy timing and spacing was high.

In **Malawi**, USAID helped the Ministry of Health pilot provision of injectable contraceptives by trained community health workers instead of physicians. National implementation contributed to a 178 percent increase in couple-years of protection from 2008.

USAID continued to partner with the Ministry of Health and NGOs in **Haiti** to increase access to a wider family planning method mix and use of services. Ten mobile teams of experienced medical staff were deployed to hard-to-reach and unequipped health facilities, extending access to long-term methods and voluntary sterilization. The teams trained more than 100 local health staff. These activities contributed to 367,000 couple-years of protection.

Nigeria's National Health Insurance Scheme trained more than 2,000 participating care providers at wellness workshops that also promoted family planning. An end-line evaluation found a substantial increase in contraceptive prevalence (from 28 to 45 percent) and decrease in unmet need (51 to 42 percent) in clients of providers who attended a workshop.

USAID also supported community-based family planning programs in 21 countries, addressing the critical human resource

USAID and Partners Focus on Future Scale-Up and Success at Kampala Conference

USAID joined national and international partners in organizing the 2009 International Conference on Family Planning held in Kampala, Uganda. The conference focused on family planning research, best practices, and transformation of knowledge into action. Activities were designed to generate momentum to elevate family planning on the health agenda and make strides in meeting unmet need. The forum facilitated the sharing of findings and identification of knowledge gaps. Participants agreed on many keys to future program scale-up and success, including:

- **Improved targeting:** Programs must do a better job of reaching women who want to end childbearing or postpone having children.
- **Contraceptive technologies:** Low-cost methods, dual protection methods against pregnancy and HIV, and long-acting and permanent methods are needed.
- **Improved service delivery:** Community-based approaches and multitier pricing strategies are essential.
- **Increased appeal to men and youth:** Youth and men need programs that address their particular needs.
- **Program integration:** Integration of family planning, HIV, and other health services should be encouraged where such integration will improve health outcomes.

Advances in the Use of Technology for Family Planning

As technology becomes more accessible in developing countries, USAID programs are using mobile phones, software programs, and Internet resources to improve contraceptive supply logistics and provide family planning information. In FY 2009, a number of programs leveraged technology with great success.

More reliable contraceptive supply: In Ghana, open-source EpiSurveyor software, which enables data collection using mobile phone technology, was successfully piloted for supply chain monitoring. The pilot demonstrated time savings in both data entry and analysis.

Innovative use of technology for information capture: CSPro, a computer software program used to process survey and census data needed to monitor and evaluate programs, now supports data capture on handheld devices, thus increasing data quality and timeliness.

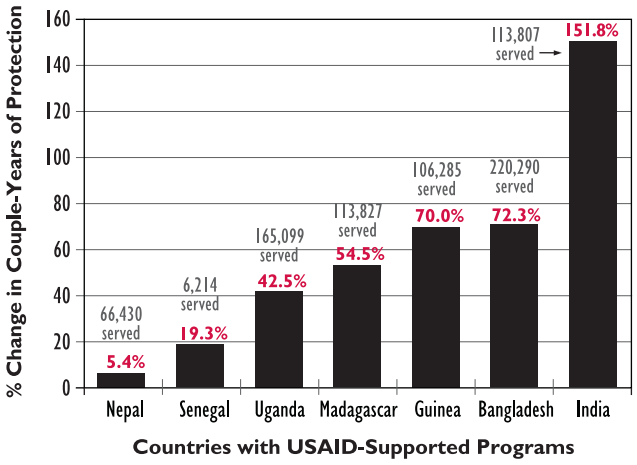
Promising communication and outreach approaches: In Lucknow, India, a toll-free helpline for gender-sensitive information and advice on family planning and reproductive health employed trained male and female counselors. With free calls allowed by the phone service providers, the helpline received nearly 145,000 calls in three months. Youth made nearly half the calls, and 70 percent were from males, who are typically reticent about sexual and reproductive health matters. Research also confirmed the feasibility of using mobile phone technology to provide information on select family planning services, and text messages were used to provide family planning information to clients in Kenya and Tanzania. Results showed that clients liked the privacy of the service and the reiteration of information initially received in a clinical setting.

Networking platforms and Web sites: USAID used social networking tools, Internet platforms, and Web sites to connect individuals and groups interested in family planning and engage health professionals throughout the world. A new Web portal harnessed Google technology to improve search results. A reproductive health virtual network had reached more than 14,550 users from 199 countries as of October 2009.

shortages hindering expanded access to family planning services. The programs served 10.7 million direct beneficiaries, and increases in couple-years of protection in recipient countries averaged 60 percent from 2008 to 2009, ranging from a 5 percent increase in **Nepal** to a 152 percent increase in **India** (figure 21).

Engaging men was an emphasis across programs. **Rwanda** promoted counseling of couples and added nonscalpel vasectomy in six hospitals, with community health workers promoting the new service. As of June 2009, 390 vasectomies had been performed, 98 percent of clients were satisfied with the procedure, and prospective clients were going on waiting lists for the procedure. In **Uganda**, a family planning campaign targeting men reached more than 3,000 with educational messages highlighting the economic benefits of small families.

Figure 21: Percent Change in Couple-Years of Protection, FYs 2008–2009



Source: Flexible Fund Family Planning and Reproductive Health Project database

ITSPLEY, Care USA

■ *The ITSPLEY program in Kenya stimulated Monica Stevens to participate in sports, which in turn opened other opportunities to her.*

Sports: A Key to Developing Confidence Among Youth

Before sports were introduced in her school, Monica Steven, a student at the Kakola Primary School in Tanzania, was not very motivated to attend. She usually skipped school without the knowledge of her parents and instead worked in a small gold mine near her village, returning home when her friends left school in the evening.

Although the work was hard, she earned very little, only about half a dollar a day. She also acquired bad habits, such as smoking. When her father caught her with a cigarette, he beat her severely and took her to the school's head teacher. It was then that he discovered that she had not been attending school for the last few months.

The USAID/DCOF-funded Innovation through Sport: Promoting Leaders, Empowering Youth (ITSPLEY) program, implemented at Monica's school by Care USA, transformed her life. ITSPLEY uses sport as an avenue for empowerment and leadership development by bridging gender inequalities, improving access to education, enhancing economic opportunities, and promoting the inclusion and participation of marginalized groups such as orphans and vulnerable children and other youth, with a special focus on girls. Monica was one of 500 out-of-school vulnerable girls who received skills training in organizing and facilitating sports and games activities. She also participated in peer education in sexual and reproductive health to reduce vulnerability to HIV and other sexually transmitted infections (STIs). When ITSPLEY initiated its sports program at her school, Monica began to attend regularly. She participated in all the sports that were introduced, including soccer, netball, and traditional Tanzanian games. She gained new friends through competitions with other schools and received information on HIV/AIDS, STIs, and the risks of early pregnancy and marriage through the peer education program.

With Monica's greater participation in sports, her class performance also greatly improved. She hopes that similar projects will be introduced in other parts of Tanzania so other youth can receive the same opportunities that she did.

Vulnerable Children

KEY RESULTS

- With projects operating in 24 countries, USAID's Displaced Children and Orphans Fund provided services or training to 790 organizations and more than 260,000 children and adults.
- A market-based project to reduce economic vulnerability among young people in Afghanistan acquired $30,000 in financing capital and generated more than $390,000 in sales.
- The Care and Protection of Children in Crisis-Affected Countries Learning Network surveyed the incidence of violations against children in war and piloted the Interagency Emergency Child Protection Resource Kit in Gaza.
- A sports program in refugee camps in Thailand improved health, developed concepts of teamwork and fair play, and increased leadership potential for more than 15,600 children, youth, and adults.
- A literacy, vocational training, and job placement program in Nepal helped more than 11,000 young people.
- The Child Blindness Program screened nearly 880,000 children, provided more than 15,400 children with glasses, and supported 1,909 eye operations.

Since its inception in 1989, USAID's Displaced Children and Orphans Fund (DCOF) has worked to improve the lives of children at risk, including orphans, unaccompanied minors, children affected by armed conflict, and children with disabilities. Through the Agency's Special Advisor for Orphans and Vulnerable Children, USAID also coordinates with other U.S. Government agencies, international organizations, and NGOs on programs to assist vulnerable children. In addition, USAID's Child Blindness Program helps reduce child blindness in countries with inadequate or nonexistent eye care.

Displaced Children and Orphans Fund

DCOF emphasizes community-based projects that address the social, psychological, educational, and economic needs of families and children in crisis. Projects focus on:

- Promoting family-based care through deinstitutionalization, tracing and reunification, and alternative systems of care
- Strengthening the capacity of families, communities, and governments to prevent child abandonment
- Developing and strengthening national child protection systems such as social service networks, community resources, judicial systems, and national policies and laws
- Reintegrating children separated during armed conflict, including child soldiers
- Strengthening the economic capacity of vulnerable families to provide for their children's needs

Table 3: Displaced Children and Orphans Fund Results, FY 2009							
Countries	**People Served**			**People Trained**			**Organizations Strengthened**
	F	**M**	**Total**	**F**	**M**	**Total**	
Afghanistan (STRIVE)	N/A	400	**400**	N/A	48	**48**	2
Azerbaijan	6491	5,836	**12,327**	203	194	**397**	15
Belarus	5,645	3,376	**9,021**	1,909	215	**2,124**	251
DR Congo	17,079	18,713	**35,792**	976	1,500	**2,476**	48
DR Congo (UNICEF)	1,272	1,292	**2,564**			**373**	18
Georgia (RLP)	585	405	**990**	256	99	**355**	13
Georgia (Disability)	1,708	869	**2,577**	16	0	**16**	30
Kenya (EMACK)	1,399	1,195	**2,594**	1,100	1,055	**2,155**	12
Liberia (STRIVE)	2,313	5,090	**7,403**	151	293	**444**	17
Mozambique (STRIVE)	5,352	4,898	**10,250**	1,708	1,761	**3,469**	0
Nepal (WINROCK)	43,195	31,004	**74,199**	16,722	4,532	**21,254**	29
Philippines (STRIVE)	122	122	**244**	37	6	**43**	7
Sri Lanka (UNICEF)			**39**			**42**	4
Sri Lanka (SCUK)	1,132	956	**2,088**	302	183	**485**	6
Sri Lanka (AECOM)			**395**			**57**	4
Thailand			**3,906**			**160**	N/A
Uganda			**7,599**			**691**	31
Ukraine	N/A	N/A	**N/A**	315	32	**347**	25
Zambia	5,577	7,347	**12,924**	1,289		**1,289**	10
Worldwide							
Better Care Network			**1,724**				46
CARE/ITSPLEY (Bangladesh, Tanzania, Egypt, Kenya)	14,742	13,033	**27,775**	1,364	747	**2,111**	72
Columbia University (Indonesia, West Bank/Gaza, Uganda)	N/A	N/A	**N/A**	52	54	**106**	54
UNICEF (Cambodia, Liberia, Guatemala)			**N/A**			**7,100**	96
Total			**214,811**	**Total**		**45,542**	**790**

Source: USAID

DCOF funds programs and activities that provide direct assistance to children, their families, communities, and governments, giving priority to programs that demonstrate innovative techniques, utilize and contribute to evidence-based guidance, and are replicable on a wider scale.

In 2009, DCOF projects operated in 24 countries with a budget of $13 million, benefiting 790 organizations and more than 260,000 children and adults through services or training (table 3). In **Nepal**, an "education for income generation" project provided disadvantaged youth with education, vocational training, and employment opportunities. An estimated 11,000 young people completed a nine-month literacy course integrated with health, agriculture, and employment information. More than 2,000 youth received vocational training in more than 40 professions and secured nonagricultural employment. More than 3,000 youth more than doubled their incomes raising and selling horticultural products, non-timber forest products, fish, goats, or spices. The project also trained young people to increase farm productivity by using natural resources, and 2,500 poor households received rice as


USAID/Families for Children Project

These two brothers are members of an at-risk family in Cherkasy province, Ukraine.

payment for their youth's labor in constructing irrigation systems, terraced hillsides, reservoirs, and fish culture ponds.

A DCOF-supported program in refugee camps on **Thailand's** border with Burma emphasized sport and play, reaching more than 15,600 children, youth, and adults. The program developed a strong base of master trainers, coaches, project coordinators, and teacher trainers, as well as a reputation for competency, integrity, and community support.

The Care and Protection of Children in Crisis-Affected Countries Learning Network established six global technical groups and three program learning groups that brought together more than 100 NGOs, universities, bilateral organizations, and other actors to build an evidence base for child protection and child protection programs. The Network held a child protection action summit in November 2008 to identify promising practices and outstanding gaps. It also surveyed the incidence of four of the United Nations Security Council's "six grave violations against children in war" and piloted the Interagency Emergency Child Protection Resource Kit during the crisis in **Gaza** in early 2009.

In **Ukraine**, the Families for Children Project transformed attitudes and practices about child care, enabling the Government to reform policies and approaches and build public support for family-based care as an alternative to institutionalization. Families for Children supported training of trainers in foster care, family preservation, national adoption, and community mobilization for about 180 trainers, who served as a pool of expertise for enhanced child welfare services. The trainers further trained more than 6,500 decisionmakers, service providers, parents, and children.

The STRIVE project (Supporting Transformation by Reducing Insecurity & Vulnerability with Economic Strengthening) initiated field projects in **Afghanistan**, **Liberia**, **Mozambique**, and the **Philippines** to benefit vulnerable children through market-led economic strengthening initiatives. Baseline surveys were completed and robust monitoring systems developed to evaluate results. In Mozambique, a village savings and loan scheme disbursed nearly $40,000 in loans, and the program in Afghanistan acquired $30,000 in capital and generated more than $390,000 in sales.

DCOF and UNICEF collaborated on projects in three countries – **Guatemala**, **Cambodia**, and **Liberia** – to strengthen systems for protecting vulnerable children and families. In Guatemala, the project partnered with public and private institutions to strengthen the ability of the Government to engage in child protection oversight, policy reform and implementation, and collaborations. The project in Cambodia helped the Cambodian National Council for Children compile existing legislation for revision and draft new legislation that addresses child protection issues such as abuse, adoption, guardianship, and juvenile justice. Activities in Liberia assisted 330 NGOs and civil society organizations, including 180 community-based child welfare committees.

Child Blindness Program

USAID programs for vulnerable children also include the Child Blindness Program, which helps reduce child blindness in countries where basic eye care services are inadequate or nonexistent. The Program provides vision screening, eyeglass distribution, education and rehabilitation for blind children, sight-restoring surgery, and training. In 2009, USAID-supported NGOs screened nearly 880,000 children; provided glasses to more than 15,400 children with refractive error; conducted 1,909 surgeries; and trained pediatric ophthalmologic teams in Africa, Asia, and Latin America.


USAID Jordan

■ *These women and children are attending one of Jordan's new comprehensive health centers, which in 2009 piloted new appointment and referral systems for primary and maternal/child health care.*

Jordan: Strengthening the Health System on Multiple Fronts

Health systems strengthening is a major focus of USAID/Jordan's health program, which in FY 2009 emphasized building leadership skills in the Ministry of Health. Central-level Ministry staff began to use information systems and knowledge management tools to strengthen their ability to make sound, evidence-based decisions to improve health services.

Ten hospitals benefited from new information technology equipment to support the perinatal information system, and members of the Ministry's information technology staff received training in maintaining the various systems. A number of systems, including those for general practice, perinatal care, and geographic mapping, were expanded. USAID also supported renovation of obstetric and neonatal care facilities in six major hospitals so they meet international standards.

USAID/Jordan also helped the Ministry extend an integrated referral and appointment system to comprehensive health centers and hospitals after it was successfully piloted in primary health care and maternal/child health centers. At the request of the Minister of Health, USAID assisted with implementing the system in all 12 health directorates. USAID/Jordan also provided technical support to the health directorates for improving the performance of their quality councils.

At the community level, USAID/Jordan helped the Ministry of Health build the capacity of 15 new health committees to mobilize communities around health priorities and develop and implement health promotion action plans. Nationwide, there are now 39 community-level health committees.

In addition, USAID helped the Jordan Medical Council build its capacity to develop and administer mandatory continuing medical education requirements for physicians.

Health Systems Strengthening

KEY RESULTS

- USAID held the first Asia Regional Workshop on Pay for Performance in the Philippines for more than 80 participants, including donor representatives, experts from around the world, and 14 country teams from nine countries. By the end of the workshop, all 14 teams completed draft designs to introduce or scale up a pay-for-performance scheme in their country to improve maternal and child health outcomes.
- With USAID support, performance assessments raised standards for HIV services in six Central American countries from an average of 46 to 72 percent improvement in compliance with standards in seven months.
- Nine countries implemented human resource information systems using free open-source software.
- Improvement collaboratives in 27 sites in 12 countries were in compliance with clinical guidelines for maternal, newborn, and child health; HIV; TB; family planning; and other areas.
- Established through WHO and USAID collaboration, drug and therapeutic committees in 70 countries continued to contribute to improved health care; 22 new committees were formed.

A core objective of USAID health programming, as well as GHI, is to strengthen health systems so they can sustain health impacts, develop country capacity, and increase equity, quality, and access to health services. GHI specifically places a strong focus on addressing barriers that constrain the delivery of health interventions.

USAID helps countries integrate their health systems across WHO's six health system "building blocks" and within their national infrastructure; gather and use data to make decisions; train health workers, who then train others; and more effectively target health services to vulnerable populations. Strengthening health systems by promoting country ownership and building the capacity of national and local institutions, organizations, and civil society stakeholders strengthens the platform for attaining sustainable results and achieving long-term positive health outcomes in disease-specific areas and among specific populations. USAID programs identify barriers to quality care and develop interventions to overcome them.

Interventions concentrate on one or more of the six core function "building blocks" in a way that will enable countries to sustain gains beyond the period of donor assistance:

1) Human resources. USAID helps countries ensure the right number, mix, and distribution of competent, efficient, and responsive staff and volunteers; appropriate workforce planning and work conditions; and education, training, recruitment, and professional development (figure 22).

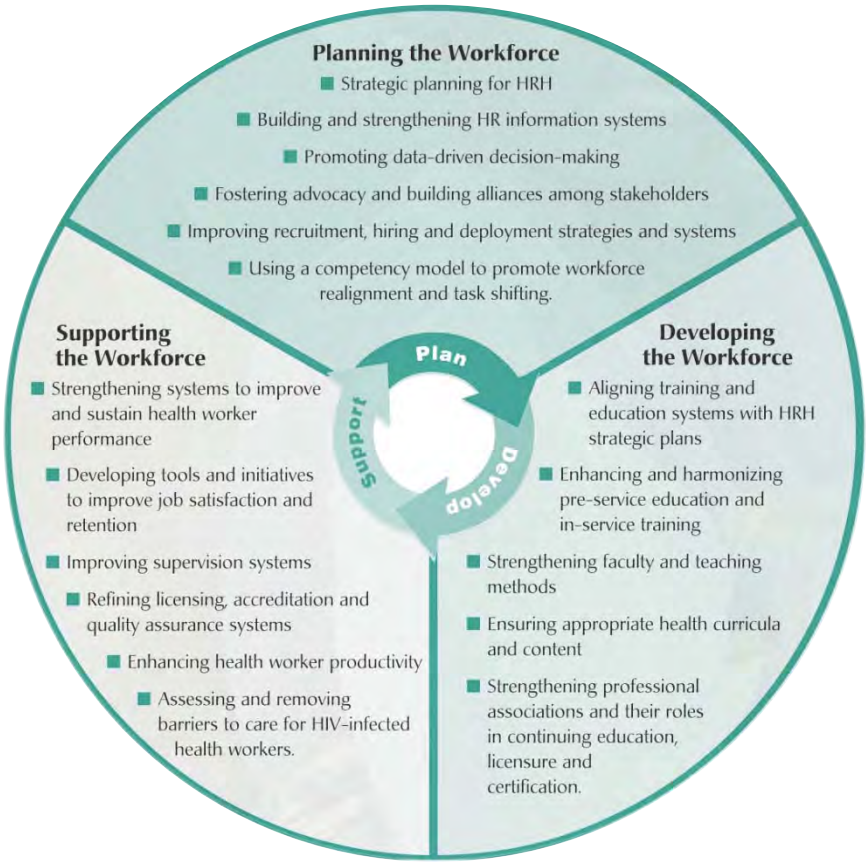
2) Medical supplies, vaccines, and technologies. USAID helps countries ensure equitable, timely, and consistent access to essential products and technologies of assured quality, safety, efficacy, and cost-effectiveness. USAID also seeks to ensure the scientifically sound, cost-effective use of commodities. A medical products regulatory system is critical for monitoring safety and enhancing a country's supply and distribution system.

3) Health financing. USAID helps countries mobilize resources to pay for health needs; pool these resources efficiently and equitably; and allocate them in ways that optimize impact, promote efficiency, and enhance equity. Financing mechanisms include expanded community-based health insurance, performance-based financing, credit, and targeted subsidies, all of which are designed to remove financial barriers and prevent financial hardship and catastrophic health expenditures.

4) Information. USAID helps countries develop their capacity to produce, analyze, disseminate, and use relevant, reliable, and timely health information for evidence-based policy development, resource allocation, program planning and management, advocacy, and community participation. Health information systems are critical for decisionmaking in all the other health system core functions and at all levels of the health system.

5) Leadership and governance. USAID helps countries increase oversight, accountability, and the participation of citizens, civil society, and the private sector in health system governance. It also works to improve the leadership and management skills of health sector staff to better plan and use resources, regulate the health system, and adhere to national health plans.

Figure 22: USAID Approach to Strengthen Human Resources for Health (HRH)



Source: Capacity Plus, USAID

6) Service delivery. USAID helps countries deliver proven health interventions to prevent and treat illness, promote healthy behaviors, improve service delivery, and measure impacts. Quality standards and quality assurance measures are integral to this effort.

The Agency partners with international organizations and other bilateral donors to strengthen health systems and maximize the effectiveness of these efforts. FY 2009 successes in health systems strengthening included the following:

Human Resources

In **Angola**, a USAID project trained 3,685 health professionals, primary care and community health workers, volunteers, and nonhealth personnel in family planning methods through a "cascade" system of training. Another project trained 13 trainers in nursing schools and institutes in Luanda, who then trained 205 family planning providers from project sites. In **Niger**, quality improvement collaboratives added human resource management indicators after assessments showed improvements in these areas often had positive effects on clinical indicators.

Medical Supplies, Vaccines, and Technologies

Activities in Latin America strengthened family planning programs. Price comparisons of contraceptives at a procurement workshop in **Guatemala** motivated the Ministry of Health to develop a price comparison for the country to enable it to obtain low-cost, high-quality contraceptives. In **El Salvador**, USAID integrated the contraceptive logistics system into the Ministry of Health's national supply management system and provided training to 849 Ministry staff. As a result, all 406 health facilities have more than 85 percent of contraceptive stocks.

Yemen Project Challenges Child Marriages

Working through the Yemen Women's Union, USAID's Extending Service Delivery and Basic Health Services activities initiated the Safe Age of Marriage Project to raise awareness and encourage local stakeholders to challenge the common practice of child marriage, especially for young girls. The partnership designed and conducted a survey of attitudes and practices to provide baseline data and inform a training curriculum focused on health and "quality of life" issues and on hands-on outreach skills in communication and community mobilization. Forty volunteers (20 males and 20 females) received this training in February 2009 and started to conduct outreach activities. Over five months, the volunteers conducted 754 educational sessions in homes (especially homes with young unmarried girls), at social gatherings, in schools, and in six newly initiated monthly health fairs, reaching 18,046 people (9,115 men and 8,931 women).

Health Financing

In FY 2009, USAID expanded its national health account (NHA) activities in the Eurasia region. It increased the capacity of countries to produce and use NHAs and helped strengthen the National Immunization Survey NHA Network in the

A poster in a pharmacy in Nicaragua depicts ways to prevent unplanned pregnancy. The poster was developed as part of a reproductive health/emergency contraception project for adolescents.

"The QAMSA (Quality of Antimalarials in Sub-Saharan Africa) study is the most comprehensive study out there on antimalarials and should be a wake-up call."

– Rachel Nugent, Center for Global Development

region. In **Armenia**, NHA data convinced policymakers to triple the country's FY 2009 budget allocation for reproductive health and antenatal care, and NHA data encouraged **Georgia** to increase health insurance coverage for the poor.

Information

USAID updated **El Salvador's** Perinatal Information System, one of the best in Latin America, by training Ministry of Health personnel and donating computer equipment and software. Ministry personnel use the system to analyze data and identify areas for improvement. USAID also improved the Ministry's Maternal Mortality Surveillance System, which included strengthening national, regional, local, and hospital maternal mortality committees.

Leadership and Governance

In **Senegal**, USAID continued to work with government and grassroots partners to improve health planning and governance through the development and implementation of government-funded annual health plans. Through a matching grant program, USAID leveraged more than $38,000 from local government units in two regions to fund their plans. USAID continued to develop and implement the NHA, which provided a systematic, comprehensive, and consistent monitoring of resources. The NHA enabled the Government to discover imbalances in funding for different health sectors and realign the health budget for the coming year. In **Nepal**, USAID worked with the Ministry of Health and Population and 11 other donors to draft a unified Nepal Health Sector Implementation Plan II (2010 to 2015), ensuring that up-to-date, evidence-based approaches are used and that donor and partner efforts are efficient and coordinated.

Service Delivery

In **Haiti**, USAID support for quality maternal and child health service delivery covered almost 50 percent of the population. The Public Law 480 Title II food aid program covered an additional 15 percent with basic maternal and child health and family planning services. The support included training for 3,000 service providers in child health and nutrition and

A caregiver helps a patient fill out an information sheet before receiving care at the PAIMAN maternal and child health clinic in Pakistan.

Health Information Systems in Paraguay

Following USAID-led efforts in FY 2008 to assess and improve national health information systems, Paraguay developed, again with USAID assistance, a conceptual framework for the Ministry of Health's health information system. The new general directorate for strategic information engaged USAID to lead the implementation of newly developed health information system tools. Another milestone was the development of new software for the Ministry's Human Resources Department, which allows the Ministry to have electronic access for the first time to more than 20,000 personnel files. With USAID support, the Ministry also established a new policy guide for procuring hardware and software. More than 900 people from the 18 sanitary regions, 15 regional hospitals, 25 district hospitals, and 60 health centers nationwide received training in health information management, and more than 100 services within the Ministry have an improved capacity to produce quality data for decisionmaking. The Health Metrics Network chose Paraguay's experience as the most successful model in the Latin America/Caribbean region.

1,100 in maternal health. Close to 140,000 children were fully vaccinated, and more than 370,000 children received at least one vitamin A dose. USAID also helped a multidonor effort deploy 10 mobile teams to underserved health facilities, train more than 100 health staff, and extend access to family planning. USAID used supplemental hurricane recovery funds to rehabilitate and re-equip eight sites serving more than 100,000 people; another five sites continue to receive assistance. The renovations facilitated improved and expanded service delivery. In **Nicaragua**, a geographic information tool measured inequity in access to family planning services; identified priority departments where inequities were the highest; and developed the results into a market segmentation study that will help target family planning services.

■ *A health worker provides antimalarial drugs to a woman in Zambia. The QAMSA study, supported by USAID and other partners, is helping countries in sub-Saharan Africa confront the problem of counterfeit and substandard antimalarials.*

Research Shines Light on Substandard Malaria Drugs

With 85 percent of the world's malaria cases and 90 percent of its malaria-related deaths, sub-Saharan Africa is at the epicenter of global malaria transmission and control activities. It is also a center for the sale of counterfeit, altered, and poor-quality malaria drugs, a particularly acute problem in Africa due to the limited regulatory capacity of country health systems and their inability to control the entry of counterfeit and sub-standard antimalarials into the marketplace. The dissemination of these drugs compromises patient treatment – putting lives at risk – and contributes to the emergence of drug-resistant strains.

To allow for a more comprehensive assessment of the problem of substandard medications and their location within the medical supply, in 2009 USAID completed a high-profile collaborative study with the World Health Organization and U.S. Pharmacopeia called the Quality of Antimalarials in sub-Saharan Africa (QAMSA) study. The QAMSA study stands out for several reasons: the large number of medicines sampled based on a field-tested protocol; the large number of samples that were submitted to full-scale confirmatory quality control testing; and the different levels of the distribution chain from which the samples were obtained. Of the 10 countries assessed, USAID supported efforts in Senegal, Madagascar, and Uganda, where the study found that, respectively, 44 percent, 30 percent, and 26 percent of antimalarials sampled in each country failed the full-scale quality control tests.

The QAMSA study has so far been reported in more than 500 academic and professional media outlets worldwide, raising awareness on the problem of substandard and counterfeit malaria drugs in developing countries. The study's results provide an evidence base to inform strategies for quality assurance systems and regulatory frameworks, for developing and providing safe antimalarial drugs, and for improving medicine quality.

Research and Technical Innovation

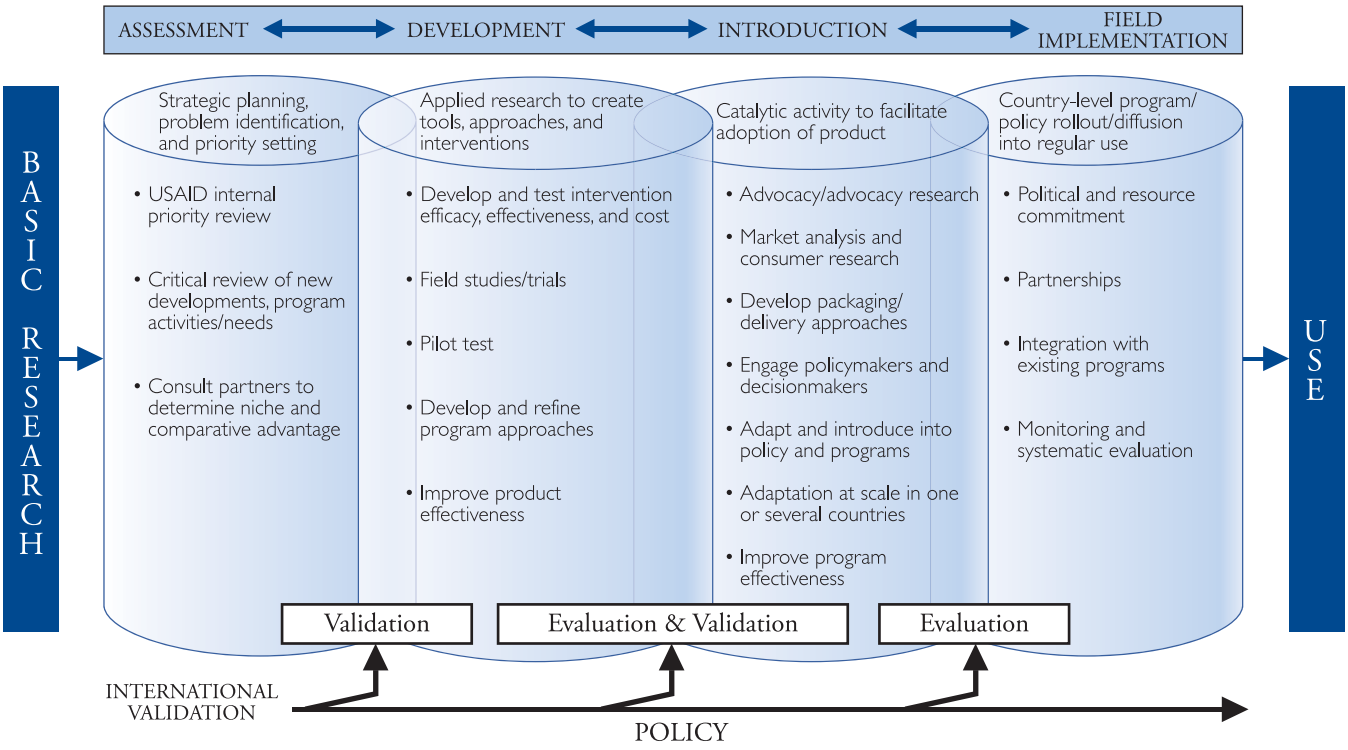
KEY RESULTS

- Results of a USAID-supported clinical trial of the tenofovir microbicide in South Africa provided the first-ever proof that a vaginal microbicide could safely and effectively reduce the risk of transmission of HIV from men to vulnerable women.
- A USAID-supported study in Zambia demonstrated that community health workers can effectively manage childhood pneumonia and malaria, which can subsequently decrease under-5 mortality.
- The USAID-supported International AIDS Vaccine Initiative announced the discovery of the PG9 and PG16 antibodies as potential candidates for vaccine development.
- The Household Hunger Scale for assessing household hunger at the population level was developed with USAID support and was included as a key indicator in the Feed the Future Initiative's results framework.

Research and innovation, one of the core GHI principles, allow USAID to develop, test, and refine new and improved tools, approaches, and interventions that contribute to programs and policies appropriate to health-related concerns in developing countries. Using a research-to-use model that maintains close connections between research, product development, and field implementation, the Agency pursues a proactive strategy for using funds to stimulate the development and introduction of key products (see figure 23). USAID outlined its five-year (2006–2010) health research strategy in its *Report to Congress: Health-Related Research and Development Activities at USAID* in 2006, and the 2010 update of the strategy was presented to Congress in September 2010 and is also available at http://www.harpnet.org.

The USAID model is an iterative process that includes ongoing validation and evaluation. USAID participates at various stages, depending on the nature of the health issue, the health policy, and the systems context. To achieve the greatest impact, USAID engages the expertise of multiple partners, including the Centers for Disease Control and Prevention and the National Institutes of Health of the Department of Health and Human Services, the Department of Defense, WHO, UNICEF, partner-country governments, universities, NGOs, and commercial sector partners.

Figure 23: Pathway from Research to Field Implementation and Use



Source: USAID

Maternal and Child Health

The Quality of Care for Prevention, Identification, and Management of Common Serious Maternal and Early Neonatal Complications Health Facility Assessment was finalized for implementation. The assessment determines the quality of interventions associated with the most common life-threatening maternal and newborn complications that occur in developing countries during labor and delivery – namely, AMTSL to treat postpartum hemorrhage, partograph use during prolonged/obstructed labor, pre-eclampsia and eclampsia screening and management, infection prevention, essential newborn care, and resuscitation in cases of birth asphyxia. Results of this study will guide national programs and policies for improving quality of care.

Research in **Zambia** demonstrated the effectiveness and feasibility of community health workers in managing pneumonia and malaria with the aid of rapid diagnostic tests. Results showed that these workers could in fact more accurately diagnose malaria with the tests than without them. Only 28 percent of the children with fevers seen by workers who used the tests received antimalarial drugs, closely matching the number of children who actually had malaria. Furthermore, fewer than 1 percent of the tested children who tested negative were treated with antimalarials, substantially reducing drug costs and the potential for drug resistance. The capacity of the workers to use rapid diagnostic tests and provide treatment for malaria and pneumonia has the potential to reduce drug overuse while providing early and appropriate treatment.

USAID water, sanitation, and hygiene (WASH) activities in **Ethiopia**, **Tanzania**, **Uganda**, and **Kenya** improved WASH practices in target groups by negotiating "small doable actions" – behaviors considered feasible to the target group given their context and resources and that have a personal and public health impact, even though they are not "ideal" practices. Using a formative research approach called "trials of improved practices" that identifies feasible incremental steps that move people toward ideal practices, USAID's Hygiene Improvement Project determined and/or validated WASH practices, and small doable actions to improve them, in households of people living with HIV/AIDS. Most small doable actions to integrate WASH into HIV/AIDS programs were found to be the same across countries in East Africa, implying that small doable actions can be easily adapted in new country settings.

Nutrition

Since 2000, USAID has supported the development of two household food security measures based on the idea that food insecurity causes predictable universal responses that can be captured and quantified by surveys such as the

"USAID plays a key leadership role in the translation of research findings into tangible improvements in the effectiveness and quality of health and nutrition interventions for the residents of isolated rural villages, rapidly expanding urban slums, and other underserved populations. These are the people that stand to most benefit from the latest findings of research on health and nutrition but are often the ones least likely to have access."

– Peter Winch, Professor in the Department of International Health at Johns Hopkins Bloomberg School of Public Health.

USAID-funded Demographic and Health Surveys. The work draws extensively on earlier U.S. Department of Agriculture efforts to develop a food security instrument for the U.S. context and USAID's Household Food Insecurity Access Scale, which provides a standard instrument and tabulation plan for food-insecure settings in developing countries. In 2009, seven data sets representing urban and rural populations, HIV-affected and non-HIV-affected households, and populations living in conflict and non-conflict areas were analyzed to test the Scale's internal, external, and cross-cultural validity. The results indicated that a simple, streamlined, culturally invariant scale to assess household hunger at the population level was achievable using a reduced set of questions and revised tabulation method. The Household Hunger Scale was subsequently developed and presented at an international food security conference in Brazil in September. The Scale is now a key indicator in the results framework of the Feed the Future presidential initiative targeting global hunger and food security.

USAID also supported the Women's Dietary Diversity Project to analyze the relationship between simple indicators of diet diversity and the micronutrient adequacy of women's diets. The Project's analysis of data from **Bangladesh**, **Burkina Faso**, **Mali**, **Mozambique**, and the **Philippines** documented low micronutrient intakes among women of reproductive age in resource-poor settings and advanced methods for assessing micronutrient adequacy using simple, indirect methods collected in large-scale surveys such as Demographic and Health Surveys. The results of this study will be published as a supplement to the *Journal of Nutrition* in 2010.

In **India**, the percentage of women receiving iron-folic acid supplements more than doubled from 32 to 69 percent as a result of Ministry of Health actions based on findings from USAID-supported micronutrient stock management assessments. Results from USAID-supported anemia prevalence studies in Jharkhand state generated policy changes to integrate deworming into anemia prevention services for pregnant women.

Family Planning and Reproductive Health

Preliminary results from a USAID-supported Phase III clinical trial that tested the contraceptive effectiveness and safety of the NES/EE contraceptive vaginal ring indicated that it is effective in preventing pregnancy; has a safety profile consistent with current hormonal contraceptives on the U.S. market; produces favorable bleeding patterns; and has high user satisfaction (about 80 percent satisfied or very satisfied). It also provides a rapid return to fertility, with 80 percent of discontinuing users who wish to become pregnant succeeding within six months. These results supported USAID's ongoing efforts to register the ring in developed markets and selected developing countries as the first user-controlled long-acting contraceptive that does not require the user's daily attention or trained health staff for insertion or removal.

Research in **Tanzania** and **Kenya** found that text messaging about family planning was acceptable to stakeholders and providers, including health ministries, private clinics, the United Nations Population Fund, and other collaborating agencies. Results showed that clients liked the privacy of the service, liked using mobile phones for communicating family planning information, and liked the reinforcement of messages first received in a clinical setting. USAID is now working with Kenya's Division of Reproductive Health on a mobile phone family planning provider notification system that will be linked with continuing medical education credits for providers.

Table 4: HIV-Positive Births Averted by Contraception in PEPFAR Countries	
Country	**Unintended HIV+ Births Averted Annually**
Botswana	4,172
Mozambique	18,395
Namibia	3,092
South Africa	120,256
Zambia	12,823
Ethiopia	2,728
Kenya	14,589
Rwanda	561
Tanzania	11,975
Uganda	7,573
Cote d'Ivoire	1,947
Nigeria	12,434
Guyana	178
Haiti	912
Vietnam	8,827

Source: Reynolds, HW, Janowitz, B, Wilcher R, et al. "Contraception to prevent HIV-positive births: Current contribution and potential cost savings in PEPFAR countries." Sex Trans Infect 2008; 84:49-53. http://sti.bmj.com/content/84/Suppl_2/ii49.full.pdf

A USAID-supported analysis of data from the 15 PEPFAR focus countries found that contraceptive use prevents hundreds of thousands of HIV-positive births each year by preventing unintended pregnancies in infected women (table 4). Contraceptive use to prevent an unintended pregnancy in an HIV-positive woman is significantly less expensive than giving an infant a single dose of nevirapine (a drug commonly given to prevent HIV in a child born to an infected woman), resulting in considerable savings – more than $2.2 million in South Africa.

HIV/AIDS

Research published in the journal *Science* in September 2009 and later presented at the AIDS Vaccine Conference announced the discovery of the first two antibodies (labeled PG9 and PG16) isolated from an African donor capable of blocking HIV. USAID support for the International AIDS Vaccine Initiative (IAVI) contributed to this important discovery. IAVI is expanding on this promising work to design vaccine candidates that will prompt the immune system to produce antibodies before a person is exposed to HIV, thus protecting against infection. Once investigational vaccines are ready for human trials, they will be tested in IAVI's network of clinical research centers in Africa, also supported by USAID.

Volunteers continued to enroll in a clinical trial of oral Truvada, a combination microbicide of the antiretroviral drug tenofovir and emtricitabine. The trial, which is ongoing through 2012, is expected to include 3,900 women at six sites in **Kenya**, **Tanzania**, **South Africa**, and **Malawi**. USAID continues to advance other antiretroviral approaches as well as research on non-antiretroviral products; novel delivery methods (e.g., vaginal rings, tablets, and films); combination

USAID-Supported Trial Shows Microbicide Protects against HIV Infection

"CAPRISA 004 is a model for future research studies in which clinical trials will be led by in-country investigators backed up by the scientific and operational expertise of their U.S. colleagues."

– USAID Administrator Rajiv Shah, July 2010

Clinical trials of microbicide products for preventing HIV infection in women have been the highest priority in microbicide research and development, and Congress has supported this priority with generous funding for more than a decade. The results of one such trial – the CAPRISA 004 trial of tenofovir 1% vaginal gel – has produced the first solid evidence that the use of an antiretroviral-based microbicide gel can significantly reduce the risk of HIV infection in women. Supported by the U.S. Government through USAID as part of the U.S. President's Emergency Plan for AIDS Relief, the trial was conducted in recent years among 889 South African women at high risk of HIV infection by the Center for the AIDS Program for Research in South Africa. It found that the tenofovir gel was 39 percent effective at reducing a woman's risk of becoming infected with HIV during sex and up to 54 percent effective in women who were more consistent in using the gel. The results were announced at the XVIII International AIDS Conference in July 2010.

These women in India are attending an information session on sound nutrition presented by community health workers. USAID-supported research in India has focused on micronutrient supplementation to prevent anemia during pregnancy.

products, including multiple-mechanism and multipurpose agents for preventing pregnancy, HIV, and other sexually transmitted infections; viral resistance; clinical trial design and coordination; and post-trial availability of microbicides.

Health Systems

USAID supports the increased use of community health workers in providing effective maternal and child health services and reducing maternal and child mortality. To monitor progress in this direction, USAID helped develop a new tool to periodically rate programs and provide rapid consensus-based measurement. In 2009, field tests were conducted in **Nepal** to validate the tool. Additional testing in **Benin** will follow to adapt the tool for HIV/AIDS, malaria, and other USAID priorities. USAID is also conducting operations research to measure the tool's cost-effectiveness.

Infectious Diseases

USAID's Malaria Vaccine Development Program collaborated with the Walter Reed Army Institute of Research, GlaxoSmithKline, the National Institute of Allergy and Infectious Diseases, the University of Maryland Center for Vaccine Development, and the University of Bamako Malaria Research and Training Center in a field trial in **Mali** to evaluate the efficacy of a potential malaria vaccine in children (also see "Infectious Diseases" chapter). The trial's results strongly suggested that a complex vaccine based on multiple parasite types could provide efficacy against each of the types. The results of a second trial confirmed the likely effectiveness of cellular immunity in protection against malaria. This and other emerging information suggest that a period of preclinical and early clinical development is now appropriate.

Multidrug-resistant tuberculosis (MDR-TB) is a significant impediment to TB control worldwide. USAID is undertaking a multicountry study to examine the effectiveness of a shortened, standardized regimen to treat MDR-TB within various settings. Contrary to the recommended 18- to 24-month treatment, this nine-month regimen significantly shortens treatment in hopes of lowering the incidence of drug resistance arising from extended noncompliance with treatment. The Standardized Treatment Regimen of Antituberculosis Drugs for Patients with Multiple Drug-Resistant Tuberculosis (STREAM) study will generate evidence to inform the MDR-TB treatment recommendations of global technical agencies.

USAID's Emerging Pandemic Threats program seeks to preempt or combat, at their source, emerging zoonotic diseases that could significantly impact human health. Research in this area supports a comprehensive surveillance capacity for emerging threats by complementing traditional "syndromic surveillance" methods with a new "predictive surveillance" model for early detection of viruses and other pathogens before they can spread to humans. This model will consider environmental factors, potential points of disease transmission, and advances in genomics and informatics to classify new harmful organisms.

Financial Annex

Funding Tables

The Department of State, Office of the Director of U.S. Foreign Assistance, established a data system that manages the budget process for USAID and the Department of State. The data system is based on the Foreign Assistance Framework, which differs slightly from the health categories incorporated into the annual appropriations bills. The data provided in this report have been adjusted to better reflect the categories of the appropriations bills.

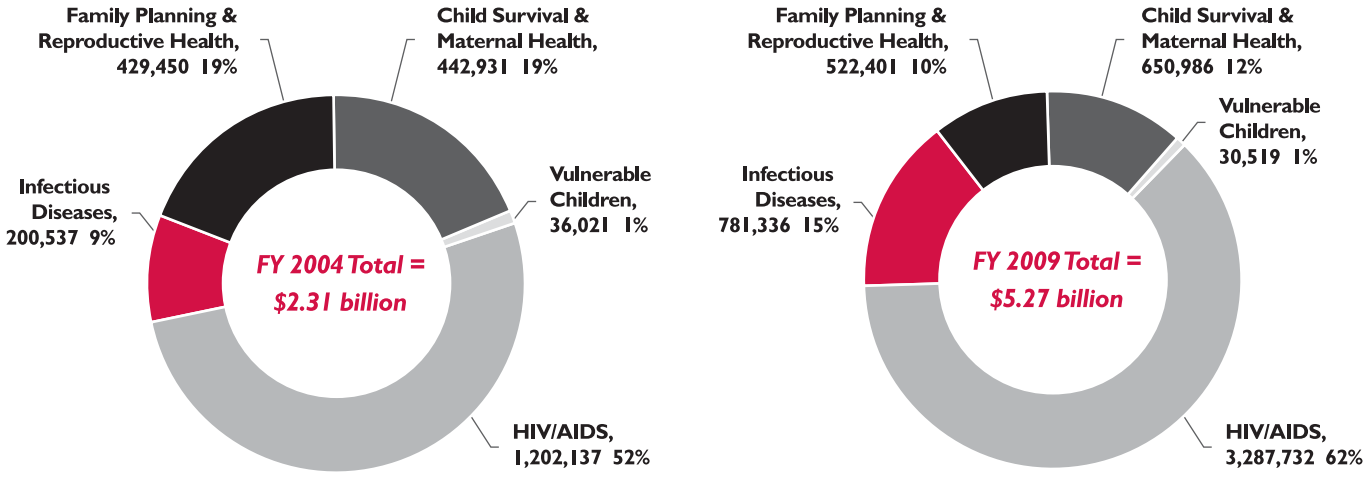
FY 2009 Total USAID Health Budget by Program Category and Bureau

($ thousands)

Program Category	AFR	AME	E&E	LAC	DCHA	GH	Int'l. Partners	TOTAL
Child Survival and Maternal Health	192,820	263,600	9,556	40,810	-	67,200	77,000	650,986
Vulnerable Children	-	-	15,519	-	13,000		2,000	30,519
HIV/AIDS	1,957,551	121,491	15,273	85,045	-	309,390	798,982	3,287,732
Infectious Diseases	379,735	100,820	24,384	15,257	-	81,140	180,000	781,336
Family Planning and Reproductive Health	208,900	142,371	8,430	44,200	-	98,500	20,000	522,401
TOTAL	2,739,006	628,282	73,162	185,312	13,000	556,230	1,077,982	5,272,974

FY 2004 and FY 2009 Total USAID Health Budget by Program Category and Bureau

($ thousands)



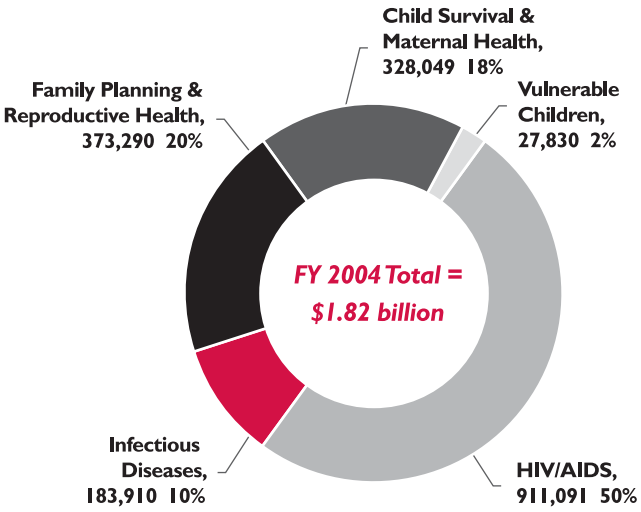
FY 2009 USAID Health Budget: Global Health and Child Survival Account by Program Category and Bureau

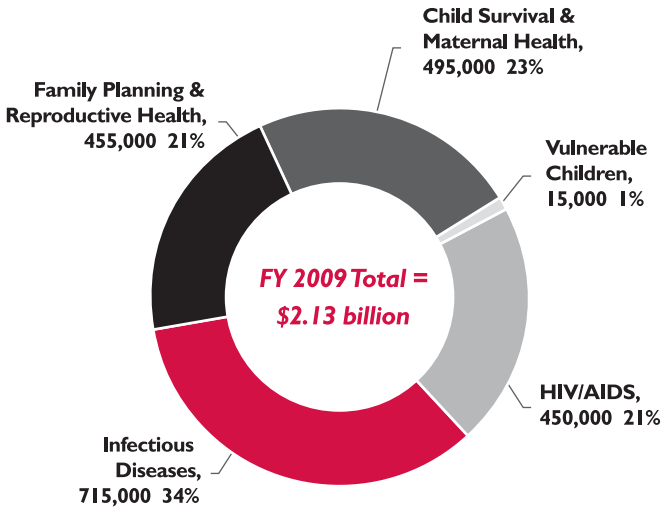
($ thousands)

Program Category	AFR	AME	E&E	LAC	DCHA	GH	Int'l. Partners	Total
Child Survival and Maternal Health	177,820	132,620	750	39,610	-	67,200	77,000	495,000
Vulnerable Children	-	-	-	-	13,000	-	2,000	15,000
HIV/AIDS	94,410	67,200	5,450	31,121	-	57,774	194,045	450,000
Infectious Diseases	373,879	59,754	4,970	15,257	-	81,140	180,000	715,000
Family Planning and Reproductive Health	202,400	92,300	-	41,800	-	98,500	20,000	455,000
TOTAL	848,509	351,874	11,170	127,788	13,000	304,614	473,045	2,130,000

FY 2004 and FY 2009 USAID Health Budget: Global Health and Child Survival Account by Program Category

($ thousands)





FY 2009 Total USAID Health Budget by Program Category and Country

($ thousands)

Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	Infectious Diseases			Family Planning/ Reproductive Health	Total
				TB	Malaria	Antimicrobial, Surveillance & Other ID		
AFRICA (AFR)								
Angola	1,350	-	5,450	100	18,700	-	4,000	29,600
Benin	4,900	-	2,000	-	13,800	-	3,000	23,700
Botswana	-	-	15,847	-	-	-	-	15,847
Burkina Faso	-	-	-	-	6,000	-	-	6,000
Burundi	2,560	-	3,500	-	6,000	-	-	12,060
Cameroon	-	-	1,595	-	-	-	-	1,595
Cote d'Ivoire	-	-	54,649	-	-	-	-	54,649
Democratic Republic of Congo	13,000	-	10,108	4,485	15,580	-	9,000	52,173
Djibouti	246	-	-	250	-	-	-	496
Ethiopia	18,000	-	206,061	5,000	19,700	-	20,500	269,261
Ghana	6,100	-	14,365	595	17,300	-	9,000	47,360
Guinea	3,200	-	2,000	-	-	-	3,000	8,200
Kenya	5,250	-	328,629	2,876	19,700	-	17,800	374,255
Lesotho	-	-	7,292	-	-	-	-	7,292
Liberia	10,500	-	3,150	400	11,800	-	7,000	32,850
Madagascar	8,700	-	2,000	-	16,700	-	12,000	39,400
Malawi	7,500	-	26,598	1,389	17,700	-	8,700	61,887
Mali	8,450	-	3,000	-	15,400	-	6,800	33,650
Mozambique	8,750	-	124,115	2,973	19,700	-	8,000	163,538
Namibia	-	-	46,639	1,934	-	-	-	48,573
Nigeria	17,000	-	225,265	5,045	16,000	-	19,000	282,310
Rwanda	6,450	-	76,898	-	16,300	-	9,000	108,648
Senegal	5,500	-	4,169	843	15,700	-	7,000	33,212
Somalia	1,550	-	-	-	-	-	-	1,550
South Africa	-	-	302,919	10,000	-	-	1,500	314,419
Sudan	17,900	-	5,112	595	3,580	3,656	5,300	36,143
Swaziland		-	16,108	-	-	-	-	16,108
Tanzania	6,600	-	146,546	2,478	35,000	-	17,000	207,624
Uganda	6,500	-	132,834	2,182	21,600	-	15,000	178,116
Zambia	8,800	-	147,971	3,075	14,700	-	10,000	184,546
Zimbabwe	9,500	-	33,930	1,587	1,000	500	3,000	49,517
Africa Regional	10,984	-	1,000	2,477	2,250	1,300	2,300	20,311
East Africa Regional	2,000	-	2,800	1,785	-	-	3,000	9,585
Southern Africa Regional	-	-	2,000	-	-	-	-	2,000
West Africa Regional	1,530	-	3,000	-	-	-	8,000	12,530
TOTAL:	192,820	-	1,957,551	50,069	324,210	5,456	208,900	2,739,006

FY 2009 Total USAID Health Budget by Program Category and Country

($ thousands)

Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	Infectious Diseases			Family Planning/ Reproductive Health	Total
				TB	Malaria	Antimicrobial, Surveillance & Other ID		
ASIA AND MIDDLE EAST (AME)								
Afghanistan	77,000	-	750	5,234	-	-	10,000	92,984
Bangladesh	15,350	-	2,700	5,000	-	-	18,500	41,550
Burma	-	-	2,100	-	-	-	-	2,100
Cambodia	9,000	-	14,050	3,868	-	-	5,000	31,918
China	-	-	5,883	-	-	-	-	5,883
Egypt	6,000	-	-	-	-	23,317	11,000	40,317
India	19,000	-	22,582	10,000	-	-	19,500	71,082
Indonesia	12,750	-	8,750	10,000	-	-	-	31,500
Jordan	17,550	-	-	-	-	-	14,650	32,200
Kazakhstan	217	-	780	1,514	-	417	-	2,928
Kyrgyz Republic	676	-	200	1,441	-	798	159	3,274
Kyrgyzstan	-	-	455	-	-	-	-	455
Laos	-	-	1,000	-	-	-	-	1,000
Libya	-	-	-	-	-	500	-	500
Nepal	8,200	-	5,000	-	-		9,000	22,200
Pakistan	68,335	-	2,000	4,468	-	2,000	28,334	105,137
Papua New Guinea	-	-	2,500		-	-		2,500
Philippines	3,720	-	1,000	5,455	-	-	17,000	27,175
Tajikistan	1,530	-	724	1,405	-	812	364	4,835
Thailand	-	-	1,250	-	-	-		1,250
Timor-Leste	2,400	-	-	-	-	-	1,400	3,800
Turkmenistan	216	-	275	785	-	230		1,506
Uzbekistan	316	-	790	1,455	-	218	164	2,943
Vietnam	-	-	44,067	-	-		-	44,067
West Bank and Gaza	13,990	-	-	-	-	8,650	-	22,640
Yemen	5,000	-	-	-	-		6,000	11,000
Regional Development Mission	-	-	2,500	5,753	6,000	1,500	-	15,753
AME Regional	2,350	-	1,300	-	-	-	1,300	4,950
Central Asia Regional	-	-	715	-	-	-	-	715
South and EastAsia Regional (RDMA)	-	-	120	-	-	-	-	120
TOTAL:	**263,600**	**-**	**121,491**	**56,378**	**6,000**	**38,442**	**142,371**	**628,282**

FY 2009 Total USAID Health Budget by Program Category and Country

($ thousands)

			Infectious Diseases					
Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	TB	Malaria	Antimicrobial, Surveillance & Other ID	Family Planning/ Reproductive Health	Total
EUROPE AND EURASIA (E&E)								
Albania	950	-	-	-	-	800	750	2,500
Armenia	2,300	1,100	-	600	-	400	1,000	5,400
Azerbaijan	750	-	-	496	-	1,120	750	3,116
Belarus	-	550	-	240	-	-	-	790
Georgia	2,650	9,578	850	900	-	6,555	1,050	21,583
Kosovo	1,000	-	-	-	-	-	-	1,000
Russia	1,675	4,291	6,670	8,567	-	-	3,375	24,578
Ukraine	-	-	7,303	2,492	-	338	1,350	11,483
EurAsia Regional	181	-	450	1,635	-	171	111	2,548
Europe Regional	50	-	-	-	-	70	44	164
TOTAL:	**9,556**	**15,519**	**15,273**	**14,930**	**-**	**9,454**	**8,430**	**73,162**
LATIN AMERICA AND THE CARIBBEAN (LAC)								
Bolivia	6,510	-	-	1,226	-	-	9,100	16,836
Brazil	-	-	800	3,500	-	-	-	4,300
Dominican Republic	2,700	-	5,750	1,289	-	-	1,700	11,439
El Salvador	2,500	-	1,090	-	-	-	2,400	5,990
Guatemala	5,450	-	2,000	-	-	-	6,600	14,050
Guyana	-	-	10,546	-	-	-	-	10,546
Haiti	9,800	-	38,960	1,289	-	-	7,200	57,249
Honduras	3,250	-	5,540	-	-	-	3,500	12,290
Jamaica	-	-	1,200	-	-	-	-	1,200
Mexico	-	-	2,200	700	-	-	-	2,900
Nicaragua	2,700	-	1,577	-	-	-	2,700	6,977
Paraguay	500	-	-	-	-	-	4,100	4,600
Peru	5,000	-	1,240	595	-	-	5,400	12,235
Caribbean Regional	-	-	5,750	-	-	-	-	5,750
Central America Regional	-	-	6,804	-	-	-	-	6,804
LAC Regional	2,400	-	1,588	808	-	200	1,500	6,496
South America Regional	-	-		300	5,000	350	-	5,650
TOTAL:	**40,810**	**-**	**85,045**	**9,707**	**5,000**	**550**	**44,200**	**185,312**

FY 2009 Total USAID Health Budget by Program Category and Country

($ thousands)

				Infectious Diseases				
Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	TB	Malaria	Antimicrobial, Surveillance & Other ID	Family Planning/ Reproductive Health	Total
CENTRAL PROGRAMS								
Democracy, Conflict and Humanitarian Assistance	-	13,000	-	-	-	-	-	13,000
Global Health	67,200	-	309,390	30,500	49,790	850	98,500	556,230
TOTAL:	**67,200**	**13,000**	**309,390**	**30,500**	**49,790**	**10,850**	**98,500**	**569,230**
INTERNATIONAL PARTNERSHIPS								
Pandemic Influenza and Other Emerging Threats	-	-	-	-	-	140,000	-	140,000
Blind Children	-	2,000	-	-	-	-	-	2,000
Commodity Fund	-	-	20,335	-	-	-	-	20,335
Global Alliance for Vaccine Immunization (GAVI)	75,000	-	-	-	-	-	-	75,000
Global Fund for AIDS, TB, and Malaria	-	-	664,937	-	-	-	-	664,937
International AIDS Vaccine Initiative (IAVI)	-	-	28,710	-	-	-	-	28,710
Iodine Deficiency Disorder (IDD)	2,000	-	-	-	-	-	-	2,000
Microbicides		-	45,000	-	-		-	45,000
Neglected Tropical Diseases (NTD)	-	-	-	-	-	25,000	-	25,000
TB Drug Facility	-	-	-	15,000	-	-	-	15,000
UNFPA UN Population Fund	-	-	-	-	-	-	20,000	20,000
UNAIDS	-	-	40,000	-	-			40,000
TOTAL	**77,000**	**2,000**	**798,982**	**15,000**	**-**	**165,000**	**20,000**	**1,077,982**
GRAND TOTAL	**650,986**	**30,519**	**3,287,732**	**176,584**	**385,000**	**219,752**	**522,401**	**5,272,974**

FY 2009 USAID Health Budget:
Global Health and Child Survival Account by Program Category and Country

($ thousands)

Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	Infectious Diseases			Family Planning/ Reproductive Health	Total
				TB	Malaria	Antimicrobial, Surveillance & Other ID		
AFRICA (AFR)								
Angola	1,350	-	4,400	100	18,700	-	4,000	28,550
Benin	4,900	-	2,000	-	13,800	-	3,000	23,700
Burkina Faso		-		-	6,000	-	-	6,000
Burundi	2,560	-	3,500	-	6,000	-	-	12,060
Cameroon		-	1,500	-	-	-	-	1,500
Democratic Republic of Congo	13,000	-	9,200	4,485	15,580	-	9,000	51,265
Djibouti	246	-		250		-	-	496
Ethiopia	18,000	-		5,000	19,700	-	20,500	63,200
Ghana	6,100	-	5,500	595	17,300	-	9,000	38,495
Guinea	3,200	-	2,000	-	-	-	3,000	8,200
Kenya	5,250	-		2,876	19,700	-	17,800	45,626
Lesotho		-	6,400			-		6,400
Liberia	6,000	-	2,700	400	11,800	-	4,000	24,900
Madagascar	8,700	-	1,500		16,700	-	12,000	38,900
Malawi	7,500	-	15,500	1,389	17,700	-	8,700	50,789
Mali	8,450	-	3,000		15,400	-	6,800	33,650
Mozambique	8,750	-	-	2,973	19,700	-	8,000	39,423
Namibia		-	-	1,934	-	-	-	1,934
Nigeria	17,000	-	-	5,045	16,000	-	19,000	57,045
Rwanda	6,450	-	-	-	16,300	-	9,000	31,750
Senegal	5,500	-	3,000	843	15,700	-	7,000	32,043
Somalia	1,550	-	-	-	-	-		1,550
South Africa		-	-	10,000	-	-	1,500	11,500
Sudan	14,400	-	2,010	595	2,080	800	3,300	23,185
Swaziland		-	6,900	-	-	-		6,900
Tanzania	6,600	-	-	2,478	35,000	-	17,000	61,078
Uganda	6,500	-	-	2,182	21,600	-	15,000	45,282
Zambia	8,800	-	-	3,075	14,700	-	10,000	36,575
Zimbabwe	2,500	-	16,500	1,587	-	-	1,500	22,087
Africa Regional	10,984	-	1,000	2,477	2,250	1,300	2,300	20,311
East Africa Regional	2,000	-	2,800	1,785	-	-	3,000	9,585
Southern Africa Regional		-	2,000	-	-	-		2,000
West Africa Regional	1,530	-	3,000	-	-	-	8,000	12,530
TOTAL	**177,820**	**-**	**94,410**	**50,069**	**321,710**	**2,100**	**202,400**	**848,509**

FY 2009 USAID Health Budget:
Global Health and Child Survival Account by Program Category and Country

($ thousands)

			Infectious Diseases					
Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	TB	Malaria	Antimicrobial, Surveillance & Other ID	Family Planning/ Reproductive Health	Total
ASIA AND MIDDLE EAST (AME)								
Afghanistan	42,000	-	500	5,234	-	-	10,000	57,734
Bangladesh	15,350	-	2,700	5,000	-	-	18,500	41,550
Burma	-	-	2,100	-	-	-	-	2,100
Cambodia	9,000	-	12,500	3,868	-	-	5,000	30,368
China	-	-	4,000		-	-	-	4,000
India	19,000	-	21,000	10,000	-	-	19,500	69,500
Indonesia	12,750	-	7,750	10,000	-	-	-	30,500
Kazakhstan	-	-	200	864	-	-	-	1,064
Kyrgyz Republic	-	-	200	595	-	-	-	795
Laos	-	-	1,000	-	-	-	-	1,000
Nepal	8,200	-	5,000	-	-	-	9,000	22,200
Pakistan	17,500	-	2,000	3,968	-	-	10,000	33,468
Papua New Guinea	-	-	2,500		-	-		2,500
Philippines	3,720	-	1,000	5,455	-	-	17,000	27,175
Tajikistan	750	-	200	495	-	-	-	1,445
Thailand	-	-	1,000	-	-	-	-	1,000
Timor-Leste	-	-	-	-	-	-	1,000	1,000
Turkmenistan	-	-	200	407	-	-	-	607
Uzbekistan	-	-	200	615	-	-	-	815
Yemen	2,000	-	-	-	-	-	1,000	3,000
Regional Development Mission	-	-	2,500	5,753	6,000	1,500	-	15,753
AME Regional	2,350	-	650	-	-	-	1,300	4,300
TOTAL	**132,620**	**-**	**67,200**	**52,254**	**6,000**	**1,500**	**92,300**	**351,874**
EUROPE AND EURASIA (E&E)								
Armenia	-	-	-	400	-	-	-	400
Azerbaijan	750	-		496	-	-	-	1,246
Russia	-	-	2,500	1,796	-	-	-	4,296
Ukraine	-	-	2,500	691	-	-	-	3,191
EurAsia Regional	-	-	450	1,587	-	-	-	2,037
TOTAL	**750**	**-**	**5,450**	**4,970**	**-**	**-**	**-**	**11,170**

FY 2009 USAID Health Budget:
Global Health and Child Survival Account by Program Category and Country

($ thousands)

Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	Infectious Diseases			Family Planning/ Reproductive Health	Total
				TB	Malaria	Antimicrobial, Surveillance & Other ID		
LATIN AMERICA AND THE CARIBBEAN (LAC)								
Bolivia	6,510	-	-	1,226	-	-	9,100	16,836
Brazil	-	-	-	3,500	-	-	-	3,500
Dominican Republic	2,000	-	5,750	1,289	-	-	1,300	10,339
El Salvador	2,500	-	1,090	-	-	-	2,400	5,990
Guatemala	5,450	-	2,000	-	-	-	6,600	14,050
Haiti	9,800	-		1,289	-	-	7,200	18,289
Honduras	3,250	-	5,000	-	-	-	3,500	11,750
Jamaica	-	-	1,200	-	-	-	-	1,200
Mexico	-	-	2,200	700	-	-	-	2,900
Nicaragua	2,700	-	1,000	-	-	-	2,700	6,400
Paraguay		-		-	-	-	2,100	2,100
Peru	5,000	-	1,240	595	-	-	5,400	12,235
Caribbean Regional	-	-	5,750	-	-	-	-	5,750
Central America Regional	-	-	5,391	-	-	-	-	5,391
LAC Regional	2,400	-	500	808		200	1,500	5,408
South America Regional	-	-		300	5,000	350	-	5,650
TOTAL	**39,610**	**-**	**31,121**	**9,707**	**5,000**	**550**	**41,800**	**127,788**
CENTRAL PROGRAMS								
Democracy, Conflict and Humanitarian Assistance	-	13,000	-	-	-	-	-	13,000
Global Health	67,200	-	57,774	30,500	49,790	850	98,500	304,614
TOTAL	**67,200**	**13,000**	**57,774**	**30,500**	**49,790**	**850**	**98,500**	**317,614**

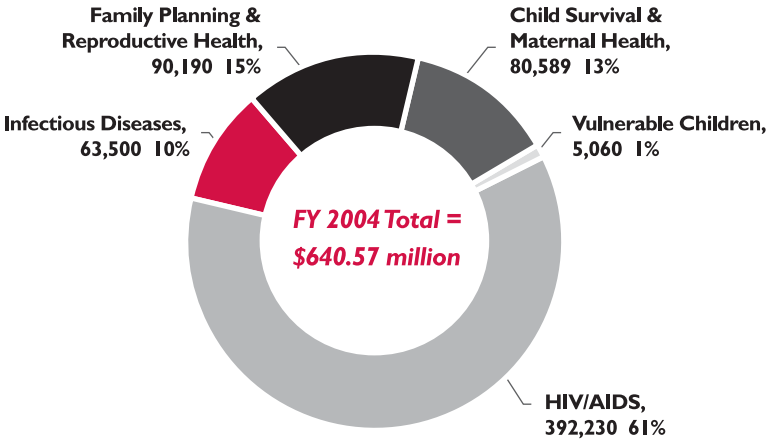
FY 2009 USAID Health Budget:
Global Health and Child Survival Account by Program Category and Country

($ thousands)

				Infectious Diseases				
Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	TB	Malaria	Antimicrobial, Surveillance & Other ID	Family Planning/ Reproductive Health	Total
INTERNATIONAL PARTNERSHIPS								
Pandemic Influenza and Other Emerging Threats	-	-	-	-	-	140,000	-	140,000
Blind Children	-	2,000	-	-	-	-	-	2,000
Commodity Fund	-	-	20,335	-	-	-	-	20,335
Global Alliance for Vaccine Immunization (GAVI)	75,000	-	-	-	-	-	-	75,000
Global Fund for AIDS, TB, and Malaria	-	-	100,000	-	-	-	-	100,000
International AIDS Vaccine Initiative (IAVI)	-	-	28,710	-	-	-	-	28,710
Iodine Deficiency Disorder (IDD)	2,000	-	-	-	-	-	-	2,000
Microbicides	-	-	45,000	-	-		-	45,000
Neglected Tropical Diseases (NTD)	-	-	-	-	-	25,000	-	25,000
TB Drug Facility	-	-	-	15,000	-	-	-	15,000
UNFPA UN Population Fund	-	-	-	-	-	-	20,000	20,000
TOTAL	**77,000**	**2,000**	**194,045**	**15,000**	**-**	**165,000**	**20,000**	**473,045**
GRAND TOTAL	**495,000**	**15,000**	**450,000**	**162,500**	**382,500**	**170,000**	**455,000**	**2,130,000**

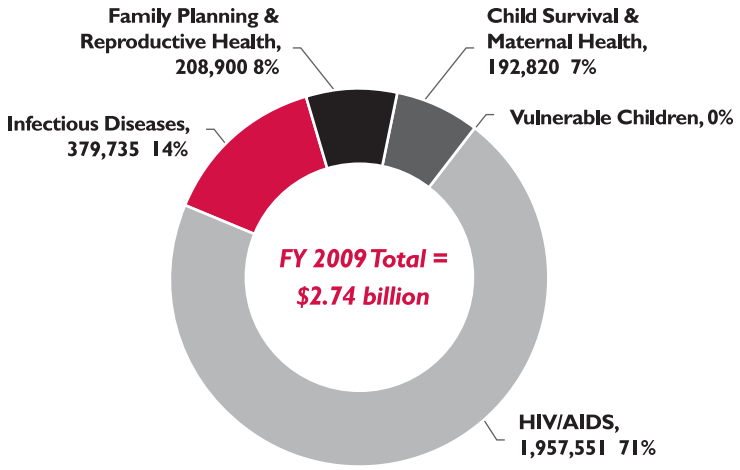
FY 2004 Total Health Budget by Program Category, Africa Region

($ thousands)



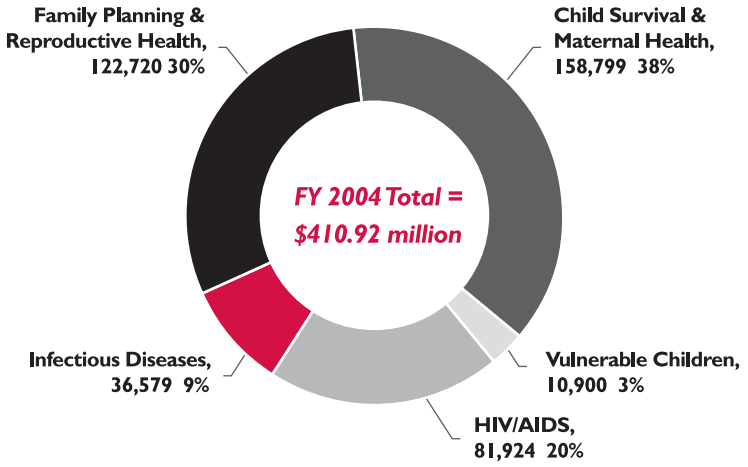
FY 2009 Total Health Budget by Program Category, Africa Region

($ thousands)



FY 2004 Total Health Budget by Program Category, Asia and Middle East Region

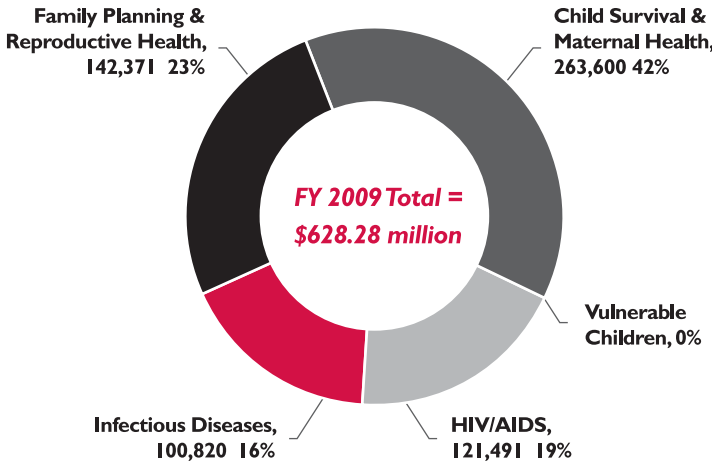
($ thousands)



;

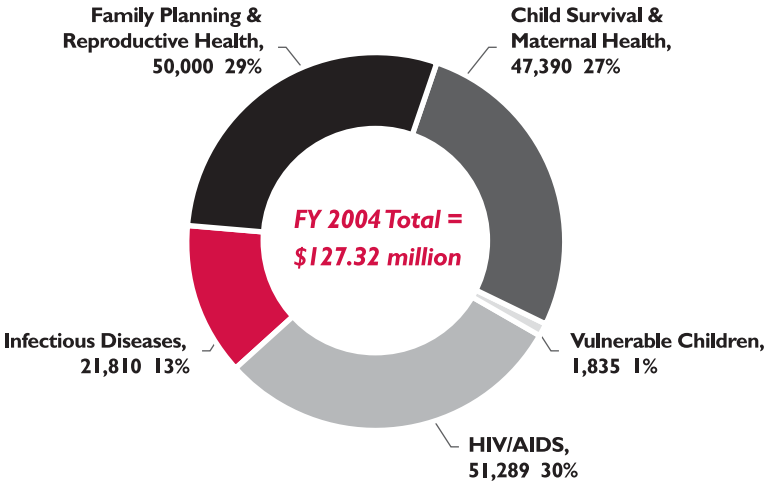
FY 2009 Total Health Budget by Program Category, Asia and Middle East Region

($ thousands)



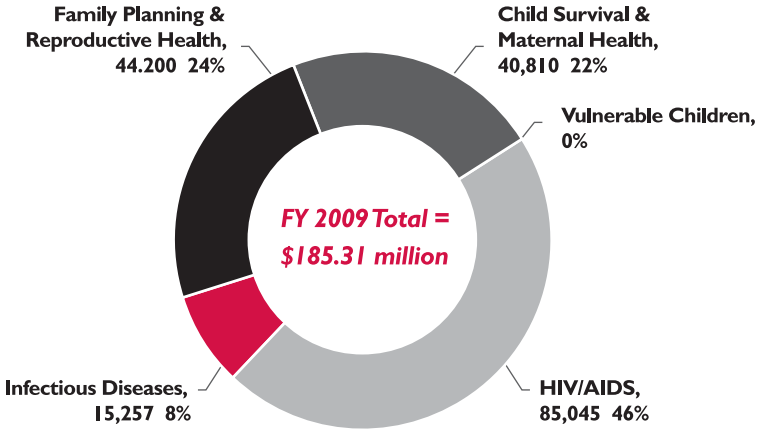
FY 2004 Total Health Budget by Program Category, Latin America and Caribbean Region

($ thousands)



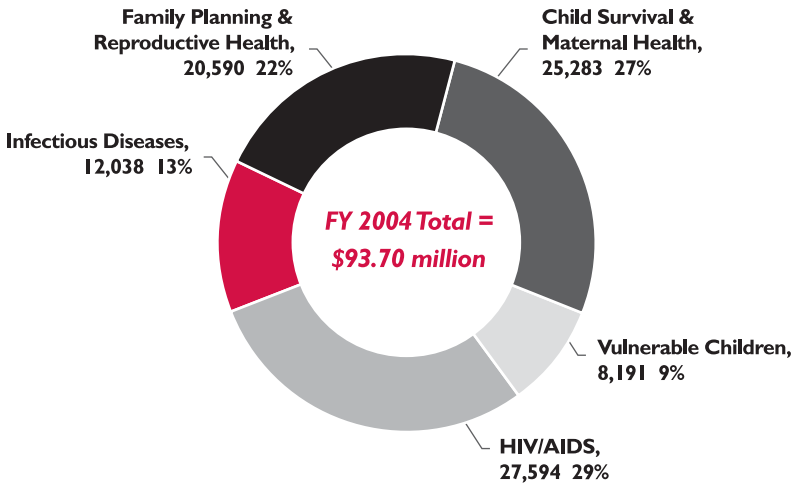
FY 2009 Total Health Budget by Program Category, Latin America and Caribbean Region

($ thousands)



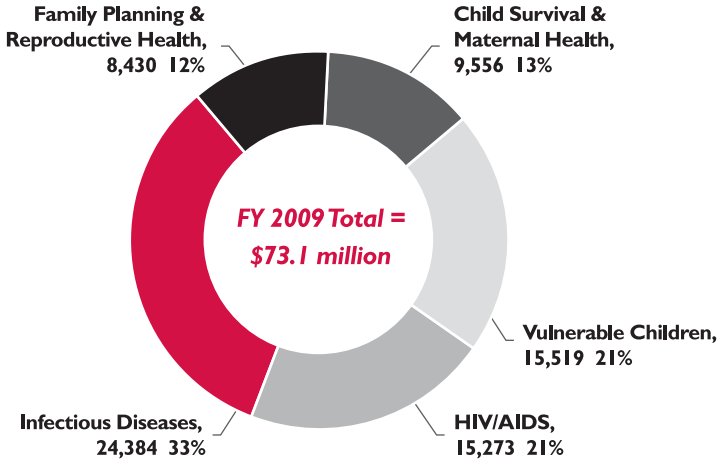
FY 2004 Total Health Budget by Program Category, Europe and Eurasia Region

($ thousands)



FY 2009 Total Health Budget by Program Category, Europe and Eurasia Region

($ thousands)



Acronyms and Abbreviations

ACT	artemisinin-based combination therapy
AFP	acute flaccid paralysis
AMTSL	active management of the third stage of labor
CHL	Communication for Healthy Living (USAID project)
CORE	Child Survival Collaborations and Resources Group
CRWRC	Christian Reformed World Relief Committee
CSHGP	Child Survival and Health Grants Program (USAID)
DCOF	Displaced Children and Orphans Fund (USAID)
DOTS	directly observed treatment, short course
DPT	diphtheria-pertussis-tetanus
EPT	Emerging Pandemic Threats (USAID program)
FY	fiscal year
GHI	Global Health Initiative (U.S.)
GPEI	Global Polio Eradication Initiative
H2P	Humanitarian Pandemic Preparedness (USAID program)
IAVI	International AIDS Vaccine Initiative
iCCM	integrated community case management
ITSPLEY	Innovation through Sport: Promoting Leaders, Empowering Youth (USAID project)
KMC	kangaroo mother care
MDR-TB	multidrug-resistant tuberculosis

MSM	men who have sex with men
NGO	nongovernmental organization
NHA	national health account
NTD	neglected tropical disease
ORS	oral rehydration solution
ORT	oral rehydration therapy
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PMI	President's Malaria Initiative (U.S.)
PMTCT	prevention of mother-to-child HIV transmission
QAMSA	Quality of Antimalarials in Sub-Saharan Africa (donor study)
SBM-R	Standards-Based Management and Recognition
TB	tuberculosis
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WASH	water, sanitation, and hygiene
WHO	World Health Organization

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
Tel: (202) 712-0000
Fax: (202) 216-3524
www.usaid.gov