USAID
FROM THE AMERICAN PEOPLE

Report to Congress

CHILD SURVIVAL AND HEALTH PROGRAMS FUND PROGRESS REPORT

Fiscal Year 2007

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

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ACRONYMS AND ABBREVIATIONS

ABC	Abstinence until marriage; being faithful; and, as appropriate, correct and consistent use of condoms
ACT	Artemisinin-based combination therapy
ADR	Adverse drug reaction
AFENET	African Field Epidemiology Network
AFP	Acute flaccid paralysis
AFR	Africa Bureau
AI	Avian influenza
AIDS	Acquired immune deficiency syndrome
AMR	Antimicrobial resistance
AMTSL	Active management of the third stage of labor
ANE	Asia and Near East Bureau
API	Avian and pandemic influenza
ART	Antiretroviral treatment
ARV	Antiretroviral
CAR	Central Asian Republics
CDC	Centers for Disease Control and Prevention
CDR	Case detection rate
CMAM	Community management of acute malnutrition
CORE	Child Survival Collaborations and Resources
CSH	Child Survival and Health
CSHGP	Child Survival and Health Grants Program
CYP	Couple-years of protection
DCHA	Democracy, Conflict, and Humanitarian Assistance
DCOF	Displaced Children and Orphans Fund
DHS	Demographic and Health Survey
DOTS	Directly observed treatment, short course
DTC	Drug and therapeutics committee
DTP3	Complete series of diphtheria-tetanus-pertussis immunizations
E&E	Europe and Eurasia Bureau
EHP	Emergency Hiring Plan
FAO	Food and Agriculture Organization of the United Nations
FELTP	Field epidemiology and laboratory training program
FP/RH	Family planning/reproductive health
FY	Fiscal year

GAIN	Global Alliance for Improved Nutrition
GAINS	Global Avian Influenza Network for Surveillance
GAVI	Global Alliance for Vaccines and Immunization
GH	Bureau for Global Health
HHS	Department of Health and Human Services
Hib	*Haemophilus influenzae* type b
HIV	Human immunodeficiency virus
IAVI	International AIDS Vaccine Initiative
ID	Infectious diseases
IDU	Injecting drug user
IFA	Iron-folic acid
IMCI	Integrated Management of Childhood Illness
IPTp	Intermittent preventive treatment for pregnant women
IRS	Indoor residual spraying
ITN	Insecticide-treated mosquito net
IU	International unit
LAC	Latin America and Caribbean Bureau
LDP	Leadership Development Program
M&E	Monitoring and evaluation
MCPR	Modern contraceptive prevalence rate
MDG	Millennium Development Goal
MDR-TB	Multidrug-resistant tuberculosis
MMV	Medicines for Malaria Venture
NGO	Nongovernmental organization
NMCP	National Malaria Control Program
NTD	Neglected tropical disease
ORS	Oral rehydration solution
ORT	Oral rehydration therapy
PAHO	Pan American Health Organization
PATH	Program for Appropriate Technology in Health
PEI	Polio Eradication Initiative
PEPFAR	The United States President's Emergency Plan for AIDS Relief
PL	Public Law
PMI	President's Malaria Initiative
POU	Point of use
PPE	Personal protective equipment
PPH	Postpartum hemorrhage
PVO	Private voluntary organization
RUTF	Ready-to-use therapeutic food

SDM	Standard Days Method
STG	Standard treatment guideline
TB	Tuberculosis
TSR	Treatment success rate
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USP	United States Pharmacopeia
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization
XDR-TB	Extensively drug-resistant tuberculosis

EXECUTIVE SUMMARY

While confronting major causes of death, illness, and suffering, USAID's health programs also emphasized building the capacity of developing countries to deliver and sustain their own health care services and systems.

A woman and her two daughters at a family planning/well child clinic in Java, Indonesia.

In fiscal year (FY) 2007, the United States Agency for International Development (USAID) led initiatives around the world to save millions of lives through proven interventions to combat diseases such as HIV/AIDS, malaria, and tuberculosis (TB), and promote safe motherhood, child survival, and family planning. While confronting major causes of death, illness, and suffering, USAID's health programs also emphasized building the capacity of developing countries to deliver and sustain their own health care services and systems.

Infectious diseases, old and new, remained a focus. USAID was the lead U.S. Government agency for implementing the President's Malaria Initiative (PMI), a five-year, $1.2 billion interagency initiative that aims to reduce malaria-related deaths by 50 percent in 15 focus countries in sub-Saharan Africa. The Agency remained a leader in the global effort to stop TB, continued its aggressive global response to the avian influenza threat, and expanded a program to fight seven neglected tropical diseases (NTDs). USAID also continued to be a major implementing partner of the United States President's Emergency Plan for AIDS Relief (Emergency Plan/PEPFAR), which has programs around the world.

KEY RESULTS IN MAJOR INTERVENTION AREAS

Infectious Diseases – USAID is leading the President's Malaria Initiative (PMI) in 15 countries in Africa and is a global leader in tuberculosis control, working in 41 countries. Key results reported in 2007 included:

- More than 25 million people in Africa benefiting from PMI interventions.
- More than 36 million drug treatments for neglected tropical diseases provided to more than 16.5 million people in five countries in Africa.

HIV/AIDS – Through the President's Emergency Plan for AIDS Relief, the United States continued its leadership in the global HIV/AIDS response, with $4.5 billion dedicated in FY 2007. USAID administered $2.6 billion of these funds, including $572.5 million from the Child Survival and Health Programs Fund. Latest PEPFAR results include:

- 33 million people provided with counseling and testing as of September 2007.
- 6.6 million provided with care and support, including 2.7 million orphans and vulnerable children, as of September 2007.
- Services to prevent mother-to-child HIV transmission provided in 12.7 million pregnancies as of March 2008.
- 1.73 million individuals receiving antiretroviral therapy as of March 2008, 1.64 million of them in the 15 Emergency Plan focus countries.

Child Survival and Maternal Health – For more than two decades, USAID has been a leader in global child survival programming, which saves the lives of more than 7 million children per year. The Agency's maternal health programs have also contributed to significant declines in maternal mortality. Key results reported in 2007 included:

- 40 million children under age 5 in 20 countries receiving vitamin A supplementation in USAID-supported programs.
- 17 to 48 percent decreases in maternal mortality since the late 1980s reported in 11 USAID-assisted countries.

Family Planning and Reproductive Health – In 35 USAID-assisted countries, more than one-third of married women now use a modern contraceptive method. Key results reported in 2007 included:

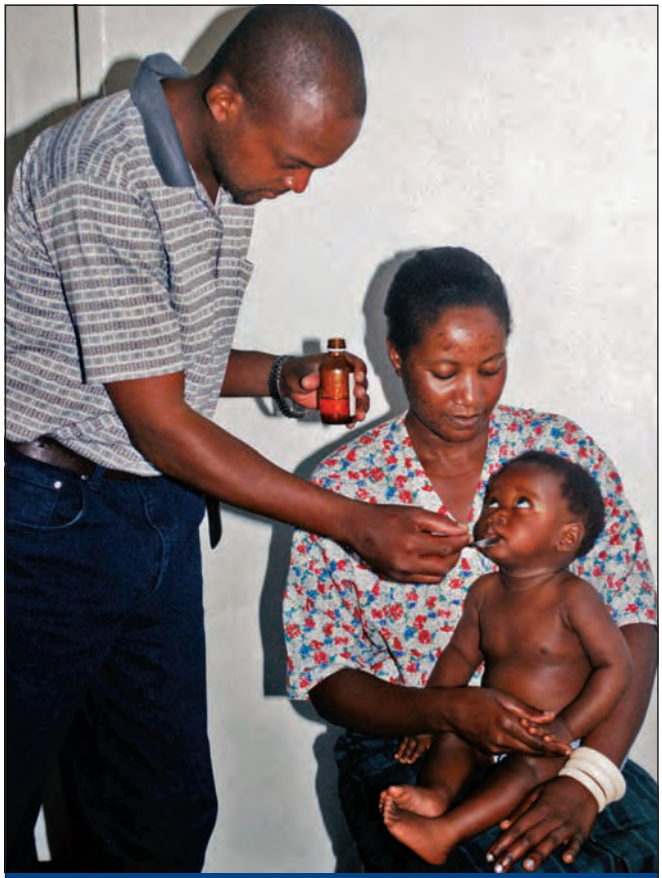
- Since 2000, an increase in the percentage of women reporting demand for family planning satisfied from 44 to 52 percent.
- Between 2002 and 2007, a decline in the total fertility rate from an average of 4.6 children per woman to 4.1.

Health Systems Strengthening – In 2007, USAID strengthened health systems in more than 60 countries to enhance results in infectious diseases, HIV/AIDS, child survival and maternal health, and family planning and reproductive health.

Areas of Intervention

This report describes the strategies, interventions, and achievements of USAID's health programs in 2007 in the following areas:

- Infectious diseases – malaria, TB, avian and pandemic influenza, NTDs, antimicrobial resistance, and surveillance
- HIV/AIDS
- Child survival and maternal health – immunization; polio eradication; nutrition; pneumonia and diarrhea; water supply, sanitation, and hygiene; and maternal and neonatal health
- Family planning and reproductive health
- Vulnerable children
- Health systems strengthening
- Research and technical innovation



An infant in Zambia receives malaria medication.

Infectious Diseases

Malaria: USAID is pursuing the objective of a 50 percent reduction in malaria-related deaths in the 15 PMI focus countries over five years by expanding coverage of highly effective malaria prevention and treatment measures to 85 percent of pregnant women and children under age 5. In 2007, PMI's second year of operation, more than 25 million people in Africa benefited from indoor residual spraying with insecticides, increasing use of insecticide-treated mosquito nets (ITNs), preventive treatment for pregnant women, and artemisinin-based combination therapies (ACTs). In addition to PMI, USAID supported social marketing sales of more than 3.5 million ITNs in Nigeria and the adoption of ACTs as the frontline malaria therapy by eight countries in the Amazon basin.

Tuberculosis: USAID's efforts improved the global TB picture in 2007 by supporting, expanding, and strengthening DOTS (directly observed treatment, short course) programming and other components of the global STOP TB Strategy in 41 countries. The TB case detection rate in USAID-assisted countries increased on average from 49 percent in 2003 to 59 percent in 2006. USAID also integrated treatment of drug-resistant TB into DOTS, along with other measures to prevent further emergence of resistance. Afghanistan, Bangladesh, Brazil, Russia, and Tanzania were among the countries reporting solid progress in USAID-supported TB control activities in 2007.

Avian and pandemic influenza: USAID helps countries around the globe limit the spread of the H5N1 avian influenza (AI) virus in animals and minimize human exposure, reducing the likelihood of an influenza pandemic. USAID's programming has two objectives: strengthening at-risk countries' detection and response capacities, and helping them prepare for a possible pandemic. In 2007, USAID supported response capabilities by training nearly 176,000 people worldwide in AI surveillance, response, and communications, as well as first responders in nearly 20 countries in the use of personal protective equipment (PPE). The Agency has supplied nearly 430,000 PPE kits to help countries prepare for possible AI outbreaks.

Neglected tropical diseases: Under its new NTD Control Project, launched in 2006, USAID aims to control highly prevalent tropical diseases such as hookworm, roundworm, whipworm, lymphatic filariasis, schistosomiasis, trachoma, and river blindness. The Project is the first global effort to support country programs in integrating and scaling

USAID/MOZAMBIQUE

Made possible by the U.S. President's Emergency Plan for AIDS Relief and funded by USAID, these workshop facilitators in Caia, Mozambique, explain the risks of HIV transmission. Caia is on the Zambezi River, a transport route for the disease.

up delivery of preventive chemotherapy to fight these diseases and has assisted targeted mass drug administrations in Burkina Faso, Ghana, Mali, Niger, and Uganda.

Antimicrobial resistance: USAID aims to preserve the effectiveness of existing antimicrobial medicines by decreasing their unnecessary use, improving their necessary use, and ensuring consistent supplies of quality products. USAID's efforts focus on evidence-based practices in case management, infection control, surveillance, and quality assurance. In 2007, USAID continued to support the World Health Organization (WHO) global strategy for containing antimicrobial resistance (AMR) and helped implement pharmaceutical management and AMR containment strategies and interventions in Africa, Latin America, and Asia.

Surveillance: USAID's approach centers on helping countries strengthen and expand field epidemiology programs, improve laboratory diagnostic capabilities, and strengthen national surveillance systems. In 2007, USAID helped eight countries in Africa develop field epidemiology and laboratory training programs.

HIV/AIDS

In every region of the world, USAID is leading an HIV/AIDS program. As a major partner in PEPFAR, USAID is supporting skilled practitioners as they carry out the largest and most diverse HIV/AIDS prevention, care, and treatment program in the world. Most of these practitioners work directly with host-country governments, nongovernmental organizations (NGOs), indigenous groups, and the private sector. They provide training, expert technical assistance, and essential supplies – including pharmaceuticals – to prevent and reduce transmission and provide care and treatment to people living with and affected by the disease.

With a budget of $2.6 billion for its PEPFAR activities, USAID supported programs in more than 50 countries in 2007 and managed roughly 60 percent of PEPFAR funds. Key components of the Agency's HIV/AIDS program include prevention through the balanced promotion of the ABC approach (abstinence, being faithful, and correct, consistent condom use); care and support, including testing, counseling and stigma reduction; antiretroviral drug treatment (ART); health systems strengthening; and medical research. Major achievements in 2007 included an increase in the number of children receiving ART to 85,900 from 4,800 in 2004; innovative prevention programs aimed at high-risk groups in countries such as Burma, Honduras, Tajikistan, and Uzbekistan; and technical assistance in supply chain management and commodity assistance in 24 countries, including Emergency Plan focus countries and bilateral program countries.

Child Survival and Maternal Health

Immunization: Routine childhood immunizations prevent more than 2 million child deaths per year and protect millions more children from illness and disability. USAID works to expand and improve immunization systems through approaches such as the Reaching Every District program of WHO and the United Nations Children's Fund (UNICEF). Through the GAVI Alliance and the GAVI Fund, USAID provides financing and technical assistance for introducing affordable new vaccines and associated technologies in a sustainable, practical way. Results in 2007 included immunizations against diphtheria, tetanus, and pertussis for more than 6 million children under age 1 in India and 88 percent measles coverage in Zambia achieved through integrated child health campaigns.

Polio eradication: Since joining the global Polio Eradication Initiative in 1996, USAID has contributed nearly $425 million to its support. As a major partner in the global effort to achieve a polio-free world, USAID focuses on supporting polio immunization programs, developing integrated polio surveillance, and expanding data collection and dissemination. In 2007, more than 400 million children in 33 countries were immunized in USAID-supported campaigns. USAID also supported

supplemental polio immunization campaigns that targeted high-risk areas of Nigeria, mobile populations in high-risk areas of Afghanistan and Pakistan, and border areas between Ethiopia, Kenya, and Somalia.

Nutrition: Nutrition programs can have a huge impact on poverty reduction and economic growth and are one of the most cost-effective development strategies. USAID's assistance strategy stresses infant and young child feeding, micronutrient supplementation, food fortification, and combating undernutrition in epidemics and emergency situations. In 2007, an estimated 160 million people benefited from USAID-assisted food fortification programs. USAID also launched large programs to combat maternal anemia in Uttar Pradesh and Jharkhand states in India.

Pneumonia and diarrhea: USAID continued to accelerate community-based treatment of child pneumonia and oral rehydration therapy (ORT) and zinc treatment for child diarrhea. For these interventions, USAID targets countries where the needs are greatest and local circumstances are favorable to effective program implementation. In 2007, USAID accelerated implementation of community-based pneumonia programs in 11 countries and ORT/zinc treatment of diarrhea in 25 countries.

BASICS

A mother teaches her young child about handwashing with soap, an important hygiene intervention promoted by USAID.

Water supply, sanitation, and hygiene: USAID's water supply, sanitation, and hygiene activities rest on three components: improving infrastructure, promoting behavior change, and supporting countries in areas such as policy development, capacity building, and financing. USAID's health funds focus on community- and household-level water supply, sanitation, and behavior change, complementing larger infrastructure activities of USAID, other U.S. Government agencies, and other donors. In 2007, USAID-supported point-of-use water purification products treated 6.6 billion liters of water in Kenya, Madagascar, Malawi, Rwanda, and Zambia. In Madagascar, a USAID-supported campaign reached 1.35 million households with water, sanitation, and hygiene messages.

Maternal and neonatal health: Improving newborn survival is closely linked to improving the health and nutrition of mothers and the care they receive during pregnancy and birth. USAID-supported maternal and neonatal health interventions include nutrition interventions, postpartum hemorrhage prevention and treatment, immediate newborn care, and infection prevention, detection, and treatment. In 2007, 48 percent of all births in 36 USAID-assisted countries were attended by skilled personnel, an increase from 34 percent in 1990. USAID also extended its neonatal programming to a total of 24 countries.

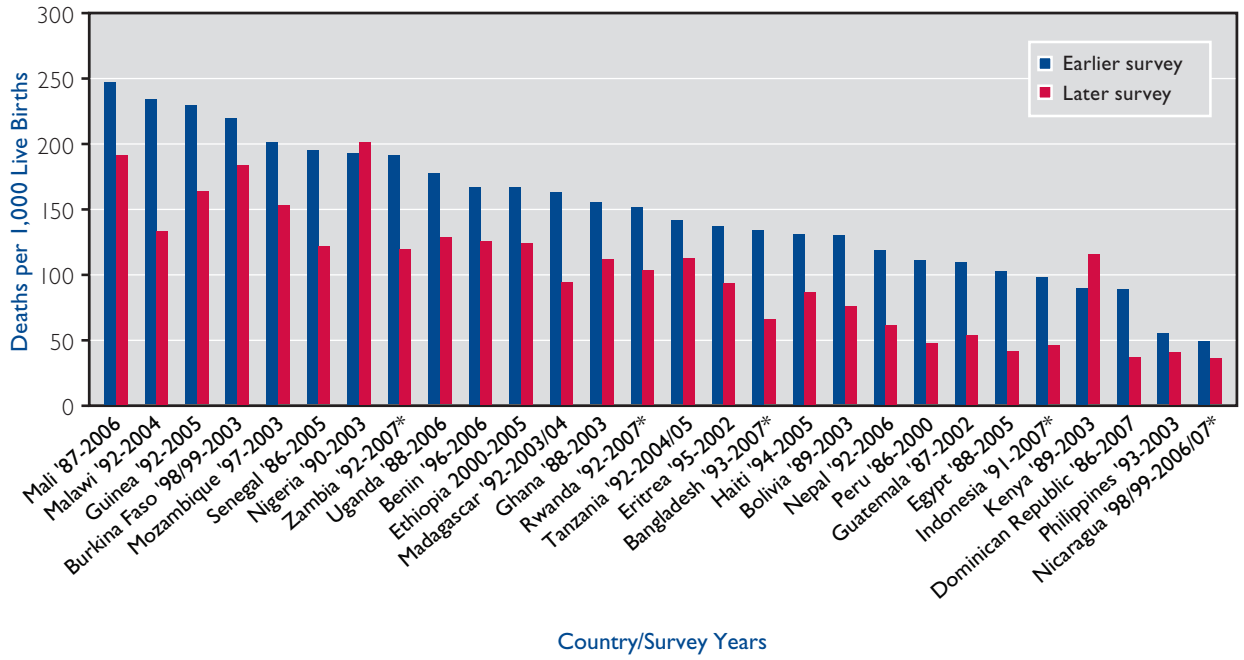
Family Planning and Reproductive Health

Family planning helps reduce unintended pregnancies (and thereby abortions), allows women to space births at healthy intervals, and contributes to reduced HIV transmission. It also enables women to stay in school longer, increasing the likelihood they will have smaller families of healthy, well-nourished, educated children who will become productive adults. USAID's activities focus on increasing knowledge about and use of quality family planning and reproductive health (FP/RH) products and services, increasing the supply of these products and services, and improving the policy environment for effective program implementation. In 2007, more than 5.5 million people, most of them in impoverished or marginalized communities in Africa and Asia, were served by USAID-supported community-based family planning programs. The Agency made 485 shipments of FP/RH commodities valued at $80 million to USAID Mission programs in 58 countries.

Vulnerable Children

Since its inception in 1989, USAID's Displaced Children and Orphans Fund (DCOF) has worked to improve the

Changes in Under-5 Mortality Rates in USAID-Assisted Countries



* Preliminary data
Source: Demographic and Health Surveys, 1986–2007; Guatemala Reproductive Health Survey, 2002; Nicaragua ENDESA, 2006/07.

well-being of children, one of the world's most vulnerable populations. DCOF programs target the specific needs of local regions and populations and are child-focused, show progress in capacity building and institutional strengthening, and demonstrate measurable social, psychological, educational, or economic results. In 2007, a new program in the Democratic Republic of the Congo reunited more than 1,100 children with their families. In Zambia, the Africa KidSAFE network enrolled more than 2,000 street children in school. In addition, USAID's Child Blindness Program screened 190,000 children, provided more than 12,000 pairs of glasses, conducted 500 sight-restoring surgeries, and trained pediatric ophthalmologic teams in Africa and Asia.

Health Systems Strengthening

USAID supports promising approaches that enable national health systems to work better on a sustainable basis. Its strategy embraces six core functions: service delivery; health workforce; information; medical supplies, vaccines, and technology; health financing; and governance and leadership. In 2007, data from USAID-supported AIDS Indicator Surveys enabled the United Nations to reduce its estimate of global HIV infections from 39.5 million to 33.2 million. Other achievements included the initiation of performance-based financing of primary health care services in Tanzania, targeting the country's entire population, and training of health workers from 68 countries in evidence-based, cost-effective selection and use of medicines in hospitals.

Research and Technical Innovation

Health research is integral to USAID's ability to achieve its health and development objectives worldwide. Research allows USAID to develop and introduce affordable health products and practices and contribute to policies appropriate for addressing health-related concerns in the developing world. USAID's research role is to assess local health conditions, develop and adapt appropriate health products and interventions, and support their field-testing and introduction, including strengthening of local health systems. The Agency often joins with other government agencies, such as the Centers for Disease Control and Prevention and National Institutes of Health; international organizations, such as WHO and UNICEF; host-country governments; universities; NGOs; and commercial sector partners to engage their strengths to achieve the greatest health impact. In 2007, research results from a USAID-supported trial in Pakistan demonstrated that home treatment of

This girl in Kenya is taking care of her sister while their mother attends family planning education.

children with severe pneumonia is just as effective as hospital treatment. This finding could significantly change the way the illness is managed in developing countries, saving a significant number of lives every year and taking pressure off health systems.

Funding

USAID's FY 2007 health programs and activities were financed through the Agency's Child Survival and Health (CSH) Programs Fund and other accounts and international partnerships. USAID's total health budget was $4.1 billion, which included $1.9 billion from the CSH account. Total amounts shown below include funding from all accounts.

Infectious Diseases

$586.2 million ($529.1 million from the CSH account) funded the presidential malaria and neglected tropical diseases initiatives, as well as activities to reduce the threats of tuberculosis and avian and pandemic influenza and address drug resistance and disease surveillance.

HIV/AIDS

$2.6 billion funded USAID-managed prevention, care, and treatment programs to mitigate the impact of the HIV/AIDS pandemic through the United States President's Emergency Plan for AIDS Relief. This included $572.5 million from the CSH account.

Child Survival and Maternal Health

$442.9 million funded immunizations, nutrition, maternal health, and other core child and maternal health programs. CSH funds accounted for $396.6 million of this amount.

Family Planning and Reproductive Health

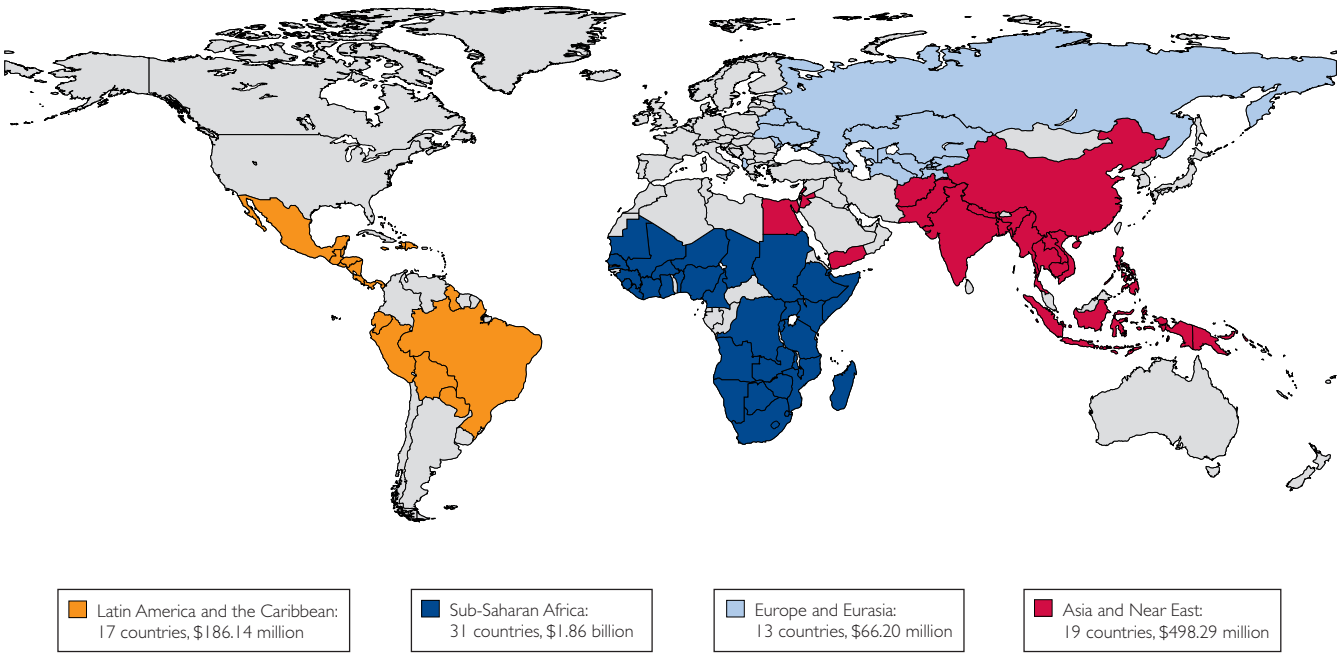
$450.4 million funded family planning and reproductive health programs to help families achieve their desired family size while protecting the health of women and children. This included $396.7 million from the CSH account.

Vulnerable Children

$19.5 million funded programs that benefit vulnerable children, of which $6.5 million was from the CSH account.

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

Countries Receiving USAID Health Assistance, FY 2007



Source: USAID.

I. INFECTIOUS DISEASES

In the past year, much progress occurred in providing preventive and treatment services, building local capacity, and contributing to global alliances to reduce these diseases.

A young tuberculosis patient comes with his mother to a chest clinic in East Delhi, India.

GARY HAMPTON

Infectious diseases claim the lives of more than 11 million people each year and cause tremendous pain, illness, and disability. Their human and economic costs are enormous.

USAID has taken a leadership role in working with international and country-level partners to reduce the incidence and burden of infectious diseases. Efforts focus on the leading causes of and threats to mortality and morbidity, including malaria, tuberculosis (TB), avian influenza, and neglected tropical diseases (NTDs), as well as on actions to address and reduce the spread of antimicrobial resistance and on critically needed surveillance capacity.

In the past year, much progress occurred in providing preventive and treatment services, building local capacity to address these major public health threats, and contributing to global alliances working together to reduce these diseases.

In malaria, USAID is the lead U.S. Government agency implementing the President's Malaria Initiative (PMI), with the Centers for Disease Control and Prevention as USAID's primary U.S. Government partner. PMI works in close partnership with national malaria control programs, helping to advance and implement their strategies. In 2007, PMI successfully expanded operations from three to seven countries and, including activities in eight other countries, reached more than 25 million people with life-saving prevention or treatment services.

In TB, USAID in 2007 expanded its efforts to address multidrug-resistant TB and extensively drug-resistant TB and had a substantial impact on improved case detection and treatment success for TB in 19 priority countries. USAID continued to play a leadership role in the Stop TB Partnership and had significant success in expanding TB efforts to work closely with the private and non-governmental organization (NGO) sectors.

The H5N1 avian influenza virus continues to pose a significant potential threat to health and economic stability globally. As a key member of the coordinated U.S. Government response to avian and pandemic influenza, USAID made significant contributions in 2007 to improved surveillance and early warning capacity. The Global Avian Influenza Network for Surveillance (GAINS) was active in 34 countries, collecting data on bird observations and biological samples for analysis.

In 2007, USAID's NTD Project reached 16.5 million people with 36 million treatments. In February 2008, President Bush announced his NTD Initiative, a five-year, $350 million initiative designed to bring integrated mass drug administrations to 300 million people in 30 countries. This integrated package of treatment is targeted at seven neglected diseases that affect millions of people, compromise the mental and physical development of children, and cause sickness, disability, blindness, and disfigurement. This initiative builds on USAID's existing NTD program.

The emergence and spread of drug resistance is a tremendous threat to public health. Antimicrobial resistance (AMR) renders first- and even second-line drugs ineffective and endangers the ability of health programs to treat patients effectively. AMR develops when drugs are misused, misprescribed, or are of poor quality. USAID's strategy is to preserve the effectiveness of antimicrobial drugs by decreasing their unnecessary use, improving their use when needed, and ensuring consistent supplies of drugs of assured quality. In 2007, USAID helped build country-level capacity to monitor and respond to drug resistance and put in place quality improvement systems. Hundreds of health workers and drug regulators were trained in evidence-based, rational, and cost-effective selection and use of medicines.

USAID also continued to work with in-country partners to develop capacity to detect and respond to infectious diseases. With a focus on developing and improving field epidemiology, laboratory, and national surveillance capacity, USAID in 2007 helped expand several field epidemiology training programs in Africa, trained dozens of epidemiologists, and, with the World Health Organization (WHO), helped launch an external quality assessment program for Africa that will help improve laboratory functioning and capacity.

I. INFECTIOUS DISEASES

Malaria

BONNIE GILLESPIE – VOICES FOR A MALARIA-FREE FUTURE

KEY RESULTS REPORTED IN 2007

- More than 25 million people in Africa benefit from President's Malaria Initiative (PMI) interventions in second year of PMI activities.
- Nearly 18 million people benefit from PMI-supported indoor residual spraying across 10 African countries.
- Decline from 22 percent in 2005 to less than 1 percent in 2007 in children testing positive for malaria in Zanzibar health centers.
- Artemisinin-based combination therapies adopted as first-line malaria drugs by all eight countries in the Amazon Malaria Initiative.

Approximately 3.2 billion people worldwide live in areas at risk of malaria transmission. An estimated 300 million to 500 million people become ill with malaria each year, and more than 1 million die. More than 80 percent of these deaths occur in sub-Saharan Africa. Although eradication efforts during the 1950s and 1960s successfully eliminated or controlled malaria in other parts of the world, malaria has remained a major killer in sub-Saharan Africa due to a combination of natural and social conditions, including an ideal climate for malaria transmission, poverty, and political instability. While anyone living in an area where malaria is transmitted can be infected, children under age 5 and pregnant women are particularly vulnerable. Malaria is a leading cause of death in African children, accounting for approximately 18 percent of deaths in children under 5.

To combat malaria in the most affected countries in Africa, President Bush in 2005 established the President's Malaria Initiative (PMI), a five-year, $1.2 billion inter-agency initiative with the goal of reducing malaria-related deaths by 50 percent in 15 focus countries.[1] USAID is the Initiative's lead agency and implements it together with the Centers for Disease Control and Prevention (CDC) of the Department of Health and Human Services (HHS). PMI is overseen by a PMI Coordinator who is advised by an interagency steering group made up of representatives from USAID, HHS/CDC, the Department of State, the Department of Defense, the National Security Council, and the Office of Management and Budget.

USAID Strategy

Under PMI, USAID is pursuing the objective of a 50 percent reduction in malaria-related deaths in the 15 focus countries by expanding coverage of highly effective malaria prevention and treatment measures to 85 percent of children under age 5 and pregnant women. These high-impact interventions include:

- **Indoor residual spraying (IRS) with insecticides.** A proven and highly effective malaria control measure, IRS involves the coordinated, timely spraying of the interior walls of homes with insecticides.

- **Insecticide-treated mosquito nets (ITNs).** In Africa, malaria-carrying mosquitoes typically bite late at night or in the early morning hours. A net hung over the bed prevents mosquitoes from biting. When that net is treated with insecticide, it provides much greater

1. Angola, Benin, Ethiopia (Oromiya region), Ghana, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Rwanda, Senegal, Tanzania, Uganda, and Zambia

BONNIE G LLESPIE – VOICES FOR A MALARIA-FREE FUTURE

Malaria is preventable and treatable. With USAID's support, children are receiving prompt treatment for malaria with effective artemisinin-based combination drugs.

protection by repelling mosquitoes and killing those that land on it.

- **Intermittent preventive treatment for pregnant women (IPTp).** IPTp is a highly effective means of reducing the consequences of malaria in pregnant women and their unborn children. Women in their second and third trimesters of pregnancy are administered at least two doses of sulfadoxine-pyrimethamine at least one month apart. This reduces the frequency of maternal anemia, malaria infection of the placenta, and low birthweight.

- **Artemisinin-based combination therapies (ACTs).** Artemisinin drugs are the most rapidly acting and effective malaria drugs available and are combined with a second malaria drug to create ACTs, which have become the standard of treatment of malaria in almost all malaria-affected regions.

The appropriate mix of these interventions in a given area varies according to the pattern of disease transmission, mosquito resistance to insecticides and parasite resistance to malaria drugs, the age and pregnancy status of infected persons, and operational feasibility and sustainability. In implementing PMI interventions, USAID works within the overall strategy and plan of the host country's National Malaria Control Program (NMCP). Planning and implementation are closely coordinated with each country's Ministry of Health.

Interventions and Results

USAID malaria activities reach 18 African countries and Mekong and Amazon regions. PMI represents a historic five-year expansion of U.S. Government resources to fight malaria in the regions most affected by the disease. In FY 2007, USAID provided malaria funding to 18 countries in Africa, including seven through PMI. In addition, USAID provided funding for two regional initiatives in the Mekong and Amazon river basins.

PMI interventions reach more than 25 million. In PMI's second year of operation, more than 25 million people in Africa benefited from its interventions. IRS benefited nearly 18 million in 10 countries. PMI procured more than 5 million long-lasting ITNs and distributed 3.3 million, and PMI also supported the re-treatment of more than 670,000 nets. More than 1.35 million IPTp treatments were procured, with more than 583,000 distributed, and 11.5 million courses of ACTs were procured, with 6.8 million distributed.

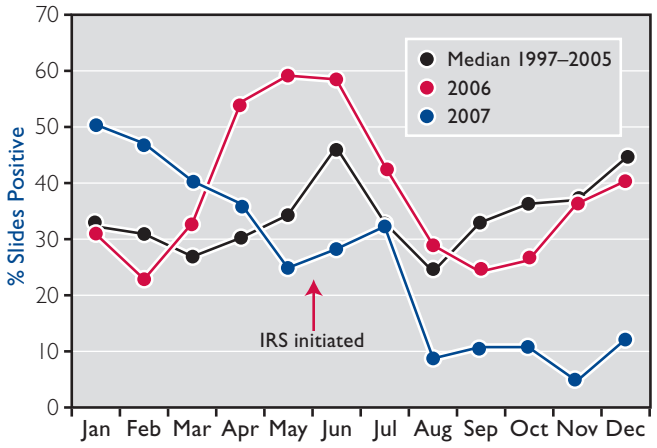
24,000 health workers trained in IPTp and ACTs. In PMI's second year of operation, PMI trained more than 3,000 health workers in correct administration of IPTp and nearly 21,000 health workers in correct use of ACTs. Since its inception, PMI has trained nearly 35,000 health workers.

Malaria-positive blood smears decline by 58 percent following IRS in Uganda district. PMI and the NMCP supported an IRS campaign in Kanungu district, **Uganda**, during February and March 2007. Data from one district health center showed a 58 percent relative reduction in malaria-positive blood smears from 30.3 percent in August–October 2006 to 12.7 percent one year later.

Scaled-up interventions bring results on Zanzibar. A two-year rapid scale-up of ITN, IRS, and ACT use on **Tanzania's** island of Zanzibar, supported by PMI, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the NMCP, and other partners, helped reduce malaria-positive blood smears in children under age 2 from 22 percent in 2005 to just 0.7 percent in 2007. A population-based survey indicated that nearly three-quarters of children under 5 and pregnant women were sleeping under an ITN.

Malaria-positive smears decrease following IRS in northwest Tanzania district. In 2007, PMI worked with the NMCP to launch IRS in Muleba district in northwest **Tanzania**, an area with highly seasonal malaria

Figure 1: Blood Slides Positive for Malaria, Muleba District Hospital, Tanzania, 1997–2007



Source: President's Malaria Initative, 2008.

transmission. Information from the district hospital showed a 37 percent reduction from previous years in malaria-positive blood smears from patients of all ages during the peak transmission season of June and July. Data also showed a 70 percent reduction in severe anemia, to which malaria is a major contributor (see figure 1).

ITNs reduce anemia and malaria risk in children in Malawi. ITN coverage in **Malawi** increased considerably over three years through the efforts of the NMCP, the Global Fund, PMI, and other donors. A 2007 survey in six of Malawi's 27 districts showed a 43 percent relative reduction from 2005 in severe anemia in children aged 6 to 30 months. The survey also demonstrated that children sleeping under an ITN had significantly reduced risks of malaria infection and anemia (figure 2).

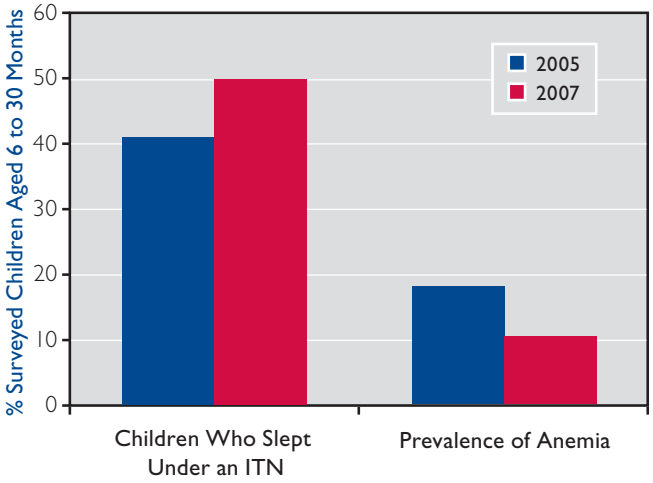
USAID surpasses ITN targets in Nigeria. USAID-supported social marketing sales of ITNs in **Nigeria** exceeded 3.5 million, surpassing the target by more than 10 percent. Another 215,000 nets were distributed for free or under a voucher scheme. To help sustain these efforts, USAID facilitated meetings between local net manufacturers in the West Africa subregion. USAID also assisted Nigeria in its transition to ACTs as its first-line malaria treatment, training more than 2,000 patent medicine vendors in ACT use.

Democratic Republic of Congo integrates IPTp into antenatal care. USAID helped the Ministry of Health integrate IPTp with sulfadoxine-pyrimethamine into routine antenatal care services for pregnant women in 65 out of 82 U.S. Government-supported health zones.

USAID continues support for Amazon Malaria Initiative. Since 2001, USAID has been a supporting partner in the Amazon Malaria Initiative in South America's Amazon basin. All of the Initiative's eight countries[2] have changed their frontline malaria therapies to ACTs. The region is the first to have completely made this change. USAID also assisted the Initiative in such areas as vector control, surveillance, microscopic diagnosis, rapid diagnostics, standardized approaches to monitoring resistance, and evaluating the public health impact of malaria in pregnancy.

Mekong countries increase surveillance. Data from USAID-supported surveillance of malaria drug resistance convinced **Thailand** to revise its treatment guidelines to comply with WHO recommendations and thereby curtail the spread of resistance. This success motivated other countries in the region to organize a network of sentinel sites that will share data and be used to harmonize drug policy. In **Thailand**, **Cambodia**, **Laos**, and **Vietnam**, drug quality monitoring was scaled up from 23 provincial sentinel sites to 31.

Figure 2: ITN Use and Anemia Prevalence, Malawi, 2005 and 2007



Source: President's Malaria Initiative, 2008.

2. Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, and Suriname

PMI Rwanda Project Brings Malaria Treatment to the Community

Mukamusoni is a mother of four children in Kirehe district in eastern Rwanda, an area prone to malaria outbreaks. When her children develop symptoms of malaria, she depends on community health workers for treatment. "I'm so glad for the community volunteer. When your child gets sick, day or night, you can get health care quickly and help your children."

In Rwanda, as in many parts of sub-Saharan Africa, malaria is the leading cause of death among children under age 5. It is critical for young children with malaria to receive treatment within 24 hours of the onset of fever. In rural Rwanda, however, families often live miles away from the nearest health facility and cannot seek immediate care.

The PMI-supported Twubakane Project is working to save the lives of young children by ensuring that they receive prompt treatment through home-based management of fever. Twubakane trains volunteer community health workers to diagnose the disease, provide lifesaving ACT drugs, and refer severe cases to the closest health facilities for immediate care.

Verena M., another mother of four who lives in malaria-endemic Kicukiro district in central Rwanda, said that on top of distance, costs were also a burden. "Before our neighbor began giving medicine to our children in the home, I always had trouble finding the money I needed for consultation fees," she explained. She also said she had to sell her goats to obtain money for transportation to the hospital. Since home-based management of fever was introduced in her community, two of Verena's young children have been treated by a community health worker and cured.

USAID/RWANDA

Mukamusoni with two of her children in Kirehe district, Eastern province, Rwanda.

Community health workers not only provide medical care for young children but also encourage pregnant women to use insecticide-treated nets and go to the nearest health facility to receive preventive malaria treatment. This treatment reduces the likelihood that a mother will become sick and affect her unborn child.

Home-based management of fever has eased the burden on health facilities as well. Sister Scholastic, a nurse in charge of childhood illnesses at the Masaka Health Center in Kicukiro, said that the staff are "no longer overwhelmed by sick patients coming to the health center. The cases of fever are treated at the community level."

USAID supports development of novel tools to fight malaria. USAID continued to support the development of malaria vaccines and new malaria drugs. In collaboration with the Department of Defense, the National Institutes of Health, and the PATH Malaria Vaccine Initiative, clinical evaluation of available experimental vaccines continued, as did preparations and preclinical testing of new potential vaccines. Currently, vaccine trials are being conducted in the United States by both the Army and the Navy with USAID support. The results of a field efficacy trial conducted in **Mali**, with multi-agency support and in collaboration with the University of Mali and the University of Maryland, will be available before the end of FY 2008. USAID also continued to support drug development through the Medicines for Malaria Venture, with one new formulation – dispersible

BONNIE GILLESPIE – VOICES FOR A MALARIA-FREE FUTURE

A mother and her children sit under an insecticide-treated mosquito net in Tanzania.

artemether-lumefantrine – expected to receive approval and become available.

Lessons Learned

USAID's activities under PMI follow principles based on four lessons learned during more than 50 years of U.S. Government experience in combating malaria, as well as the recent experience of the United States President's Emergency Plan for AIDS Relief. These lessons call for:

- Use of a comprehensive, integrated package of proven prevention and treatment interventions
- Strengthening of health systems and integrated maternal and child health services
- Commitment to strengthen NMCPs and build capacity for country ownership of malaria control efforts
- Close coordination with international and in-country partners

I. INFECTIOUS DISEASES

Tuberculosis

DAVENPORT/WHO/TBP

PROGRESS TO DATE

- Global improvement in the case detection rate from 45 to 61 percent of estimated cases between 2003 and 2006.
- Global treatment success rate of 84.7 percent in 2005, just shy of the Stop TB Partnership's 85 percent target.
- More than 10 million patient treatments supplied by the Global TB Drug Facility to 78 countries in six years of operations.

KEY RESULTS REPORTED IN 2007

- Improvement in case detection rate in USAID-assisted countries from 49 to 59 percent, on average, between 2003 and 2006.
- 85 percent treatment success target surpassed in 12 USAID-assisted countries.
- 97 percent DOTS coverage and 66 percent case detection – just shy of the 70 percent target – achieved in Afghanistan.
- Expansion of TB-HIV activities in Tanzania from 10 to 18 districts and provision of HIV counseling and testing to 14,000 TB patients.

Tuberculosis (TB) is one of the world's deadliest infectious diseases, responsible for approximately 1.5 million deaths each year. According to WHO, one-third of the world's population is infected with the TB bacillus, and nearly 9.2 million people develop active TB each year. TB is a major killer of women of reproductive age and is the leading cause of death in people who have HIV infection, accounting for one-third of AIDS deaths worldwide. Developing countries account for 95 percent of all TB cases and 98 percent of all TB deaths.

Thanks to expanded programs and improved methods of TB control, TB incidence is declining worldwide. TB prevalence and deaths are also falling, even faster than incidence. Globally, prevalence rates fell by 2.8 percent between 2005 and 2006, and the TB death rate fell by 2.6 percent over the same time period. This important progress is threatened, however, by the spread of multidrug-resistant TB (MDR-TB) and the emergence of extensively drug-resistant TB (XDR-TB). The overlap of MDR- and XDR-TB with HIV/AIDS in sub-Saharan Africa presents a particular challenge. WHO estimates there were 489,139 cases of MDR-TB globally in 2006, and 45 countries have reported at least one case of XDR-TB since 2002.

USAID Strategy

USAID aims to contribute significantly to the global reduction of illness and death caused by TB. Specifically, the Agency's program aims to reduce the number of deaths due to TB by 50 percent in 19 priority countries.[1]

1. Afghanistan, Bangladesh, Brazil, Cambodia, Democratic Republic of the Congo, Ethiopia, India, Indonesia, Kenya, Mozambique, Nigeria, Pakistan, Philippines, Russia, South Africa, Tanzania, Uganda, Ukraine, and Zambia

USAID supports the implementation of the STOP TB Strategy in priority countries and the goal and targets of the Stop TB Partnership's Global Plan to Stop TB 2006–2015, including 70 percent case detection and 85 percent treatment success rates among sputum smear-positive pulmonary TB patients. In 2007, USAID continued helping patients gain access to treatment by working with national TB programs and the Stop TB Partnership to expand DOTS (directly observed treatment, short course), one of the key interventions of the WHO-recommended STOP TB Strategy.

USAID's program is fully consistent with the STOP TB Strategy and provides financial and technical assistance for implementation and scale-up of:

- **DOTS services.** USAID works with host countries to improve DOTS quality; access to services; drug procurement and management; laboratory services; monitoring and evaluation; program management and supervision; and community, civil society, and private sector participation.

- **Management of MDR- and XDR-TB.** USAID supports the integration of MDR-TB treatment into DOTS programs, surveillance of drug resistance, infection control, and measures to improve services to prevent further emergence of resistance.

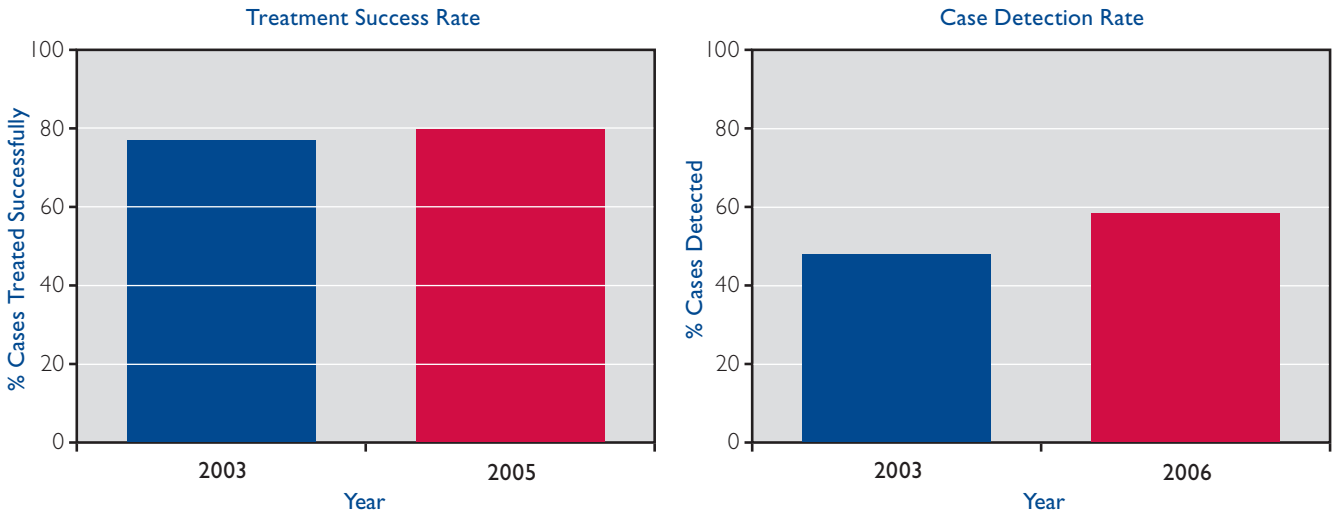
- **TB-HIV co-infection services.** USAID supports improved TB screening and cotrimoxazole treatment in persons with HIV, HIV testing of TB patients, cross-referrals between TB and HIV services, isoniazid preventive therapy, and coordinated TB-HIV/AIDS services, training, supervision, and monitoring.

- **Health systems and human resources.** USAID supports tracking financial resources for TB, policy dialogue to ensure that TB is a health priority, the integration of TB control into health system reforms, effective commodity procurement and supply management, and all aspects of human resources development, including training.

- **New tools and improved approaches.** USAID supports research into cost-effective, less labor-intensive ways to improve treatment efficacy and access to services and to reduce disease transmission and delays in diagnosis. Priority is given to research that can change policies and practices in three to five years.

Interventions and Results

USAID support improves global TB picture. In FY 2007, USAID supported expanded and strengthened DOTS programming and other components of the STOP TB Strategy in 41 countries. This support included training for nearly 16,000 health personnel and community volunteers and leveraging of USAID resources with the Global Fund to Fight AIDS, Tuberculosis and Malaria to gain additional resources for country-level TB activities. In USAID-assisted countries, the TB case detection rate (CDR) increased from 49 percent in 2003



Source: *Global Tuberculosis Control.* WHO, 2008. Note: No data for Ukraine were reported to WHO.

to 59 percent in 2006, while the already high treatment success rate (TSR) remained close to 80 percent (figure 3). These important results contributed significantly to the global CDR improvement from 45 to 61 percent between 2003 and 2006 and a global TSR approaching the target rate of 85 percent in 2005. Ten USAID-assisted countries met or surpassed the case detection target of 70 percent in 2006; six more with CDRs of 65 percent or greater are approaching it; and 12 have surpassed the 85 percent TSR target.

Brazil increases DOTS coverage and doubles case detection. Before USAID support began in 2002, DOTS coverage in **Brazil** was just 25 percent. USAID-supported technical assistance and policy dialogue were instrumental in gaining Brazil's official endorsement of DOTS. As a result, DOTS coverage has increased to 80 percent, and the national CDR increased from 30 percent in 2002 to 64 percent in 2006.

Afghanistan cuts TB disease, deaths by more than half since 1990. Despite instability and insecurity, **Afghanistan** has surpassed its targets of reducing TB prevalence and deaths to below half of their 1990 levels. More than 800 health facilities (81 percent nationwide) provide DOTS, resulting in 97 percent coverage and a CDR of 66 percent in 2006, just shy of the 70 percent target, and a 90 percent TSR for new cases in 2005. The laboratory network has also expanded and decentralized to encompass approximately 435 microscopy centers.

Smiling Sun clinics serve millions in Bangladesh cities. USAID has supported DOTS in urban areas of **Bangladesh** since 2002, assisting NGOs that belong to the Smiling Sun network. With 56 clinics and 31 microscopy centers, the network serves 3.8 million people in four cities. Before the Smiling Sun initiative, DOTS services in these areas were very limited. In 2007, Smiling Sun clinics detected 4,570 TB cases, achieved a TSR of 89 percent, and helped increase the national CDR to 71 percent from 30 percent in 2002.

MAARTEN VAN CLEEFF

Community health volunteers in Zambia's North-Western province provide information, care, and support to TB patients.

Russia accelerates actions against MDR-TB. USAID supported pilot projects to treat MDR-TB in five regions. These projects will serve as models for scale-ups funded by the Global Fund in other regions. In Orel, USAID provided financing and assistance to establish the Orel Center of Excellence for MDR-TB, which opened in August. The Center will implement 20 training courses to reach 300 technical personnel involved in MDR-TB activities. To slow the emergence of drug resistance, USAID also supported DOTS expansion in 15 regions and republics. As a result, the TSR in Vladimir rose from 64 to 80 percent while remaining high in Orel at 90 percent – rates considerably higher than the national TSR of 58 percent.

Tanzania scales up TB-HIV services. USAID assisted the scale-up of TB-HIV services, including HIV testing of TB patients, the entry point to treatment and care for those found HIV positive. USAID expanded its assistance from 10 to 18 districts and supported training for 301 providers, including 97 from the private sector. As a result, 13,996 TB patients were offered HIV counseling and testing, with 9,416 (67.1 percent) accepting and receiving test results. In target districts, 140 outlets, including 50 in the private sector, were providing TB-HIV services.

I. INFECTIOUS DISEASES

Avian and Pandemic Influenza

NICHOLAS STUDZINSKI, USAID

PROGRESS TO DATE

- Tracking of wild migratory birds in 34 countries, cumulative data collection on 105 million bird observations, and H5N1 analysis of more than 20,000 biological samples by the Global Avian Influenza Network for Surveillance (GAINS).
- Cumulative shipments of nearly 430,000 sets of personal protective equipment.
- More than 120,000 people trained in AI surveillance and response and 160,000 in communications and outreach.
- Surveillance activities in Indonesia scaled up to include more than 1,240 participatory disease surveillance and response officers in more than 160 high-risk districts.

KEY RESULTS REPORTED IN 2007

- Reduction in countries reporting outbreaks from 53 in 2006 to 32 in 2007.
- 19 percent decrease in number of reported human cases worldwide between 2006 and 2007.
- From 2006 to 2007, 46 percent reduction in typical time between start of an outbreak and H5 detection in developing countries.
- From 2006 to 2007, 14 percent reduction worldwide in time between symptom onset and hospitalization in reported human AI cases.

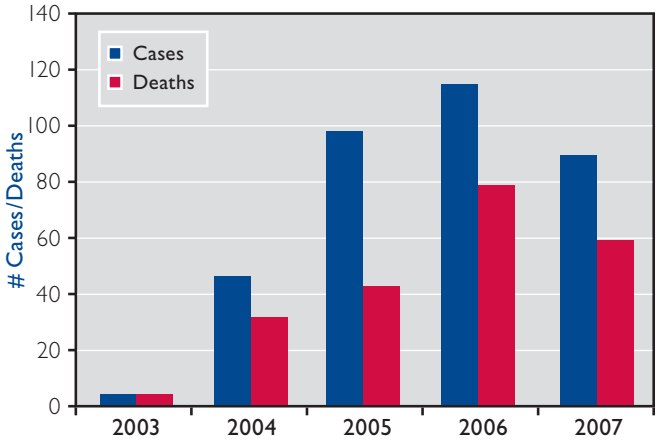
The highly pathogenic H5N1 avian influenza (AI) virus persists as a significant threat to trigger the next global influenza pandemic. In such a pandemic, researchers predict that up to 95 percent of deaths worldwide will occur in developing countries. Because of its significant global impact, the H5N1 AI virus is a threat not only to public health but also to overall development. This virus has in fact already emerged as a considerable economic threat, with the deaths of 240 million birds through illness or culling affecting the livelihoods of farmers, feed producers, and distributors, among others. In addition to the financial effects on poultry industries and local farmers, reduced consumption of poultry further threatens nutrition levels in affected countries, many of which rely heavily on poultry for protein. Since the virus began to spread through Asia and into Europe and Eurasia in 2005, animal outbreaks have been reported in more than 60 countries, and 15 countries have confirmed human cases. Of the 387 human H5N1 influenza cases reported since 2003, 245 have been fatal (figure 4). Opportunities for the virus to mutate into a pandemic strain that is efficiently transmitted among humans increases with human exposure. USAID has developed an aggressive package of interventions to combat AI and the pandemic threat.

USAID has supported disease control programs in 54 countries and provided nonmedical emergency assistance to nearly 100 countries, obligating $352.9 million to carry out avian and pandemic influenza (API) activities between 2005 and 2007.

USAID Strategy

USAID's twofold API strategy addresses *pandemic prevention*, by preventing and controlling outbreaks among animals and minimizing human exposure, and *pandemic readiness*, by helping countries strengthen national- and community-level readiness, with a particular focus on reducing excess mortality in the event of a pandemic. Under the overall coordination of the Department of

Figure 4: Number of Confirmed Human Cases of Avian Influenza and Resulting Deaths Reported to WHO, 2003–2007



Source: WHO.

State, USAID collaborates closely with other U.S. Government departments and agencies, host governments, international partners such as WHO and the Food and Agriculture Organization of the United Nations (FAO), and in-country partners to implement activities under this strategy. These activities include:

- **Strengthening of national API preparedness plans.** This includes support for national API task forces, coordination of efforts at a national level, and simulation exercises to test national plans in order to help identify gaps and areas requiring additional strengthening.

- **Improving national surveillance and case detection capacity in affected and high-risk countries.** Support includes provision of diagnostic equipment, encouragment of community participation in disease monitoring, and increased surveillance of wild and migratory birds through programs such as GAINS to track and share information about the spread of AI globally.

- **Delivery of nonmedical commodities and training of surveillance and response workers in their use.** These goods include personal protective equipment (PPE) kits containing suits, masks, gloves, goggles, and other supplies.

- **Dissemination of information about the virus and how to minimize the risk of exposure and spread.** Communications and social mobilization activities range from mass media messaging to outreach to farmers and poultry producers about monitoring and reporting suspected H5N1 cases and improving farm biosecurity.

- **Provision of technical and financial assistance for outbreak response.** Activities include promotion of safe culling and disposal procedures and improved biosecurity practices in poultry-raising settings. USAID also supports training for first responders on proper PPE use, how to collect and ship samples, and how to detect AI using laboratory diagnostic equipment.

- **Building capacity for national- and community-level pandemic planning for a humanitarian response in countries highly vulnerable to the effects of a pandemic.** Plans include the development of standard operating procedures and protocols to address health and nonhealth aspects of a humanitarian response, including clinical management practices, infection control, and public awareness.

Interventions and Results

USAID supports national task forces and preparedness activities. With a particular focus on East and Southeast Asia and in collaboration with U.S. Government partners and host governments, USAID developed and supported national API task forces and preparedness activities, including simulations to test and strengthen national preparedness plans. To build longer-term capacity, in 2007 USAID trained 47,000 people globally in AI surveillance; 29,000 in AI response; and nearly 100,000 in AI communications. USAID also trained first responders and surveillance workers in the

AED

Children gather informational posters created and distributed with USAID support during a water festival in Vientiane, Laos. The posters feature Super Chicken, a popular mascot created for USAID's API communications activities.

Indonesian Islamic Group Mobilizes Grassroots Prevention Efforts

In Indonesia, 95 of 117 human H5N1 influenza cases reported by the end of 2007 were fatal. In Bantul district in Yogyakarta province, residents have experienced the devastating results of AI outbreaks, as the disease has infected thousands of birds and affected local livelihoods. Now, members of a community group empowered by USAID-supported training have mobilized to serve as village AI coordinators and bring prevention messages home – literally.

CB/AIC

Teachers in Bantul receive training on AI prevention methods. The teachers will incorporate the training into lessons in their school curricula and encourage students to share and practice them at home.

The group, Muhammadiyah, is a grassroots Islamic organization with nearly 30 million members nationwide. In Bantul, Muhammadiyah is working with teachers and students and helping small-scale backyard farmers improve safe poultry practices in order to reduce the AI threat. With USAID support and the cooperation of groups like Muhammadiyah, the Indonesian Government intensified AI surveillance in 2006. USAID helped Muhammadiyah provide training for 121 high school teachers on AI risks, prevention methods, and the role of communities in preventing disease transmission and outbreaks. The teachers are now incorporating this information into their courses. Mr. Budi Santosa, a Muhammadiyah AI response team coordinator, said a goal of the training is to help teachers comprehend the AI threat and communicate it to their students. "My students are very enthusiastic about the subject and ask a lot of questions," said Mr. Yuliantoro, one of the teachers who received training. These efforts to encourage prevention practices are expected to reach more than 5,000 households per academic year.

With USAID support, Muhammadiyah is also promoting outreach to backyard farmers. More than 50 percent of Indonesians raise poultry, and there are nearly 287 million free-roaming chickens in the country. These activities encourage prevention, energize communities to act and share information, and help disseminate information to other areas of the country as well.

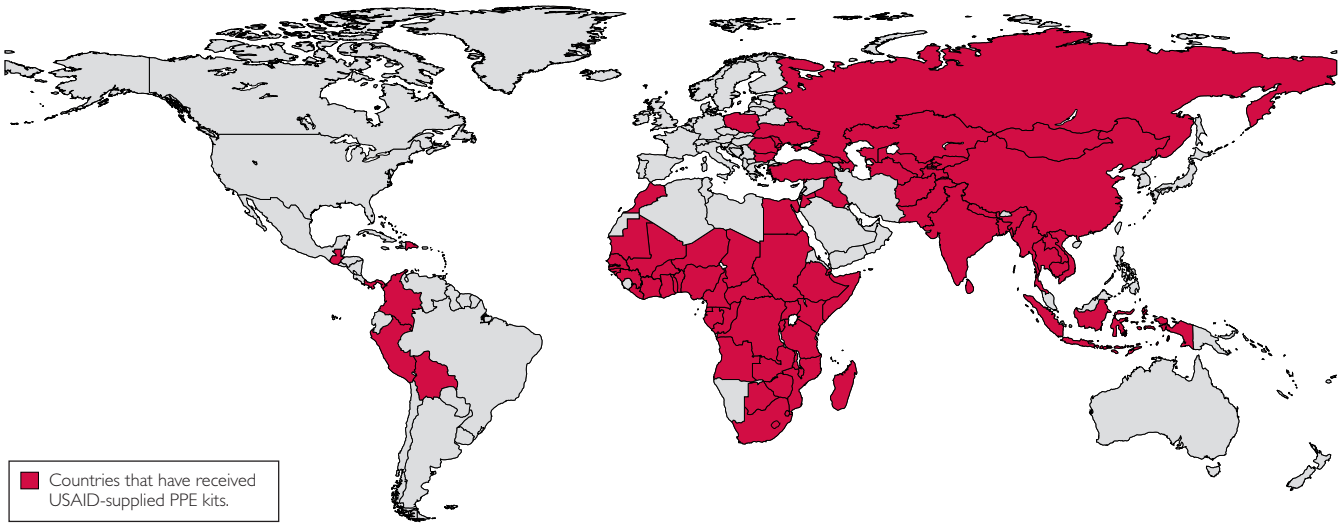
proper use of nonmedical commodities, such as PPE and decontamination kits, in nearly 20 countries.

USAID strengthens outbreak diagnosis and response capabilities. To increase the speed and effectiveness of response efforts, USAID improved capacity for H5N1 diagnosis by supporting technical surveillance and analysis at national laboratories, providing laboratory equipment, and strengthening testing capabilities in Asia, Europe and Eurasia, and Africa. USAID assistance to the FAO Crisis Management Center in Rome facilitated rapid responses to animal outbreaks and supported deployments from the Center to Africa and South Asia; such activities were integrated with human surveillance efforts in coordination with WHO. With USAID support, every country in the Americas also has a strategic national pandemic preparedness plan, and work in a number of countries is progressing to make plans operational at the state and local levels.

USAID stockpiles commodities for containment efforts. USAID established a stockpile of nonmedical commodities, including 1.5 million PPE kits (containing protective suits, goggles, gloves, masks, and other supplies to protect surveillance and response workers from contracting or spreading AI); 248 laboratory kits for use in diagnostic activities; and 15,000 decontamination kits to disinfect farms that have experienced outbreaks. By the end of 2007, approximately 430,000 PPE kits had been deployed to 78 countries (figure 5).

Fast response in Ghana supports outbreak management. In May 2007, **Ghana** reported its first confirmed cases of H5N1 and requested USAID assistance. The farmer who first reported the suspected outbreak had

Figure 5: Countries Receiving USAID Personal Protective Equipment (PPE) Kits for Avian Influenza Surveillance and Response, 2006–2007



Note: PPE kits contain protective suits, goggles, gloves, masks, and other supplies for surveillance and response activities. USAID has distributed these commodities in response to requests from affected countries and in coordination with other donors.

Source: USAID.

learned of AI through USAID-assisted public awareness activities. Within three days, USAID had deployed 4,500 PPE sets, 40 decontamination kits, and two laboratory specimen collection kits to the field. USAID supported follow-up information dissemination on safe practices to more than 30,000 people in major marketplaces, with messages reinforced in mass media.

Festival provides AI information. Informational materials reached up to 40,000 people in **Laos** at a festival in Vientiane, the national capital, that draws thousands of visitors from throughout the country. The materials provided key messages about how to handle poultry and included take-home brochures and posters. Substantial changes in AI knowledge and practices are evident, with poultry farmers' awareness increasing from 35 to 98 percent in one province between 2006 and 2007. In addition, the percentage of poultry farmers taking preventive actions against AI in the country's most vulnerable regions increased from 46 percent in 2006 to 87 percent in 2007.

Kazakhstan educates health and agricultural workers on AI. A USAID-led initiative in AI surveillance, biosecurity, and reporting trained more than 600 veterinary inspectors and laboratory directors. The program also disseminated public awareness materials to 8,000 households and 272 local administrative posts in Pavlodar province, where the USAID AI pilot project took place. The Ministry of Agriculture will fund printing and distribution of the materials in the rest of the country. Training and materials are also being adapted for use in other Central Asian countries.

I. INFECTIOUS DISEASES
Neglected Tropical Diseases

ANDREA PETERSON

KEY RESULTS REPORTED IN 2007

- More than 36 million drug treatments for neglected tropical diseases (NTDs) provided to more than 16.5 million people in Burkina Faso, Ghana, Mali, Niger, and Uganda in the first year of USAID's NTD Control Project.
- More than 107,000 workers at central, regional, and district levels, including Ministry of Health staff, teachers, supervisors, and drug distributors, trained in mass drug administration in five NTD program countries.
- Greater than 80 percent coverage of treatment-eligible populations achieved in country programs.
- Mapping activities to target and expand treatment of trachoma and lymphatic filariasis in more than 60 districts in Niger, Burkina Faso, and Uganda.

More than 1 billion people – one-sixth of the world's population – suffer from one or more neglected tropical diseases (NTDs). These diseases disproportionately impact poor and rural populations in developing countries, who often lack access to safe water, sanitation, and essential medicines. They cause sickness and disability, contribute to childhood malnutrition, compromise the mental and physical development of children, and can result in blindness and severe disfigurement. Their impact on economic development is considerable. Overall, NTDs are associated with 415,000 deaths and 52 million disability-adjusted life-years annually.

Targeted mass drug administration can control seven of the most prevalent NTDs: hookworm, roundworm, and whipworm (three soil-transmitted helminthes); lymphatic filariasis (elephantiasis); schistosomiasis (snail fever); trachoma (eye infection); and onchocerciasis (river blindness). When treatment is provided to at-risk populations annually over successive years, these diseases may be eliminated or reduced to an extent that they no longer pose a public health threat.

USAID's NTD Control Project, launched in 2006, is making a large-scale, cost-effective contribution to the global effort to reduce and potentially eliminate these debilitating diseases (figure 6). This is the first global effort to support country programs in integrating and scaling up delivery of preventive chemotherapy for the seven targeted NTDs. The Project focused initially on five countries in Africa – Burkina Faso, Ghana, Mali, Niger, and Uganda – and in its first year delivered more than 36 million treatments to more than 16.5 million people. To date, USAID has invested almost $30 million in the Project and has expanded it to Haiti, Southern Sudan, and Sierra Leone.

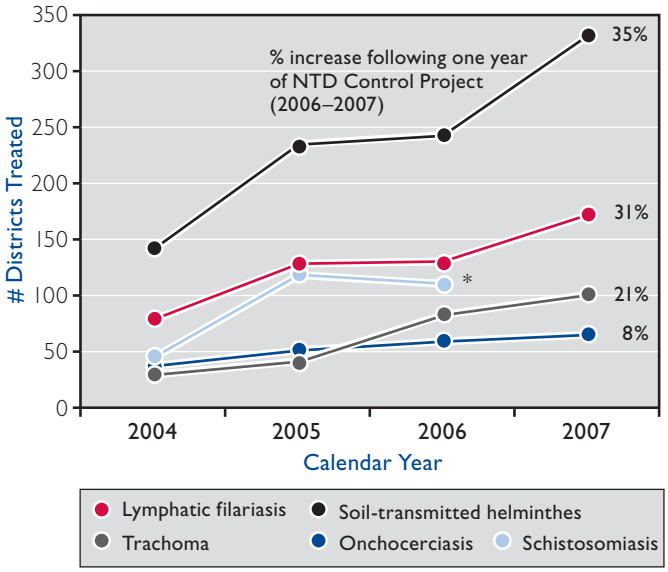
In early 2008, President Bush announced a new presidential initiative for NTD control, which will begin in FY 2009 and increase the U.S. commitment to NTDs to $350 million over five years. These funds will provide integrated treatment to more than 300 million people in Africa, Asia, and Latin America. The initiative will expand the number of targeted countries to approximately 30 and build on USAID's current project. As the initiative is rolled out, USAID and its partners will work to find opportunities to expand integrated approaches.

USAID Strategy

USAID's NTD strategy has five principal elements:

- **Integrated control of NTDs.** Historically, NTDs have been tackled individually, with wide variation in

Figure 6: Number of Districts With NTD Drug Administrations in Five USAID NTD Control Project Countries, 2004–2007



* Many areas did not carry out schistosomiasis treatments in 2007. Numbers include all districts treated in national programs irrespective of funding source.

Source: USAID NTD Control Project.

the intensity of control efforts. USAID focuses on an integrated approach for the seven targeted NTDs that is safe for communities and more efficient for governments to manage than individual approaches. The integrated approach facilitates scale-up of preventive chemotherapy.

- **Support for country programs.** Grants are provided to NGOs in support of national integrated NTD control programs. The Project works in partnership with health ministries struggling with multiple disease burdens by providing technical assistance and targeting resources to country priorities.

- **Partnerships with pharmaceutical donation programs.** Most drugs in the Project are donated, at hundreds of millions of dollars in value each year, by pharmaceutical companies, including Merck, Johnson & Johnson, GlaxoSmithKline, and Pfizer. USAID provides funding to the countries receiving donated drugs to enable them to scale up treatment, with 80 percent of funding directly supporting mass drug administration to at-risk populations.

- **Technical advisory group.** The Project seeks guidance from a technical advisory group to ensure it is accessing state-of-the-art scientific findings, best practices, and lessons learned.

- **Information documentation and dissemination.** The Project works to influence policy in support of integrated NTD control by documenting and disseminating information about successful models, best practices, and cost efficiencies.

Interventions and Results

Mali treats more than 4.5 million. In a four-month period, **Mali's** integrated NTD program provided mass drug administrations for five diseases, treating 4.6 million people in 24 districts in three regions. With USAID assistance, this rapid effort included training, training materials development, transport of drugs and other materials to target areas, community mobilization, supervision of drug administrations, results reporting, and investigations of reported adverse events.

Burkina Faso attacks trachoma, schistosomiasis, and soil-transmitted helminthes. With support from international and local organizations, government health and education officials, traditional leaders, and target groups,

ANDREA PETERSON.

A young Ugandan beneficiary of USAID's NTD Control Project.

Burkina Faso's program delivered integrated treatment for trachoma, schistosomiasis, and helminthes to 1.1 million people in three target districts and completed trachoma prevalence mapping in 33 health districts.

Ghana reaches coverage target. The NTD Control Project trained more than 21,000 volunteers and health workers in **Ghana**, enabling it to conduct mass drug administrations in all 60 districts in its five target regions. More than 5.5 million people received treatments for lymphatic filariasis, onchocerciasis, soil-transmitted helminthes, and trachoma.

WHO review concludes that USAID's NTD Control Project represents a major contribution to NTD control. In 2007, USAID requested WHO to conduct an independent review of various models of NTD integration that have been implemented since WHO issued its new normative *Guidance on Preventive Chemotherapy* – guidance that catalyzed a new era of integrated programming for seven of the NTDs. This review included the first year of implementation of USAID's integrated NTD Control Project. In his summary of the review, Dr. Hiroki Nakatani, Assistant Director-General of WHO, concluded that USAID's NTD Control Project is ambitious and wide-ranging, and highlighted that millions more people affected by NTDs benefit from the support of the USAID NTD Control Project. Key recommendations of the review will contribute to USAID's strategic planning for the rollout of the new presidential initiative for NTD control. As an additional outcome of the review, WHO developed and published *Methodology for Evaluation of NTD Control Programs at Country Level*, which contains guidelines that will assist program managers and various institutions in evaluating their own NTD control programs.

ALBS C'ABRELLE

These community members are in line to receive drugs in a mass drug administration under Mali's integrated NTD control program.

USAID supports disease-specific NTD initiatives. USAID also supported disease-specific NTD initiatives in 2007, including the Carter Center's Guinea Worm Eradication Program and the World Bank's African Program for Onchocerciasis Control.

I. INFECTIOUS DISEASES

Antimicrobial Resistance

KIRILL BURIMSKI, 2005

PROGRESS TO DATE

- Effective containment strategies and interventions and expanded technical capacity for managing pharmaceuticals implemented in countries in Africa, including Zambia, Ethiopia, Kenya, and Rwanda.
- Improved management of antimicrobial drugs implemented throughout South America through USAID regional initiative.

KEY RESULTS REPORTED IN 2007

- 2,100 community health workers and drug dispensers from Senegal, Tanzania, and the Democratic Republic of the Congo trained in managing child illnesses and community case management to reduce inappropriate use of antibiotics.
- 18 retail outlets in Laos and two clinics in China closed as a result of USAID-supported drug quality monitoring; counterfeit and substandard medicines confiscated in Cambodia, Thailand, and Vietnam.
- Approximately 600 participants from 55 countries trained in 20 pharmaceutical management courses, resulting in improved management and availability of medicines for HIV/AIDS, TB, and malaria.

The emergence and spread of antimicrobial resistance (AMR) endanger the effectiveness of health programs to treat TB, malaria, acute respiratory infections, HIV/AIDS, and other infectious diseases. AMR – the phenomenon of disease-causing microbes becoming resistant to the medicines used against them – renders first-line treatments ineffective and increases the need for new, often more complicated and more expensive treatments. AMR is especially problematic in developing countries with high disease rates and limited resources. These countries lack the systems and capacity to ensure the quality of medicines and to promote the rational selection, procurement, prescribing, dispensing, and use of medicines – key variables for the containment of AMR. Furthermore, awareness of AMR tends to be poor in these countries. There are few country-level advocacy and containment programs; professional expertise is scarce; and available interventions are not being implemented.

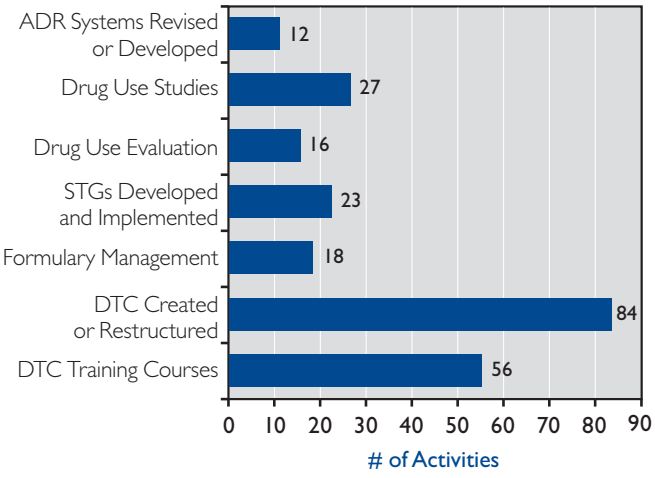
USAID Strategy

USAID's objective is to preserve the effectiveness of existing antimicrobial medicines by decreasing their unnecessary use, improving their use when they are needed, and ensuring consistent supplies of products of assured quality. AMR efforts focus on the following key areas:

- **Advocacy and containment strategies.** The development and coordination of regional, country, and local strategies to ensure appropriate use of antimicrobial drugs by patients and providers are vital to achieving progress in combating AMR.

- **Improved drug selection, procurement, and management.** Improved pharmaceutical management leads to increased availability of quality first-line medicines and improved use. Expertise in medicine selection, quantification, procurement, quality assurance, distribution, inventory management, dispensing, and appropriate use is required to ensure good pharmaceutical management.

Figure 7: USAID Drug and Therapeutics Committee (DTC) Training Course Activities, 2001–2007



Source: Course participants.

- **Improved drug use by providers and consumers.** Excessive or unnecessary use of antibiotics, which are available over the counter in many developing countries, is a major factor in the spread of AMR.

- **Strengthened quality control and assurance.** Low-quality and counterfeit medicines, especially antimicrobials that play a key role in treating major infectious diseases, are a major global concern. USAID works with regulatory authorities, quality control laboratories, manufacturers, and international organizations and initiatives to strengthen quality assurance of medicines.

- **Research and development.** These efforts focus on evidence-based practices in case management, infection control, surveillance, and quality assurance and control.

Interventions and Results

Zambia and Ethiopia implement nationwide initiatives. A package of USAID-supported interventions in **Zambia** included revised treatment standards and guidelines, local media approaches, a strengthened AMR curriculum for health professionals, and improved quality assurance of medicines. In **Ethiopia**, the focus was mainly on improving and expanding hospital drug use through training and supervision.

Regional initiative helps improve drug practices in Peru. USAID partners in the South America Infectious Disease Initiative identified poor storage conditions and inventory management as factors contributing to AMR in Callao, **Peru**. Because of improvements in local warehousing and inventory management, the warehouse receiving assistance was certified for good storage practices, and procedures developed through the activity provided a model for other regional warehouses. Initiative partners also identified irrational drug use as an important contributing factor to AMR, and USAID helped develop and disseminate standard treatment guidelines (STGs) to support good prescribing practices.

Training promotes appropriate pharmaceutical management. USAID supported training in medicine selection and use for more than 400 health professionals from Africa, Asia, the Caribbean, and Latin America. The training prepared participants to carry out such activities as drug use evaluations, formulary management, development of treatment guidelines, and, through a training-of-trainers component, their own training of hospital drug and therapeutics committees (figure 7). Participating countries included **Kenya**, **Rwanda**, **Malaysia**, **Zambia**, **Sri Lanka**, **Mongolia**, **China**, and **Ethiopia**.

USAID helps countries improve quality of medicines. USAID supported the development of *Ensuring the Quality of Medicines in Resource-Limited Countries: An Operational Guide*, which provides guidance on how to strengthen quality assurance systems in developing countries. In **Bolivia**, **Guyana**, **Madagascar**, and many other countries, USAID provided support for national quality control laboratories. In **Bolivia**, **Paraguay**, and **Peru**, USAID helped strengthen post-marketing surveillance and supported analysis of more than 150 samples of TB medicines and other antibiotics.

Two USAID guides support AMR programs. To facilitate AMR advocacy and containment programs, USAID developed two guides that help countries implement WHO recommendations at the country level: *Building Local Coalitions for Containing Drug Resistance: A Guide* and *Containing Antimicrobial Resistance: Guide for USAID Missions to Promote Institution-Based Interventions*. The guides provide tools and approaches for developing and implementing AMR containment strategies.

I. INFECTIOUS DISEASES

Surveillance

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PROGRESS TO DATE

- Establishment in Africa of regional network of field epidemiology and laboratory training programs to help meet the critical need for a well-trained health workforce.
- Development of innovative training models that integrate animal and human health to address emerging zoonotic diseases.
- Strengthening of public health laboratories worldwide to improve diagnostic capacity for communicable and epidemic-prone diseases.

KEY RESULTS REPORTED IN 2007

- Establishment in Nigeria of first field epidemiology training program in sub-Saharan Africa to integrate field epidemiology, laboratory training, and veterinary medicine.
- Laboratory field kits for timely diagnosis of suspected disease outbreaks developed and distributed to Ghana, Kenya, Uganda, and Zimbabwe.
- Two-year training completed for 74 field epidemiologists in Africa.

In 2007, the human suffering and economic costs caused by the uncontrolled spread of infectious diseases served as important reminders that many countries still lack the ability to detect, confirm, monitor, and respond to infectious disease outbreaks. As a result, all countries – developing and developed alike – remain highly vulnerable to the threats of emerging and re-emerging infectious diseases.

The ability to detect and control infectious diseases requires effective comprehensive surveillance and response capacity. Surveillance systems are structured to address existing disease threats and emerging threats with epidemic and/or pandemic potential. Early and complete detection of infectious diseases allows earlier control and containment, which are especially important for emerging diseases that have the ability to spread rapidly, such as pandemic influenza.

USAID Strategy

USAID's infectious disease surveillance and response strategy focuses on:

- **Developing field epidemiology capacity.** Surveillance and response capability must be built on a foundation of skills that are often limited in developing countries. USAID support enables developing countries to strengthen and expand applied epidemiology and laboratory programs that play a critical role in evidence-based public health practice.

- **Improving laboratory diagnostic capabilities.** USAID support focuses on strengthening public health laboratory capacity, particularly in Africa. Activities improve the quality of national laboratory systems and identify sustainable approaches to meeting national laboratory requirements for maintaining diagnostic capacity for communicable and epidemic-prone diseases.

AFENET

A fellow at the African Field Epidemiology Network (AFENET) in Uganda uses a field outbreak investigation kit provided with support from USAID.

- **Strengthening national surveillance systems.** USAID assists with the development of national strategic plans, surveillance and response guidelines, and training materials, and the promotion of integrated disease surveillance and response across all levels of the health system.

Interventions and Results

Africa field network responds to disease outbreaks. The African Field Epidemiology Network (AFENET), established in 2005 with support from USAID, provided critical assistance in disease surveillance and response in Africa. AFENET members investigated and responded to urgent disease outbreaks, including, among others, Rift Valley fever in **Kenya** and **Tanzania**, avian influenza in **Ghana**, and Marburg hemorrhagic fever in **Uganda**. AFENET also developed and distributed outbreak investigation laboratory kits to **Ghana**, **Kenya**, **Uganda**, and **Zimbabwe** to facilitate timely laboratory diagnosis of suspected disease outbreaks.

AFENET assists training programs. The demand for field epidemiology and laboratory training programs (FELTPs) is increasing rapidly as countries recognize critical human resource gaps in infectious disease surveillance and response. AFENET provided technical assistance to eight countries[1] to develop FELTPs (figure 8). These programs are the only competency-based applied epidemiology training programs in Africa and are a critical resource for ministries of health. **Nigeria's** program developed integrated training in animal and human health, the first FELTP in Africa to do so. This innovative approach will serve as a model for other countries for facilitating more effective and efficient ways to address emerging zoonotic infectious diseases.

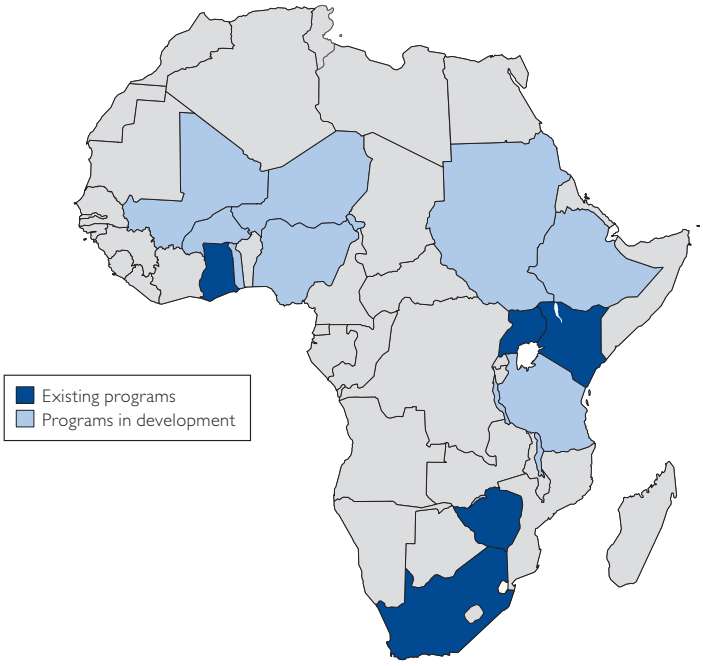
Pakistan training expands. The USAID-supported FELTP in **Pakistan** expanded its comprehensive approach to improve capacity within the Ministry of Health in epidemiology, public health surveillance and response, public laboratories, and information systems for surveillance. Trainees play an essential role in investigating disease outbreaks. The program is also overseeing an expansion of a public health laboratory network.

Health staff receive training in integrated disease surveillance and response. USAID supported training for district health staff in 43 countries in Africa; 33 of these countries had conducted training in at least 60 percent of their health districts by 2007. In addition, 14 countries had introduced integrated disease surveillance and response into their national health training institutions.

USAID helps fight dengue in Bolivia. USAID supported efforts to control outbreaks of dengue fever in regions of **Bolivia** affected by flooding. Support included capacity building for surveillance, destroying mosquito breeding sites, and controlling adult mosquitoes; information and communications targeting households and communities; and training and equipment. Activities in Beni *departamento* served nearly 13,000 households and 90,000 residents. In Santa Cruz, mobile teams visited more than 136,000 households, and the infestation rate was reduced by nearly half, from 26 to 15 percent.

1. Tanzania, Sudan, Nigeria, Ethiopia, Niger, Togo, Mali, and Burkina Faso

Figure 8: Field Epidemiology and Laboratory Training Programs, Sub-Saharan Africa



Source: USAID.

II. HIV/AIDS

To combat the global pandemic, President Bush has raised the United States' commitment and leadership in the fight against HIV/AIDS to an unprecedented level.

Orphaned girls at the Little Angels Infant Primary School in Rukungiri, Uganda, sing about the HIV/AIDS education and prevention lessons they are taught in school.

U.S. GLOBAL HIV/AIDS PROGRESS TO DATE

- Continued U.S. leadership of the global HIV/AIDS response, with $4.5 billion dedicated in FY 2007 through the United States President's Emergency Plan for AIDS Relief (Emergency Plan/PEPFAR). The latest PEPFAR results include:
  - 33 million people provided with counseling and testing as of September 2007.
  - 6.6 million provided with care and support, including 2.7 million orphans and vulnerable children, as of September 2007.
  - Services to prevent mother-to-child HIV transmission provided in 12.7 million pregnancies as of March 2008.
  - 1.73 million individuals receiving antiretroviral therapy as of March 2008, 1.64 million of them in the 15 focus countries.

KEY RESULTS REPORTED IN 2007

- In FY 2007, approximately 60 percent of programs managed by USAID in partnership with the Emergency Plan; $2.6 billion in funds administered by USAID, including $572.5 million from the Child Survival and Health Programs Fund. Key PEPFAR results included:
  - 57.6 million people reached with support for the prevention of sexual HIV transmission using the "ABC" approach (abstinence, being faithful, correct and consistent condom use).
  - Nearly 1.9 billion condoms supplied worldwide from 2004 through 2007.
  - 93 percent of PEPFAR drugs delivered through the USAID-managed Supply Chain Management System project were generic brand antiretroviral drugs, achieving an estimated $64 million savings when compared with brand-name drugs.

The global HIV/AIDS pandemic is an enormous public health and development challenge in much of the developing world. As the disease spreads, it brings with it a burden of suffering and death for individuals, families, communities, and nations. The vast majority of people living with HIV/AIDS are in developing countries, where poverty, inadequate health care, and lack of infrastructure contribute to the spread of the disease.

At the end of 2007, more than 33.2 million people worldwide were living with HIV/AIDS. In 2007, 2.1 million adults and children died of AIDS, and 2.5 million new infections occurred. An estimated 15.4 million women were living with HIV in 2007, 1.6 million more than in 2001. Although recent re-estimates of HIV prevalence cast some uncertainty on the estimated numbers of orphans and vulnerable children affected by AIDS, the number orphaned by AIDS worldwide may exceed 20 million by 2010, and the number of children made vulnerable may exceed 40 million.

To combat the global pandemic, President George W. Bush has raised the United States' commitment and leadership in the fight against HIV/AIDS to an unprecedented level. In 2003, he announced the historic United States President's Emergency Plan for AIDS Relief (Emergency Plan/PEPFAR), a multifaceted five-year, $15 billion program now combating the disease around the world.

The Emergency Plan is raising hopes in the parts of the world most heavily hit by AIDS. Reauthorized on July 30, 2008, PEPFAR's next phase aims to:

- Provide antiretroviral treatment (ART) for 3 million people living with HIV/AIDS
- Prevent more than 12 million new HIV infections
- Care for more than 12 million people, including 5 million orphans and vulnerable children

In virtually every region of the world, USAID is leading an HIV/AIDS program in partnership with PEPFAR. A cadre of skilled USAID practitioners helps bring to bear the largest and most diverse HIV/AIDS prevention, care, and treatment program in the developing world. The majority of these individuals work directly with host-country governments, NGOs, indigenous groups, and the private sector to provide training, expert technical assistance, and essential supplies – including pharmaceuticals – to prevent and reduce HIV/AIDS transmission and provide care and treatment to people living with and affected by the disease.

USAID Strategy

With an HIV/AIDS budget of $2.6 billion, which included approximately $1.6 billion in transfers from the Office of the U.S. Global AIDS Coordinator, USAID

Students attend a DramAidE forum theater performance at a high school in South Africa's KwaZulu-Natal province, which has the highest HIV/AIDS prevalence in the country.

supported programs in more than 50 countries and managed roughly 60 percent of PEPFAR funds in FY 2007. One of USAID's core strengths is its ability in high-prevalence countries to support multisectoral responses to HIV/AIDS that address the widespread impact of the disease outside the health sector.

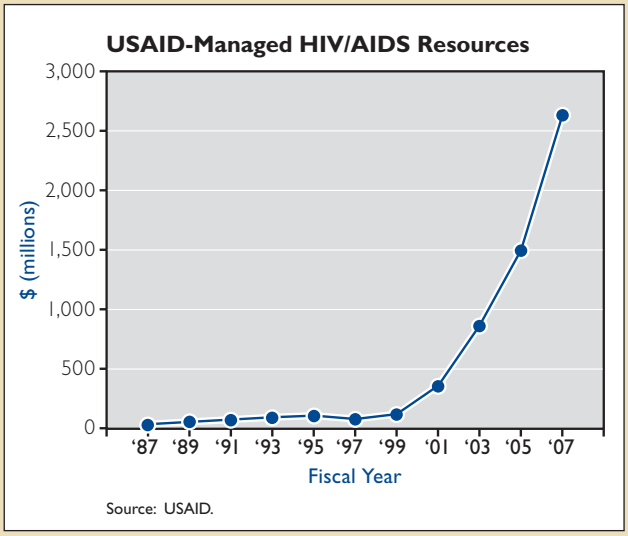
Emergency Plan programs are increasingly linked to other important programs – including those of other U.S. Government agencies and international partners – that meet the needs of people infected or affected by HIV/AIDS in such areas as clean water, nutrition, education, and gender issues. In high-prevalence countries, USAID is also supporting wraparound programs in agriculture, education, and economic development that are reducing the impact of the pandemic on nations, communities, families, and individuals.

Key components of USAID's HIV/AIDS program include:

- **Prevention.** Through PEPFAR, USAID focuses on the balanced promotion of all three behaviors of the "ABC" approach: "A" for abstinence (or delayed sexual initiation among youth); "B" for being faithful (or reducing the number of sexual partners); and "C" for correct and consistent condom use, especially in high-risk situations. USAID also implements PEPFAR programs to prevent mother-to-child transmission of HIV and to reduce HIV-related morbidity and mortality among mothers, their children, and other family members.

USAID Brings Nearly 50 Years of Development Expertise to Global AIDS Fight

Since 1986, just two years after the HIV virus was isolated and identified and only five years after the first reported case of HIV in the United States, USAID has been at the cutting edge of the global fight against HIV/AIDS. More than 20 years later, the Agency is working in partnership with the United States President's Emergency Plan for AIDS Relief, touching millions of lives with essential HIV/AIDS prevention, care, and treatment. Drawing on its nearly 50-year history, USAID mobilizes its expertise and resources, including a vast network of international and indigenous partners, to fight the HIV/AIDS pandemic.



Source: USAID.

With an HIV/AIDS budget of $2.6 billion in FY 2007, USAID worked with its HIV/AIDS partners in three primary ways: through traditional USAID funding mechanisms that support NGOs (such as grants and cooperative agreements); through contracts; and through public international organizations, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria and the Joint United Nations Programme on HIV/AIDS. USAID also enters into unique public-private partnerships and collaborative agreements with businesses and multinational corporations. In addition, several USAID staff serve as co-chairs on the Emergency Plan's Technical Working Groups, which formulate technical guidance and support field implementation of Emergency Plan programs.

- **Care and support.** This covers a broad spectrum of clinical, psychological, and nutritional services ranging from diagnosis, treatment (curative and palliative), and acute and chronic care management. Activities include establishing HIV test sites, training and supporting counselors, promoting outreach to enhance community acceptance of HIV/AIDS activities, counseling discordant couples, succession planning, palliative care, and pediatric care and support. Routine facility, community, and home HIV clinical monitoring; diagnosis, prevention, and treatment of HIV-related opportunistic infections, particularly TB; and assessment, counseling, and treatment of nutritional deficiencies are also important areas of assistance. In addition, PEPFAR supports referrals for women in HIV/AIDS treatment and care to voluntary family planning programs upon request, including programs supported by USAID.

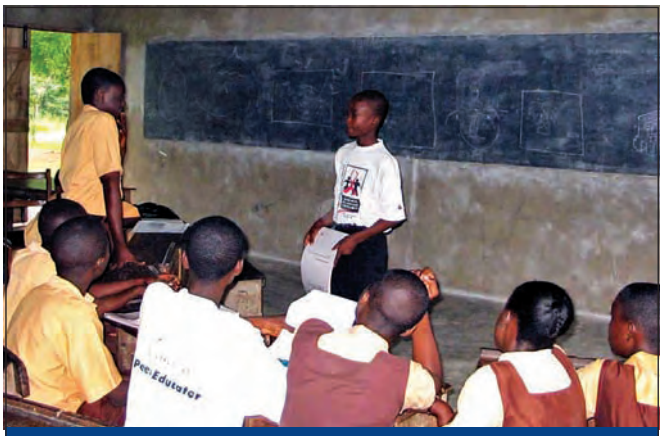
- **Treatment.** Through PEPFAR, USAID is committed to improving access to antiretroviral (ARV) drugs for treating HIV/AIDS and supports a range of programs to increase the availability of treatment. Activities include training health care providers and establishing programs for clinical care, including screening and treatment for opportunistic infections such as TB.

- **Health systems strengthening.** To achieve universal access to comprehensive HIV prevention, treatment, and care and support services, strong health systems are essential. In partnership with PEPFAR, USAID addresses financing, service delivery, human resources, health information systems, pharmaceutical management, procurement, and health governance.

- **Research.** Through the Emergency Plan, USAID supports the development of products to prevent HIV transmission, including a vaccine and microbicides. USAID also conducts research in such areas as HIV prevention among youth, prevention of mother-to-child HIV transmission, and treatment of pediatric HIV infections.

Interventions and Results

USAID supports Emergency Plan ABC strategy. USAID contributed to Emergency Plan support for programs that in 2007 reached 57.6 million people in the Plan's 15 focus countries[1] with ABC messages for preventing sexual transmission of HIV. Surveys have detected increases in abstinence and declines in men having multiple sex partners (figure 9). From 2004 to 2007, the U.S. Government supplied nearly 1.9 billion condoms worldwide.



JSI

A young boy in Ghana teaches his classmates about AIDS prevention.

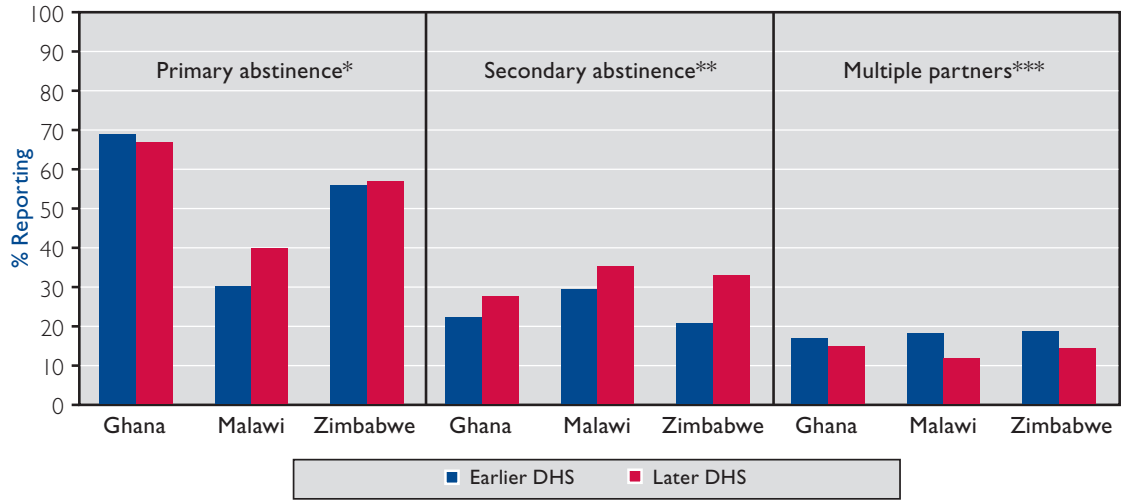
Prevention messages reach youth in Malawi and Uganda. In **Malawi**, an ABC campaign reached an estimated 1.35 million people. Condom use among youth aged 15 to 24 reporting sex with a non-cohabitating partner increased from 47 percent in 2004 to 60 percent among men and from 35 to 40 percent among women. In **Uganda**, USAID reached 110,000 youth with HIV prevention messages transmitted through mass and community media and interpersonal communication.

Youth theater in Jordan provides model for region. USAID's PEPFAR partners produced a peer education manual for vulnerable youth and a training manual titled "Theatre-Based Techniques for Youth Peer Education." Youth were targeted in schools through awareness raising, peer-to-peer education, and training of trainers in five major universities. These initiatives are considered models for the region.

Partnerships with faith- and community-based groups continue. Since its inception, USAID has partnered with faith- and community-based groups. These groups have extensive geographic reach, well-developed infrastructures, and unmatched staying power, and they often reach populations outside of traditional service delivery networks. In 2007, they continued to play a critical role in providing HIV/AIDS prevention, care, and treatment. Implementing PEPFAR in **Mali**, USAID

1. Botswana, Côte d'Ivoire, Ethiopia, Guyana, Haiti, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Vietnam, and Zambia

Figure 9: Changes in Abstinence and Being Faithful Indicators Between Last Two Demographic and Health Surveys: Ghana, Malawi, and Zimbabwe



Source: Demographic and Health Surveys: Ghana – 1998, 2003; Malawi – 2000, 2004; Zimbabwe – 1999, 2005/06.
* Primary abstinence = percent of young men and women aged 15 to 19 who have never had sex.
** Secondary abstinence = percent of young women and men aged 15 to 24 who have ever had sex but did not have sex in the last year.
*** Multiple partners among males aged 15 to 49 who were sexually active in the last 12 months.

supported skills and tool development for *imams* (religious leaders) and others to gain support for HIV/AIDS prevention from the country's Muslim population. USAID trained more than 2,400 people, including 100 *imams* and numerous female Muslim community leaders, in abstinence/be faithful messages. The number of people reached with the messages doubled during the year.

Programs reach high-risk groups. In **Honduras**, a social marketing program reached more than 173,000 at-risk persons with prevention messages on condom use and drug and alcohol abuse. The program expanded condom sales to 359 new outlets in high-risk settings, such as brothels, raising the number of outlets to more than 800. In Central Asia, the Break the Cycle program, which engages injecting drug users (IDUs) to discourage nonusers from starting, trained 87 outreach workers in **Tajikistan** and reached nearly 4,000 IDUs in **Tajikistan** and **Uzbekistan** combined, including 111 sex workers. In **Burma**, a USAID-implemented PEPFAR project worked with the Ministry of Health to allow HIV/AIDS rapid testing, which guaranteed anonymity of testing. This change increased participation among most-at-risk populations, with the percentage receiving test results increasing from 76 percent in 2006 to 93 percent in 2007.

USAID contributes to preventing maternal-child transmission through Emergency Plan. To date, Emergency Plan services for preventing mother-to-child HIV transmission have been provided during 12.7 million pregnancies, with ART provided during more than 1 million pregnancies. As a result, an estimated 194,000 infant HIV infections have been averted. In **Burundi**, a new program tested nearly 14,000 pregnant women and treated nearly 200 for HIV. In **Nicaragua**, HIV counseling and testing were integrated into family planning services in 11 *departamentos* with high HIV rates. After access to counseling and testing increased, a USAID PEPFAR-funded evaluation demonstrated a decline in the number of HIV-positive pregnant women. Across the Central Asian Republics of **Kazakhstan**, **Kyrgyzstan**, **Tajikistan**, **Turkmenistan**, and **Uzbekistan**, HIV/AIDS prevention was integrated into training on effective perinatal care standards in maternity/postpartum departments, postabortion care departments, maternity hospitals, and primary health care facilities.

Four PEPFAR countries implement injection safety programs. A USAID-operated project in **Ethiopia**, for example, helped ensure that safe injection devices, such as auto-disposable syringes that prevent reuse of contaminated needles, were included in the national HIV/AIDS commodities list by producing data that demonstrated a gap between national supply and demand. This information will help avoid future undersupplies or oversupplies of injection commodities.

USAID Helps Vietnam Provide Family-Centered Care

Mrs. Van Anh is a client of a family-centered care project supported by PEPFAR in Vietnam through USAID. The project is helping district clinics provide family-centered care to HIV-positive parents and children. Before the project began, Van Anh's daughter Ha, who like her mother is HIV-positive, could only receive pediatric HIV care in Ho Chi Minh City, which is more than 12 hours away by bus. Van Anh was only able to save the money to take Ha there twice, and antiretroviral treatment (ART) was out of the question.

KIMBERLY GREEN, PHI VIETNAM

Clients of family-centered care in Vietnam, which enables parents and children to receive care at the same time at the same facility from the same staff.

Family-centered care involves providing comprehensive care (including nutrition, treatment, support, protection, prevention, care for opportunistic infections, and palliative care) for parents, caregivers, and children in the same facility, at the same time, and by the same staff. This makes sense because families affected by HIV/AIDS have multiple needs, and when services are not coordinated for families, care can become more complicated, costly, and fractured. The USAID project also supports community and home-based care teams and family care case managers who provide care and support services for orphans and vulnerable children.

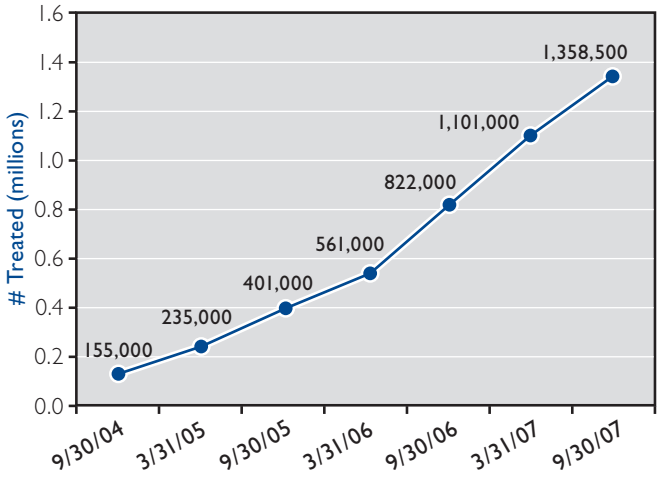
The project began to help district clinics in Vietnam integrate pediatric HIV care and treatment, as well as prevention of mother-to-child HIV transmission, into their adult services in October 2006. Young Ha started ART at the local clinic in Tan Chau district of An Giang province in December 2006, when the clinic first started providing this service. She and her sister also receive support that allows them to stay in school and attend a play group for all children in the community, including those infected with or affected by HIV, every month.

To date, the project has enrolled 60 children in clinical HIV care, supported ART for 40 children, and reached 1,700 orphans and vulnerable children. At least 200 pregnant women have received counseling and testing, and nine have received ART either to prevent transmission or for their own health. The project's activities will be expanded to new districts in the next few years, and USAID and the Vietnamese Government are working together to eventually provide family-centered care on a national scale.

USAID helps deliver PEPFAR counseling and testing. In the 15 Emergency Plan focus countries, 10.6 million people received HIV counseling and testing services. USAID implemented PEPFAR counseling and testing services in a number of other bilateral program countries as well. In **Cambodia**, for example, a USAID-supported project that provides integrated reproductive health/family planning, maternal/child health, and HIV services provided 25 percent of all counseling and testing services nationwide, although its 16 facilities constituted only 10 percent of the country's counseling and testing sites. In **Honduras**, a scaled-up rapid HIV testing program involving 10 NGOs brought services to nearly 8,000 people in hard-to-reach communities. With increased awareness and availability of counseling and testing services in **Liberia**, nine times more clients than expected used the services.

USAID support boosts Emergency Plan care and support services. USAID helped PEPFAR provide palliative care services to 2.2 million people with HIV/AIDS in the 15 PEPFAR focus countries. In **Haiti**, PEPFAR supported the enrollment of nearly 5,500 persons in care and treatment, including 1,087 in ART.

Figure 10: Individuals Receiving Antiretroviral Treatment With U.S. Government Support, 15 PEPFAR Focus Countries, September 2004–September 2007



Source: *The Power of Partnerships: The U.S. President's Emergency Plan for AIDS Relief. 2008 Annual Report to Congress.*

In **Vietnam**, an increased emphasis on identifying people who require care and treatment brought more than 34,000 people into care and support services in just six months, exceeding the target for the entire year. In **Guyana**, PEPFAR supported care and support services through USAID for 4,400 individuals in FY 2007. Community health care providers, volunteers, and nurse supervisors were trained or retrained in home-based and palliative care, opportunistic infection diagnosis, and treatment adherence.

USAID implements Emergency Plan programs reaching orphans and vulnerable children. As of September 2007, 2.7 million orphans and vulnerable children had received Emergency Plan support, up from 2 million a year earlier. In **Ethiopia**, the Emergency Plan and the President's Malaria Initiative collaborated on a program targeting orphans and vulnerable children that is expected to leverage $500,000 in U.S. Government education resources to improve the health status of students and their families. In **Haiti**, USAID supported nearly 31,000 children orphaned or made vulnerable by HIV/AIDS, and their families, through community programs that included nutrition and dietary assessments, linkages to immunization services, payment of school fees, and income-generation assistance.

USAID implements Emergency Plan ART expansion. As of September 2007, PEPFAR supported treatment for 1.45 million individuals – approximately 1.36 million in the 15 PEPFAR focus countries (figure 10). USAID has implemented PEPFAR programs to expand access to ART treatment for children. The number of children receiving treatment increased from only 4,800 in FY 2004 to 85,900 in FY 2007. In **Zambia**, scaled-up access to ART brought treatment to nearly 123,000 people (half of them new patients and more than 5,000 of them children) at 157 treatment sites. In **Nicaragua**, USAID supported the expansion and decentralization of ART from four to 11 hospitals.

Supply chain logistics support improves Zimbabwe's drug procurement, distribution. In partnership with the Emergency Plan, USAID administered the Supply Chain Management System project in **Zimbabwe** and helped the country create and strengthen its systems for procuring and distributing drugs and other essential commodities. In 2007, USAID supported ART for 45,000 individuals in Zimbabwe and extensively supported the distribution of ARVs to clinic sites.

USAID leadership contributes to Global Human Resources for Health Framework. Achieving HIV/AIDS objectives is seriously impeded by a lack of health workers. Through the Emergency Plan and in collaboration with WHO and others, USAID was a leading contributor to the development and implementation of the Global Human Resources for Health Framework, published in WHO's 2006 *World Health Report*.

PEPFAR supports emergency staff deployment in Kenya. USAID helped **Kenya's** Ministry of Health implement an emergency hiring plan and implement

These youth in Egypt are taking the AIDS train, a World AIDS Day initiative.

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A volunteer health worker counsels young people before they receive free HIV testing in Lagos, Nigeria.

integrated HIV/AIDS prevention, care, and treatment in rural areas with especially high HIV/AIDS prevalence and pressing health worker shortages. Under the plan, the Ministry deployed 40 nurses to camps for 300,000 internally displaced persons in the Rift Valley and Western and Nyanza provinces.

New private sector partnership begins work on vaccine development. In 2007, the USAID-funded International AIDS Vaccine Initiative (IAVI) began collaborating on the development of a novel AIDS vaccine technology using the Sendai virus as a vector to deliver HIV antigens that, researchers hope, will stimulate protective immunity against HIV. IAVI plans to develop a Sendai-based AIDS vaccine candidate and advance it into clinical trials in partnership with a Japanese biotech company.

Youth "AB" programs improve after research study. Through USAID, PEPFAR supported operations research to strengthen HIV prevention programs designed to promote abstinence until marriage, being faithful in marriage, and the avoidance of unhealthy sexual behaviors among youth aged 10 to 24. An evaluation of 20 program sites in **Kenya**, **Tanzania**, **Mozambique**, and **Ethiopia** suggested that curricula should be targeted by age and marital status and include specific messages and strategies for sexually active youth. A number of partners have modified their programs and materials as a result of the evaluation.

USAID leads new support for highly vulnerable children. In 2005, President Bush signed into law the Assistance to Orphans and Other Vulnerable Children in Developing Countries Act (Public Law 109-95), requiring the U.S. Government to devise and implement a comprehensive strategy for addressing the needs of children orphaned or made vulnerable by all causes, including HIV/AIDS. As the lead implementing agency of this legislation, USAID in 2007 focused on improving the coordination, communication, and effectiveness of U.S. Government assistance to these children. For more information on USAID support for highly vulnerable children, see chapter V.

III. CHILD SURVIVAL AND MATERNAL HEALTH

The health interventions that can save the lives of mothers and children are being delivered on a scale unprecedented in global public health.

Children receive their noon meal at the Punwami Child Feeding Program in Kenya. More than 30 children usually receive a meal each day.

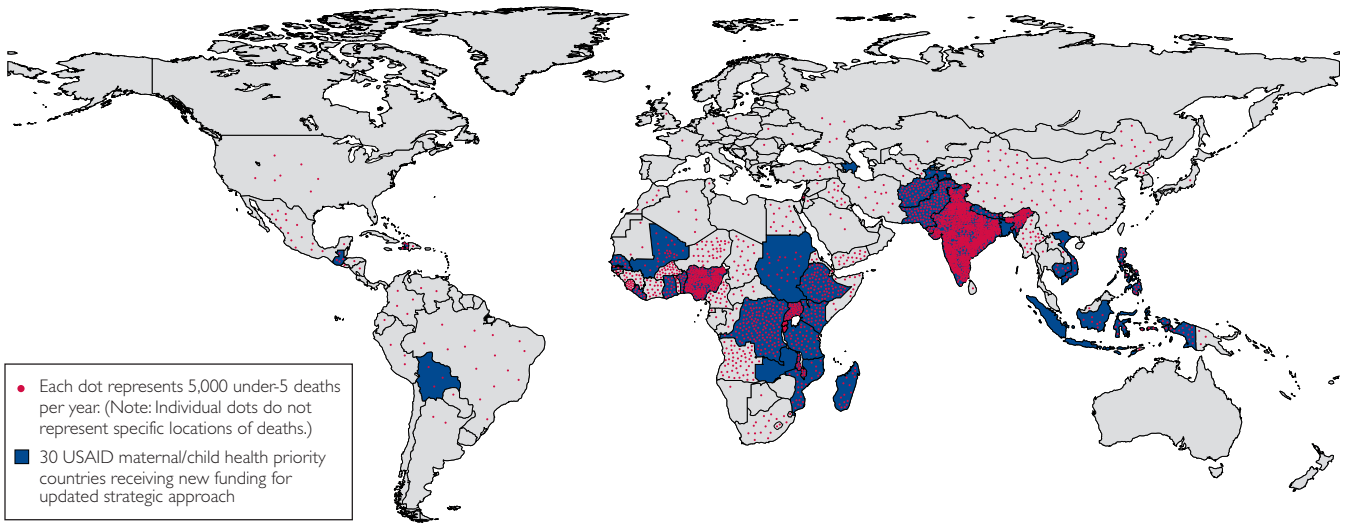
It has been more than two decades since USAID, with the bipartisan support of Congress, in the 1980s helped launch the "child survival revolution" and the global Safe Motherhood initiative. At that time, an estimated 15 million children under age 5 – one out of seven worldwide – died each year, almost all of them in the developing world.

Without improvements in child survival, this number today would be 17 million. Instead, UNICEF reported in 2007 that the estimated number of infant and child deaths dropped below 10 million – to 9.7 million – for the first time. This means that around the world more than 7 million children's lives are being saved annually. Nonetheless, at close to 10 million, child deaths remain high, with 40 percent of these deaths occurring among newborns in the first month of life. Preventable complications of pregnancy and delivery continue to kill more than 500,000 women a year, although maternal mortality has declined by 20 percent or more in some countries, including 11 assisted by USAID. And millions of women and children suffer the effects of ill health and malnutrition throughout their lives.

The health interventions that can save the lives of mothers and children are being delivered on a scale unprecedented in global public health. At least 750 million vaccinations are given every year, many of them to children living in extreme poverty in countries with weak health systems. Roughly 1 billion episodes of child diarrhea are treated with lifesaving oral rehydration therapy (ORT), one of the first high-impact interventions of the child survival revolution. Hundreds of millions of children with pneumonia symptoms are taken for appropriate care each year. Vitamin A supplementation programs reach millions of children worldwide, and the proportion of households consuming iodized salt continues to rise. For maternal and newborn health, almost 90 million women

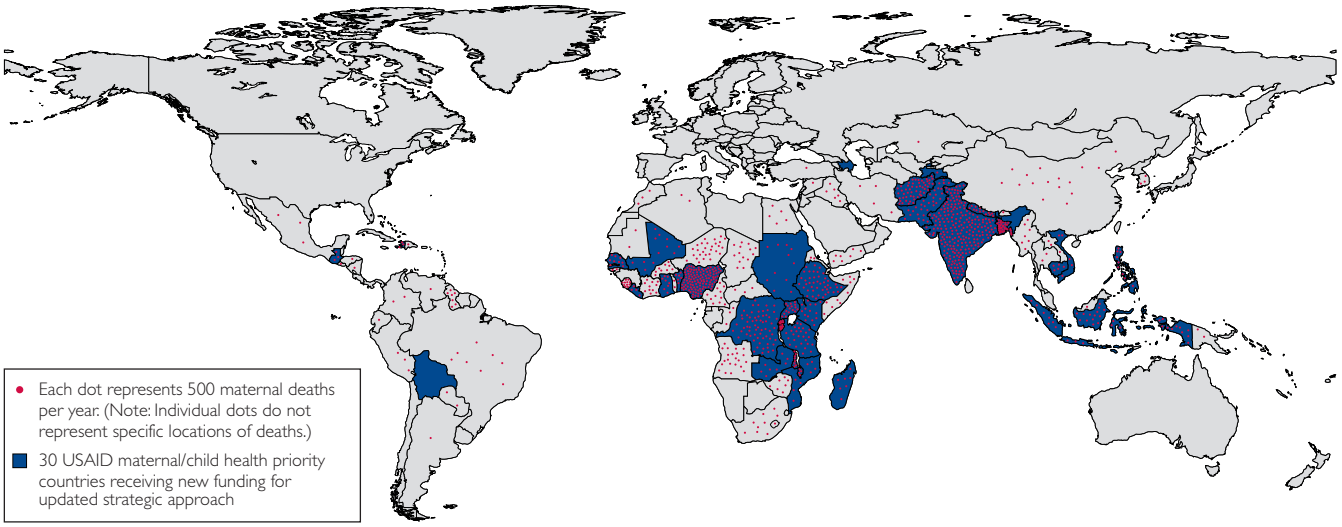
A young woman talks to a clinic doctor about her baby's health during a routine check-up in Surabaya, Indonesia.

Figure 11: Number of Under-5 Deaths per Year



Source: *State of the World's Children*, UNICEF, 2008; USAID.

Figure 12: Number of Maternal Deaths per Year



Source: *Maternal Mortality in 2005*, WHO, 2007; USAID.

in the developing world have at least one antenatal visit with a trained provider, and nearly 75 million are attended at birth by a doctor, nurse, or midwife.

USAID is a leading agency in delivering these interventions in developing countries, although the United States is clearly not alone in supporting this tremendous scale of care. The programs of other bilateral and multilateral donors have also incorporated these high-impact interventions as core elements of their child survival and maternal health support. Most importantly, they have also been institutionalized in, and are now substantially supported by, host countries' own health services.

The urgent need to promote confidence and capacity in countries experiencing or recovering from conflict or crisis also underscores the important continuing U.S. leadership role in child survival and maternal health. In an era when roughly half of under-5 deaths occur in such countries, USAID has led the way in implementing relevant and effective programs in these settings.

USAID today possesses additional resources to strengthen its child survival and maternal health efforts. At the end of 2007, Congress approved an appropriation that increased funding for USAID's child survival and maternal health programs by 25 percent.[1] At the same time, with an increased focus on the 2015 Millennium Development Goals, there is heightened global awareness of the need to accelerate progress in maternal, newborn, and child health. Building on the successes detailed in this report, USAID will take advantage of these additional resources and new opportunities to support countries in reaching more women and children with lifesaving services, focusing on a strategy that targets 30 priority countries and four major goals to be achieved in them by 2013:

- Average reductions in under-5 mortality of 25 percent
- Average reductions in maternal mortality of 25 percent
- Average reductions in child malnutrition of 15 percent in at least 10 of the priority countries
- An increase of at least 100,000 in the number of functional (trained, equipped, and supervised) community health workers and volunteers serving at the primary care and community levels

The 30 priority countries selected account for at least 50 percent of infant, child, and maternal deaths worldwide (figures 11 and 12). In these countries, USAID will aim to achieve and sustain the greatest possible reduction of maternal and child mortality and malnutrition through high-impact interventions and programs that also strengthen health systems and human capacity. In addition, in priority countries that are recovering from

1. For additional information, see USAID's *Report to Congress: Working Toward the Goal of Reducing Maternal and Child Mortality: USAID Programming and Response to FY08 Appropriations*, July 2008 (http://www.usaid.gov/our_work/global_health/mch/publications/mch_report.html).

USAID Child Survival and Health Grants Program

The Child Survival and Health Grants Program (CSHGP) is a highly effective, dynamic partnership between USAID and U.S. private voluntary organizations (PVOs)/nongovernmental organizations (NGOs) to leverage "what works" in community-oriented programming to improve maternal, newborn, and child health. CSGHP supports the leadership role of U.S. PVOs/NGOs to implement and evaluate innovations that address the major barriers to delivering packages of low-cost, high-impact interventions and improving outcomes in vulnerable communities. PVOs/NGOs make important contributions to scaling up such interventions, strengthening health systems and policies, and ensuring sustainability by developing effective partnerships with and building the capacities of ministries of health, local NGOs, and communities.

Since 1985, CSHGP has supported 420 U.S. PVO/NGO projects in 62 countries. These projects have built the capacity of weak health systems – particularly at the primary care and community levels – and delivered integrated high-impact health interventions to more than 218 million beneficiaries in largely underserved areas. In 2007, CSHGP supported 71 projects implemented in 40 countries by 39 U.S. PVOs/NGOs in collaboration with local partners, reaching an estimated 13.2 million beneficiaries. CSHGP projects consistently demonstrate improvements in health outcomes (see figures 19 and 20 in "Pneumonia and Diarrhea" section), usually at levels that surpass improvements at the national level.

Based on the IMPACT model,[1] the global state of the art for estimating impact on child mortality from increases in the coverage of evidence-based health interventions, CSHGP estimates that the 33 PVO/NGO projects ending in 2006 and 2007 together averted approximately 25,000 under-5 child deaths in project areas. Additional analysis conducted with the model reveals that on average, grantees achieved an estimated 25 percent decline in under-5 child deaths per project in their project sites.[2] This percent mortality decline – required to reach Millennium Development Goal (MDG) 4 for child mortality – was achieved in a number of countries not making adequate progress to meet MDG 4, demonstrating the need to scale up high-impact interventions delivered via community-oriented programming and effective partnerships in order to accelerate progress toward the MDGs.

Through its partnership with the CORE Group,[3] CSHGP supports NGO collaborations to advance technical leadership and learning, strategic action, and advocacy at the global and national levels. In 2007, CORE disseminated lessons learned from NGO community-oriented innovations; developed technical and cross-cutting skills to enable NGOs and their local partners to implement high-impact interventions; fostered partnerships and collaborations between NGOs and ministries of health to scale up lifesaving interventions; and brought community-level voices to national and global policy fora.

1. The Child Survival Technical Support Project made minor adaptations to the IMPACT model, first introduced in the 2003 *Lancet* child survival articles by the Child Health Epidemiology Reference Group, to convert CSHGP project outcome data into estimates of impact on reducing child mortality.
2. The duration of each CSHGP project is four to five years.
3. Child Survival Collaborations and Resources Group, an association of 47 international health and development NGO members in more than 180 countries, including eight technical working groups that facilitate collaborative learning and action.

conflict, USAID will implement tailored programs that extend basic services as quickly as possible while rebuilding the foundations of health systems.

The keys to achieving these goals are to *deliver high-impact interventions* that prevent or treat the major causes of maternal and child mortality and malnutrition (see table, next page) and to *strengthen essential elements of health systems*, such as human resources, financing, and quality assurance. At the ground level, USAID's strategy will employ evidence-based methods, documented in the recent *Lancet* series on maternal, newborn, and child survival,[2] that have already proved effective, cost-efficient, timely, and safe, and that have the potential for scaled-up national implementation.

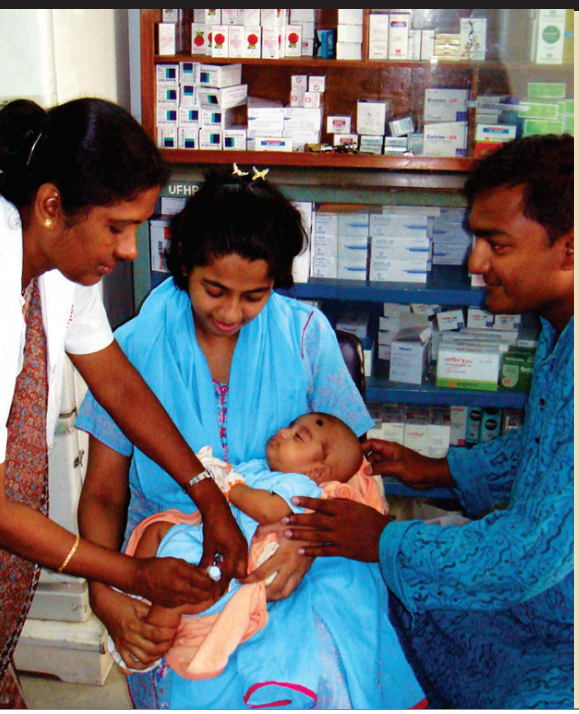
Effective partnerships will be critical to accelerating reductions in child and maternal mortality. USAID's principal partners are host-country governments themselves. In these countries, and internationally, USAID also collaborates with partners such as the GAVI Alliance, other donors, multilateral organizations, NGOs operating in priority countries, and private sector partners to enhance health services. With the support of these partners, the maternal and child health interventions described in the following pages will be extended to more and more of the world's most vulnerable populations.

2. Full citations available, respectively, at http://www.thelancet.com/collections/series/maternal-survival; http://www.thelancet.com/collections/series/neonatal; and http://www.thelancet.com/collections/series/child_survival.

HIGH-IMPACT INTERVENTIONS FOR REDUCING CHILD AND MATERNAL MORTALITY AND MALNUTRITION	
Intervention	**Description**
Antenatal care	Depending on epidemiology and health system capacity, interventions focus on providing pregnant women with iron-folate supplements; de-worming; intermittent preventive malaria treatment; insecticide-treated mosquito nets; HIV and syphilis control; and counseling to use a skilled birth attendant and to seek timely emergency care in the event of a pregnancy or birth complication.
Skilled attendants at birth	Doctor, obstetrician, nurse, or midwife with midwifery skills in basic essential obstetric care (normal birth and initial treatment of complications) that includes use of partogram; infection prevention; active management of the third stage of labor; essential newborn care; and recognition of and initial treatment and, as necessary, timely referral for hemorrhage, infection, hypertensive disorder, prolonged labor, newborn asphyxia, and postabortion complications.
Emergency obstetric care	Includes treatment of life-threatening complications, such as medical management of hypertensive disorder, blood transfusion, cesarean section, hysterectomy, and resuscitation.
Active management of the third stage of labor	Requires provision of a uterotonic drug immediately after birth; delivery of the placenta by controlled cord traction; and external uterine massage by a skilled birth attendant for prevention of postpartum hemorrhage. In the absence of a skilled birth attendant, a uterotonic alone may be administered.
Treatment of postpartum hemorrhage	Includes assessment of the cause and, if uterine atony, provision of a uterotonic; removal of the placenta or fragments as necessary; emptying the bladder; external or bimanual uterine compression; and recognition of severe hemorrhage that requires referral.
Essential newborn care	Focus is on immediate warming and drying, clean cord care, and initiation of breastfeeding.
Treatment of severe newborn infection	Includes assessment of symptoms and treatment with antibiotics and additional respiratory, nutritional, and fluid support, as feasible and needed.
Prevention of diarrhea	Focus is on point-of-use (typically household or school) water treatment to ensure the safety of drinking water, coupled with associated improvements in key hygiene behaviors, such as correct water handling and storage, effective handwashing, and safe feces disposal.
Treatment of diarrhea	Focus is on home-based treatment with oral rehydration therapy (use of oral rehydration solution, increased fluids, continued feeding) to prevent severe dehydration and treatment with zinc to reduce severity and duration of diarrhea.
Treatment of pneumonia	Focus is on community-based treatment of pneumonia with antibiotics and effective recognition of severe illness with appropriate referral.
Treatment of severe childhood illness	Includes assessment of symptoms, treatment with antibiotics and antimalarials, and provision of respiratory, fluid, and nutritional support as needed.
Immunization	Focus is on full immunization for children (defined as three doses of diphtheria-tetanus-pertussis vaccine and immunization against measles and polio before age 1); immunization with tetanus toxoid for pregnant women to prevent neonatal tetanus; and introduction of new vaccines in countries with high routine immunization coverage.
Vitamin A	Focus is on providing vitamin A supplements to children 6 to 59 months of age twice annually.
Infant and young child feeding	Includes breastfeeding from immediately after birth, including colostrum; exclusive breastfeeding on demand for the first six months of life; and, for 6- to 23-month-olds (and while continuing breastfeeding), addition of soft/semisolid foods made from a variety of food groups at an age-appropriate feeding frequency. Focus is on multichannel breastfeeding promotion and support, community-based growth promotion, and implementation of essential nutrition actions through existing community and facility services; also therapeutic nutrition (especially community-based management of acute malnutrition with ready-to-use therapeutic foods), where implemented as part of maternal/child health programs.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Immunization



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PROGRESS TO DATE

- Nearly 3 million premature deaths averted from 2002 to 2007 through USAID-supported GAVI Alliance.
- Increase in global coverage for complete diphtheria-tetanus-pertussis immunizations (DTP3) from 73 to 79 percent between 2002 and 2006, translating into protection for 22 million additional children.
- *Haemophilus influenzae* type b vaccine introduced in 108 countries by 2006, with coverage extended to 143 million children.

KEY RESULTS REPORTED IN 2007

- More than 6 million children under age 1 in India vaccinated with DTP3 in USAID-supported programs.
- Increase from 49 percent in 2005 to 70 percent in DTP3 coverage in East Timor's USAID-supported program.
- 88 percent measles coverage and greater than 80 percent vitamin A and de-worming coverage achieved in integrated child health campaigns in Zambia.

Routine childhood immunizations remain vital to child survival in developing countries and are a cornerstone of USAID child health programs. As a proven, cost-effective intervention, immunizations prevent more than 2 million deaths per year and protect millions of children from illness and disability. Routine immunizations prevent such deadly diseases as diphtheria, pertussis (whooping cough), measles, polio, tetanus, TB, hepatitis B, and meningitis caused by *Haemophilus influenzae* type b (Hib).

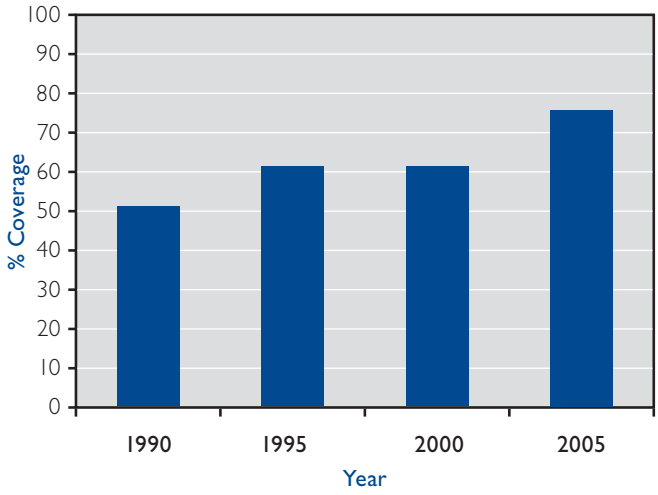
Immunization programs now provide nearly three-fourths of the world's children with their complete series of diphtheria-tetanus-pertussis immunizations (DTP3) (figure 13). However, more than 27 million children under age 1 do not receive routine immunizations annually, resulting in the deaths of hundreds of thousands of children under age 5 from measles, pertussis, neonatal tetanus, pneumonia, and other vaccine-preventable diseases. Up to a half million additional lives could be saved by the new rotavirus vaccine against diarrhea, and up to 800,000 by pneumococcal conjugate vaccine against pneumococcal bacterial disease, which causes both pneumonia and meningitis. Sub-Saharan Africa has the lowest immunization coverage rates, with only half of children under age 1 receiving immunizations in some areas. Lack of human and financial resources, weak supervision and use of data, limited access to poor and isolated populations, and competing health priorities contribute to shortfalls in coverage.

USAID Strategy

USAID's immunization strategy involves:

- **Expanding and improving routine immunization systems.** USAID supports policies, strategies, systems, and skills to increase and sustain routine immunization coverage. In areas of low coverage, USAID supports the WHO/UNICEF Reaching Every District strategy, which seeks to increase district-level coverage through improved outreach, on-site training, monitoring, and management.

Figure 13: DTP3 Coverage, 12 USAID-Assisted Countries, 1990–2005



Selected countries: Cambodia, Democratic Republic of the Congo, Dominican Republic, Ethiopia, Ghana, Guatemala, Guinea, Madagascar, Mali, Mozambique, Senegal, and Uganda
Source: WHO/UNICEF estimates, 2006.

- **Devising global strategies and providing country support for immunization financing.** USAID's strategy includes a strong focus on financial sustainability. USAID works with governments and international partners to generate resources to reach more children, introduce new and underused vaccines, and meet accelerated disease control objectives. USAID's participation in the GAVI Alliance (formerly the Global Alliance for Vaccines and Immunization) is a major component of this effort.

- **Introducing innovative technologies and new and underutilized vaccines, and contributing to vaccine research.** Primarily through the GAVI Alliance and the GAVI Fund, USAID provides financing and technical assistance for introducing affordable new vaccines and associated technologies in a sustainable and practical manner.

- **Supporting initiatives to reduce measles deaths.** Due to measles' high mortality, USAID supports measles mortality reduction activities that are consistent with building sustainable capacity and strengthening routine service delivery.

Interventions and Results

East Timor increases immunization coverage and expands future activities. A USAID-funded project launched in 2005 helped **East Timor's** Ministry of Health prepare an expanded national immunization policy, strategy, and training program in preparation for introducing hepatitis B vaccine nationwide. The project also completed extensive research to guide future behavior change communications and capacity building. From 2005 to 2007, national DTP3 coverage increased from 49 to 70 percent.

India strengthens routine immunizations. USAID supported scaling up effective approaches through advocacy, networking, and technical assistance. More than 6 million children under age 1 received DTP3 immunizations from USAID-supported programs. In Uttar Pradesh and Jharkand states, USAID assisted capacity building and training for regional, state, and local immunization officers.

Rwanda ensures continued success through solid commitment. With strong government commitment, **Rwanda** has one of the strongest immunization programs in Africa. Vaccine coverage is consistently high – over 80 percent for eight of the last 10 years and an estimated 99 percent in 2006 – and has been a contributor to reducing infant mortality. In 2007, a USAID-supported project worked with the Ministry of Health to conduct detailed financial planning and help gain GAVI cofinancing for diphtheria-tetanus-pertussis, Hib, and hepatitis b vaccines for the coming years.

Guatemala campaigns to eradicate congenital rubella. With combined USAID and corporate sector support, **Guatemala** exceeded its immunization goals for 2007 and also launched a national campaign to eradicate congenital rubella. More than 7 million people aged 9 to 39 were vaccinated against measles and rubella.

GAVI and the GAVI Fund

USAID continues its successful partnership with the GAVI Alliance and the GAVI Fund. GAVI's purpose is to contribute, by 2015, to poverty reduction in the poorest countries through a sustainable reduction in child mortality and the better protection of all people's health through increased access to immunization. Since 2000, global commitments of nearly $4 billion have been made to 72 eligible countries. Between 2000 and 2007, USAID directed $422 million to the GAVI effort. USAID currently sits on GAVI's Board (the Alliance's highest decisionmaking body), its Executive Committee, and (along with the U.S. Centers for Disease Control and Prevention) its Working Group. Other GAVI partners include national governments, multilateral organizations, NGOs, private foundations, and the vaccine industry.

In Awoyaya, Nigeria, an infant sits on her mother's lap at a community forum about childhood immunizations held by a local NGO.

GAVI's goals include:

- Increased, predictable, and sustainable long-term financing for immunization in GAVI-eligible countries (which must have a per capita gross national product of less than $1,000)
- Increased demand for and access to basic health services as indicated by greater immunization coverage
- Increased vaccine security and affordability for underutilized vaccines and associated technologies
- Sustainable introduction of affordable new vaccines and associated technologies

GAVI is revitalizing interest in the lifesaving, cost-effective benefits of immunizations for children in developing countries. GAVI and the GAVI Fund have strengthened immunization services in the poorest countries of the world, achieving the following results through 2007:

- More than 2.8 million premature deaths estimated to have been prevented
- 26 million additional children immunized with diphtheria-tetanus-pertussis vaccine
- 123 million additional children immunized with hepatitis B vaccine
- 20 million additional children immunized with *Haemophilus influenzae* type b vaccine
- 18 million additional children immunized with yellow fever vaccine
- More than 1 billion single-use, auto-disable syringes – a technology developed with USAID support – supplied for immunization

For the future, USAID will continue to be highly engaged with GAVI at the global level, in both technical discussions and policymaking decisions, and at the national level, where GAVI makes the most difference by supporting USAID-assisted countries in strengthening routine immunizations and immunization financing.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Polio Eradication Initiative

CORE GROUP POLIO PROJECT, INDIA

PROGRESS TO DATE

- 6 million child deaths or cases of paralysis prevented since 1988.
- Decline from 125 polio-endemic countries in 1988 to four in 2007.
- No cases reported in 2007 in 25 of 27 countries re-infected by polio since 2003.

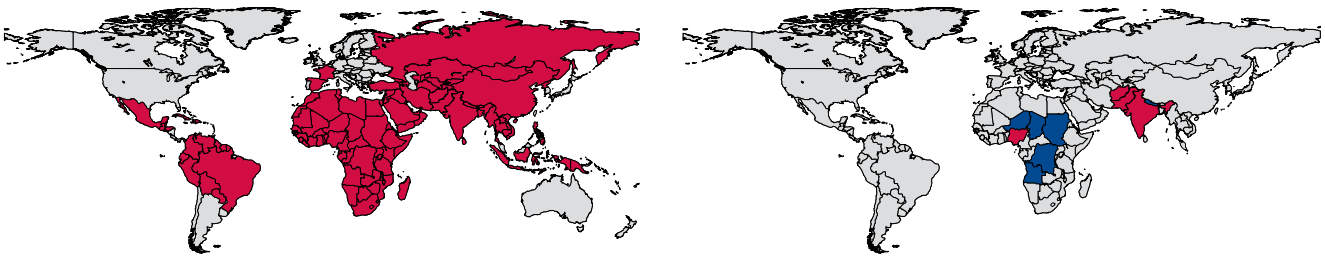
KEY RESULTS REPORTED IN 2007

- More than 400 million children under age 5 in 33 countries in Africa, Asia, and the Near East immunized in USAID-supported polio campaigns.
- 84 percent decrease in transmission of type 1 poliovirus between 2006 and 2007.
- 20 percent increase in LabNet workload, with approximately 157,000 acute flaccid paralysis (AFP) fecal samples and 10,600 non-AFP samples tested; wild polioviruses isolated from 1,400 AFP cases in 12 countries.

The international effort to eradicate polio has made tremendous progress. The number of reported cases has fallen from an estimated 350,000 in 1988 to fewer than 1,400 in 2007, a greater than 99 percent decline. Of the 27 countries that were re-infected between 2003 and 2007, 25 have stopped transmission of imported poliovirus. Only four countries – Nigeria, India, Pakistan, and Afghanistan – remain endemic, the fewest ever and down from 125 in 1988 (figure 14), and in these countries, polio circulates in very limited geographic areas. Cases of type 1 polio, the most virulent of the two remaining types, fell by 84 percent in 2007, and a particularly striking development was the absence of type 1 polio in western Uttar Pradesh state in India, the only area of the country that had never interrupted indigenous polio transmission.

Prospects for polio eradication are bright. The tools to eradicate polio are better than ever and include monovalent vaccines that are twice as effective as previous

Figure 14: Polio Eradication Progress, 1988–2007



Source: WHO.

ELLYN W. OGDEN, USAID, 2006

A newborn baby receives his first dose of oral polio vaccine from a health worker in Madura, Indonesia.

vaccines and diagnostic tools that detect and track poliovirus twice as fast as before. Policies to minimize the risks and consequences of the international spread of wild poliovirus are also in place. Significant challenges remain, however. Operational challenges in reaching every child in the four endemic countries include quality concerns, security issues, population movements, vaccine refusals, and funding. In addition, the need to deal with outbreak response activities in countries such as the Democratic Republic of the Congo, Angola, and Somalia is a tragic, costly reminder that no child is safe until polio has been eradicated everywhere.

USAID Strategy

USAID joined the global Polio Eradication Initiative (PEI) in 1996 after providing more than one-half of donor support to the successful eradication program in the Americas. Since then, USAID has contributed nearly $425 million to support PEI and continues to be a major partner in the global effort to achieve a polio-free world. USAID's strategy has been developed with PEI partners such as WHO, UNICEF, Rotary International, CDC, and the Child Survival Collaborations and Resources (CORE) Group Polio Project, which links U.S.-based PVOs and local community-based organizations to conduct polio immunizations and related activities in the poorest, most challenging areas. The strategy focuses on:

- **Building collaborative and cooperative partnerships.** USAID fosters collaboration and cooperation in polio eradication at the global, national, and local levels through diplomacy, assistance for national polio eradication programs, and support for local community organizations.
- **Strengthening and improving health systems.** USAID support helps meet the special systems needs of immunization services in such areas as vaccine forecasting, vaccine distribution, logistics, communications, and training in vaccine use and injection safety.
- **Supporting polio immunization campaigns and supplemental immunizations.** Since PEI began in 1988, supplemental immunization campaigns have averted more than 6 million cases of polio. USAID-supported activities include planning, community mapping, training, supervision, communications, transportation, provision of vaccine and other supplies, and monitoring and evaluation.
- **Developing integrated surveillance approaches and establishing surveillance networks.** USAID provides support for surveillance officers, who investigate all reported cases of acute flaccid paralysis in children; specimen transport; public awareness activities; and assistance for facility- and community-based surveillance.
- **Improving and expanding data collection and dissemination.** Improved information collection and use assist future planning, monitoring and evaluation, and research.

Interventions and Results

Supplemental immunizations campaigns and increased community acceptance of vaccination limit polio transmission. In 2007, USAID supported two rounds of immunization campaigns in northeast **Kenya**, which were synchronized with similar activities in **Ethiopia** and **Somalia**. The campaigns immunized more than 2 million children and covered 28 high-risk districts. In **Nigeria**, a USAID-funded project worked in the highest-risk areas of 11 states to improve immunization coverage and identify areas where children were missed and reasons for vaccine refusal. Campaigns in **Afghanistan** and **Pakistan** successfully targeted more than 40 million children. The campaigns focused on children in high-risk areas and mobile populations while engaging all the involved parties to allow safe passage for polio vaccinators. Polio transmission is increasingly confined to cross-border areas and insecure areas with limited access. To increase community awareness and combat false rumors about the safety of the oral polio vaccine, USAID funded extensive communication reviews in all endemic countries, developed strategies for overcoming resistance, and identified indicators to monitor the impact of this important element of eradication.

More countries meet certification criteria, expand surveillance to other diseases. In 2007, USAID-funded surveillance officers helped **Pakistan**, **Bangladesh**, **Nepal**, **Indonesia**, **Thailand**, and **Afghanistan** meet certification standards. In an increasing number of USAID-supported countries, including 26 in Africa, 18 in the Eastern Mediterranean, 20 in Europe and Eurasia, and five in South Asia, polio surveillance officers are also reporting on measles, neonatal tetanus, and other vaccine-preventable diseases, forming the basis of epidemic early warning systems. USAID also gave particular attention to improving surveillance and laboratory analysis in the four endemic countries, re-infected countries, Central Africa, and the Horn of Africa to ensure no chains of transmission escaped detection.

A polio-affected boy participates in an athletic meet organized for slum children in Chandigarh, India.

Global laboratory network upgrades capacity, introduces new tests. USAID continued to fund the accreditation process for the 145 laboratories in LabNet, the global polio laboratory network. In 2007, with USAID support, LabNet evaluated and adopted a new testing strategy that reduces confirmation time by 50 percent. Laboratories in **Cameroon**, **Kenya**, **Madagascar**, **Morocco**, and **Uganda** were upgraded to increase their testing capacity.

CORE NGOs strengthen community-based networks. In **India**, CORE partners worked through their network of 1,500 community mobilizers, religious leaders, and influential citizens to build confidence in the immunization program and reduce the number of families refusing vaccination. In one district, the number of resistant households decreased from more than 50 to just three. In **Angola**, CORE used the "geographic assessment of planning and services methodology" to monitor the quality of immunization campaigns and help organizers reduce gaps in coverage. CORE **Ethiopia** and CORE **Nepal** increased immunization coverage in their most difficult cross-border areas, thus limiting international spread of the virus in the Horn of Africa and South Asia.

South-South cooperation promotes synchronized immunization campaigns and technical assistance. USAID supported cross-border meetings between **Nigeria** and **Niger** and between **Afghanistan** and **Pakistan** to help these neighboring countries synchronize border area immunization campaigns. These campaigns help build population immunity and streamline sharing of surveillance data. USAID also supported the provision of technical experts from countries that have eradicated polio to countries where polio still remains. Such assistance helps countries see polio eradication as a global public good and reinforces the adoption of strategies necessary to stop virus transmission.

USAID focuses on communication and service integration to increase vaccination coverage. In 2007, the USAID-supported Communication Initiative (a consortium of international groups committed to development communication) chaired advisory group meetings for polio communication in **India**, **Pakistan**, **Afghanistan**, and **Nigeria**. Service integration was supported in 11 USAID-assisted countries conducting measles immunizations along with polio immunizations and in 22 countries distributing vitamin A supplements through polio campaigns. In **India**, CORE partners initiated a newborn tracking system in which infants are identified by community mobilizers so that their houses can be visited, and revisited if necessary, by vaccination teams. Subsequent visits track routine immunization coverage.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Nutrition

PROGRESS TO DATE

- 2.1 million lives saved due to the increase in children fully protected with two doses of vitamin A from 16 percent in 1999 to 72 percent in 2005.
- Since the early 1990s, increase from 20 to 70 percent in the percentage of households consuming adequately iodized salt.
- Global decline in child malnutrition from one in three children in the early 1980s to one in four today.

KEY RESULTS REPORTED IN 2007

- More than 40 million children under age 5 in 20 countries supplemented with vitamin A through USAID-supported programs.
- Food fortification programs supported in 23 countries, benefiting more than 160 million people.
- More than 3.3 million pregnant women in India provided with new access to lifesaving iron-folic acid supplements.

More than one-half of the 9.7 million child deaths worldwide are linked to undernutrition. Nearly one-third of children in the developing world are chronically malnourished, and 2 billion people suffer from micronutrient deficiencies. Vitamin A deficiency affects more than 254 million children, impairing their immune systems and causing blindness, early morbidity, and mortality. Iron deficiency is the primary cause of anemia, which is responsible for 22 percent of maternal deaths and 24 percent of perinatal deaths. Today, rising prices for staple foods are causing a global food and nutrition crisis that will plunge another 100 million people into hunger and food insecurity and severely threaten progress toward improving child survival in developing countries.

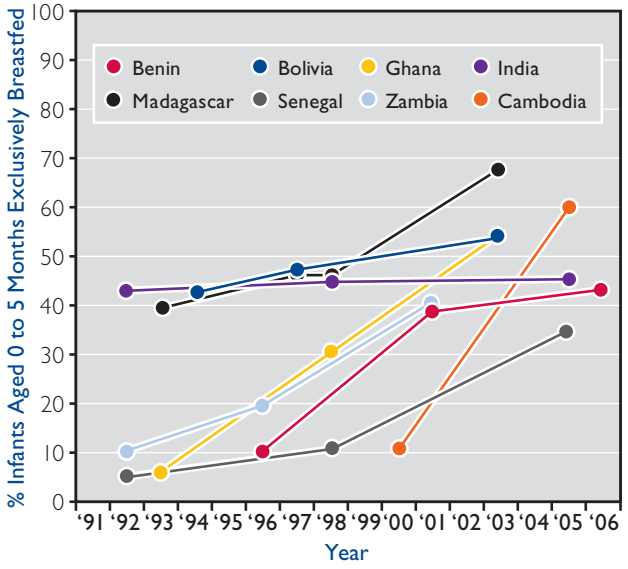
Undernourished children are more likely to die than well-nourished children. Undernutrition weakens the immune response, exacerbating the effects of childhood illnesses like diarrhea, measles, and pneumonia. The physical and cognitive effects of undernutrition in the first two years of life are irreversible, leading to impaired educational performance in childhood and reduced economic productivity in adulthood. The nutritional status of a pregnant woman is a deciding factor in maternal and neonatal survival. Malnutrition also exacerbates the burden of infectious diseases, and the success of infectious disease programs depends on complementary nutrition interventions.

Nutrition is a central component of meeting the Millennium Development Goals (MDGs) of reducing poverty and hunger, reducing child mortality, improving maternal health, and combating HIV/AIDS, malaria, and other diseases. Improving nutrition will enhance the ability to meet the MDGs while remaining one of the most cost-effective strategies for reducing poverty and enhancing development and economic growth.

USAID Strategy

USAID's strategy to improve global nutrition is based on evidence that optimal feeding practices such as exclusive

Figure 15: Exclusive Breastfeeding Trends, Selected USAID-Assisted Countries



Source: Demographic and Health Surveys, 1992–2005/06.

breastfeeding and complementary feeding, twice-yearly vitamin A supplementation, improved micronutrient nutrition, community-based therapeutic feeding, and maternal nutrition all improve child survival. For example, exclusive breastfeeding for six months has the potential to avert 13 percent of all under-5 deaths in developing countries, and twice-yearly vitamin A supplements can reduce under-5 mortality by 23 percent.

USAID's program concentrates on the following areas:

- **Infant and young child feeding.** USAID works with countries to deliver a package of key infant and child feeding interventions, including promotion of immediate initiation of breastfeeding, exclusive breastfeeding through 6 months of age, appropriate and high-quality complementary feeding from 6 to 24 months of age, continued feeding during illness, and safe feeding practices for infants affected by HIV.

- **Micronutrient supplementation.** USAID strengthens national twice-yearly vitamin A supplementation programs for children under age 5 through sustainable delivery mechanisms. USAID combats anemia through comprehensive anemia reduction packages, including improved iron intake, de-worming, and malaria control in high-prevalence settings.

- **Food fortification.** USAID helps countries introduce and expand the reach of mass fortification of staple foods with multiple micronutrients. USAID's strategic approach to mass food fortification involves both the public and private sectors.

- **Epidemics and emergencies.** USAID's food security strategy addresses food access, utilization, quality, and availability to combat undernutrition. USAID supports the effective integration of community management of acute malnutrition (CMAM) into national health systems. USAID strengthens nutritional care and support for people living with HIV/AIDS and improves food assistance and food security programming in the context of HIV.

THE MANOFF GROUP

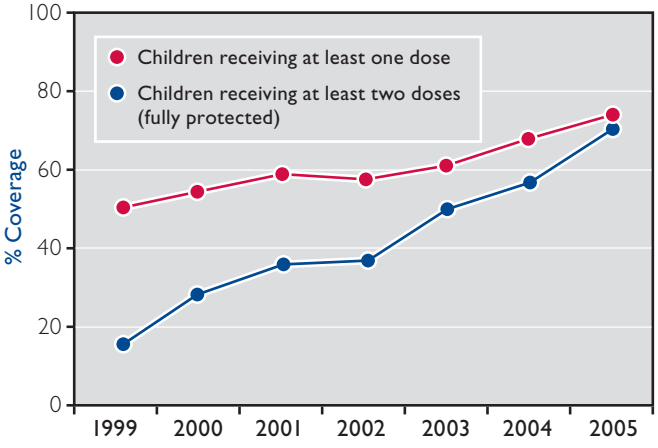
A child in Latin America receiving complementary foods. Complementary feeding is recommended to start at age 6 months.

Interventions and Results

USAID extends success in promoting optimal breastfeeding practices. USAID historically has been a leader in programs that promote a package of optimal infant feeding packages, including immediate initiation of breastfeeding, exclusive breastfeeding, and continued breastfeeding. In 2007, USAID worked with 20 countries to increase optimal breastfeeding practices. Figure 15 highlights exclusive breastfeeding trends in eight of these countries where USAID has had a long-standing investment in infant feeding programs.

USAID pioneers new approaches in complementary feeding. In 1999, USAID supported original research on the development of a micronutrient powder, or Sprinkles, to help improve the quality of semisolid foods given to children in the home. Children more than 6 months of age are provided Sprinkles for 90 to 120 days to address deficiencies in the diet such as iron, zinc, and iodine and to help reinforce good feeding practices. In 2007, there

Figure 16: Global Trends in Vitamin A Supplementation Coverage, 1999–2005



Source: UNICEF statistics, http://www.childinfo.org/vitamina_progress.html.

were more than 15 countries globally providing a micronutrient powder in the public and private sectors.

Lifesaving vitamin A reaches 40 million children. In 2007, USAID helped bring vitamin A to 40 million children in 20 countries. In **India**, joint advocacy by USAID, UNICEF, the Micronutrient Initiative, and WHO led to an increase in the age limit for vitamin A supplementation from 35 months to the global standard of 59 months. Now, 11.3 million more children can be protected with this lifesaving intervention. In Uttar Pradesh state, vitamin A coverage increased to 65 percent, up from 20 percent in 2005. Since 1999, USAID's collaboration with international partners has resulted in more than 70 percent of all children being fully protected with two doses of vitamin A (figure 16).

USAID helps strengthen and sustain vitamin A programs in decentralized health systems. Responding to the global trend toward decentralized health services, USAID helped develop and test tools that governments can use to plan and monitor vitamin A delivery as their health systems decentralize. This kind of investment has ensured that countries like **Tanzania** maintain their greater than 90 percent coverage despite major changes in the health system.

New programs attack maternal anemia. In 2007, USAID launched large-scale programs to combat maternal anemia through comprehensive packages, including iron-folic acid (IFA) supplementation, in **India's** Uttar Pradesh and Jharkhand states, where 70 to 75 percent of pregnant women have anemia. USAID advocacy and analyses generated support from policymakers as well as solutions to supply and logistics problems that had been major program barriers in the past. There are now more than 3.3 million pregnant women in Uttar Pradesh and Jharkhand states who have access to IFA. USAID also launched a large anemia reduction program in **Uganda**, where anemia prevalence in pregnant women is between 47 and 68 percent.

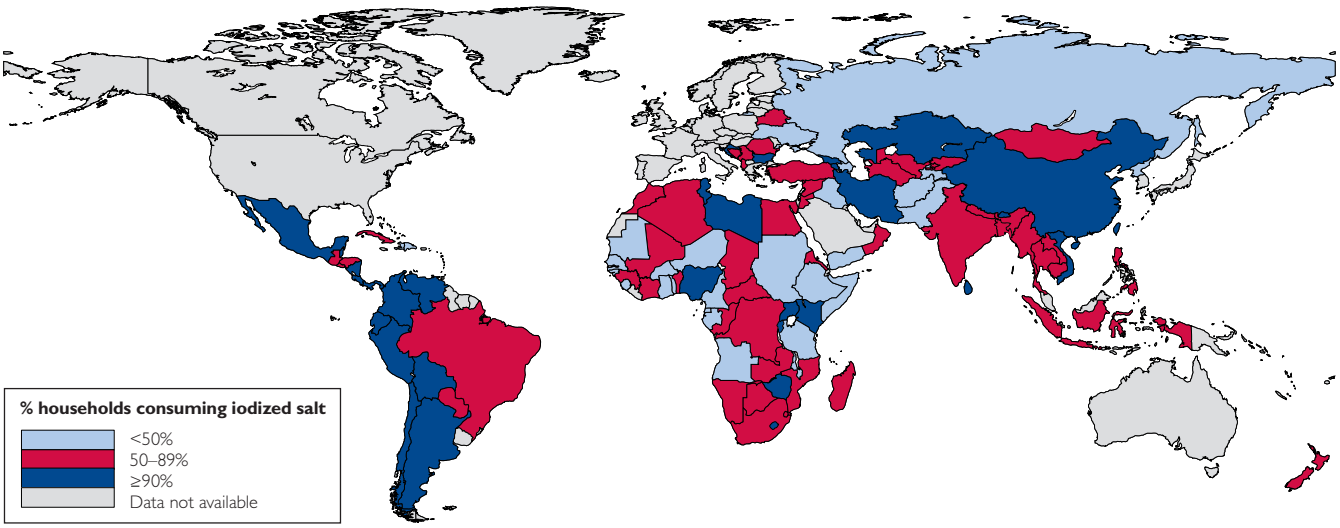
USAID helps countries add food and nutrition to HIV/AIDS response. USAID assisted with the development of training curricula, guidelines, counseling materials, and job aids for service providers to help the governments of **Côte d'Ivoire**, **Namibia**, **Kenya**, **Haiti**, **Zambia**, and **Rwanda** add food and nutrition interventions to their response to HIV/AIDS. Such interventions will improve the nutritional status of individuals with HIV, helping them fight the illness.

USAID supports sustainable community-based treatment of acutely malnourished children. USAID worked with WHO, UNICEF, and other partners to integrate CMAM into national health systems. In **Madagascar** and **Ghana**, USAID is building the capacity of program managers and health facility staff to design, develop, implement, and monitor CMAM programs within existing health structures. USAID developed a framework of key elements for CMAM in post-emergency settings based on a comprehensive review conducted in **Ethiopia**, **Malawi**, and **Niger**. This framework will be a crucial component of the health response to the current food crisis.

GAIN

Children at a school in South Africa eat foods fortified with micronutrients, part of a program supported by USAID and the Global Alliance for Improved Nutrition (GAIN).

Figure 17: Proportion of Households Consuming Iodized Salt, 2000–2006



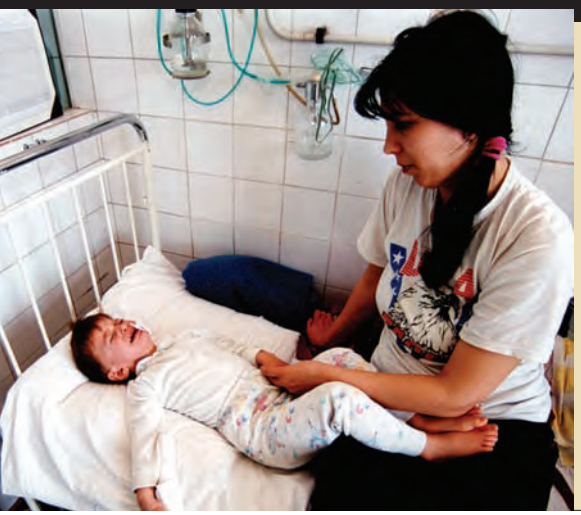
Source: *State of the World's Children*, UNICEF, 2008.

USAID and partners scale up local production of ready-to-use therapeutic foods (RUTFs). A 2006 USAID-funded study that concluded developing countries can safely and easily produce RUTFs led USAID to work with UNICEF, WHO, PVOs, and host governments to facilitate in-country production using locally available ingredients. **Malawi**, **Niger**, and **Ethiopia** are now manufacturing RUTFs. USAID remains a technical leader in expanding production and enhancing manufacturing capability in the highest-need countries. With USAID assistance, UNICEF completed a reference manual on manufacturing and production standards that will allow many more countries to initiate their own production of RUTFs for use in community-based malnutrition programs.

USAID initiates, expands mass food fortification programs. USAID supports food fortification through the Global Alliance for Improved Nutrition (GAIN), through direct support to country programs, and through UNICEF. In 2007, an estimated 160 million people benefited from these programs. Successful projects included vitamin A-fortified oil in **Morocco** and **Uganda**, iron-fortified fish sauce in **Vietnam**, and iron-fortified soy sauce in **China**. These fortified foods and condiments provide a healthy and affordable addition to the diets of low-income, malnourished populations. USAID is a key partner in UNICEF's campaign to eliminate iodine deficiency through the fortification of salt with iodine. A unique combination of enlightened public policies, private sector action, effective monitoring, advocacy, and national demand creation has produced progress toward iodizing the world's salt and ending iodine deficiency (figure 17).

III. CHILD SURVIVAL AND MATERNAL HEALTH

Pneumonia and Diarrhea



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PROGRESS TO DATE

- More than half of child diarrhea cases worldwide treated with oral rehydration therapy.
- Zinc treatment for diarrhea introduced in more than 20 countries.
- More than 2 million child deaths from pneumonia averted annually.

KEY RESULTS REPORTED IN 2007

- Scaled-up community-based pneumonia treatment in 18 districts in Senegal reaching 20 percent of under-5 population.
- National zinc program for treating young children with diarrhea adopted in Nepal.
- 20 percent increase in use of low-osmolarity oral rehydration solution in three states in northern India as a result of private partnership marketing campaign.

More than 2 million children under 5 years of age die each year from acute respiratory tract infections, mainly pneumonia. Most of these deaths occur in developing countries, where more than 150 million new cases are estimated to occur each year. Standard case management, including use of simple, inexpensive antibiotics at home, could avert the majority of these deaths, yet this proven intervention reaches only about 40 percent of children. As a result of USAID-supported research in Bangladesh, India, Nepal, Pakistan, Philippines, and Tanzania showing that trained community health workers can diagnose and treat child pneumonia – and thereby reduce child pneumonia deaths by nearly 40 percent – governments, donors, and NGOs are now piloting new and innovative ways of reaching children closer to home.

Diarrhea also remains a leading cause of child deaths worldwide. Despite the availability of effective low-cost therapies, every year more than 1.5 million children under age 5 die from dehydration due to acute diarrhea. New recommendations for standard case management include oral rehydration therapy (ORT) with a new low-osmolarity formulation of oral rehydration solution (ORS) or other available home fluids, along with continued feeding and zinc treatment. Previously high levels of ORT use in some USAID-supported countries are now showing significant declines (figure 18), and new efforts are thus needed to reinforce family and community knowledge about diarrhea management and revitalize ORT use in homes and health facilities.

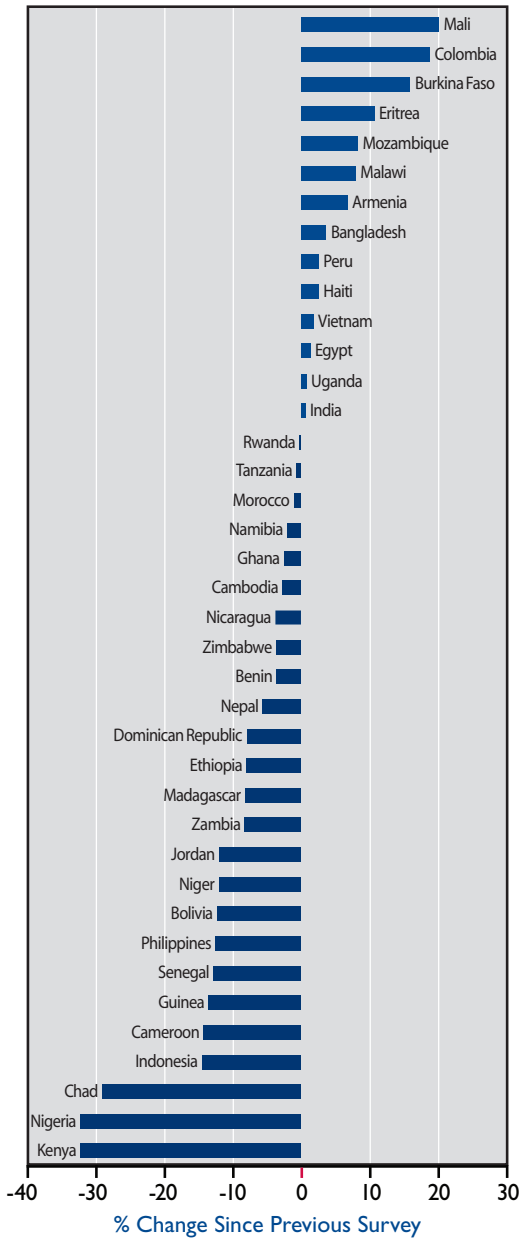
USAID Strategy

USAID continues to accelerate implementation of major global health initiatives in community-based treatment of pneumonia and zinc/ORS treatment of childhood diarrhea. These initiatives foster public-private partnerships to expand program coverage, scale, and sustainability while expanding access to quality services through integrated facility- and community-based strategies.

Pneumonia: USAID's strategy applies lessons from countries that have successfully implemented community-based treatment, such as Nepal, to new countries, targeting those where local circumstances are favorable for its introduction and the needs are greatest. The approach focuses on:

- **Research.** USAID supports research to assess the effectiveness of community-based treatment using community health workers, either for pneumonia alone or, in sub-Saharan Africa, integrated with malaria treatment; zinc supplementation in treating pneumonia in young children; and home oral antibiotic therapy

Figure 18: Changes in ORT Use (Fluid Therapy Only) in Countries With Latest Demographic and Health Survey Since 2000



Source: Demographic and Health Surveys, 2001–2007.

to treat severe child pneumonia, which eliminates the risk of further infection in a hospital as well as the costs of hospitalization both to families and care facilities.

- **Implementing community-based treatment programs.** In combination with malaria treatment in malaria-endemic areas, USAID targets countries where the needs, in terms of high pneumonia mortality and poor access to care, are greatest and where national commitment, permissive policies, and specific program supports are in place. USAID also continues to support the strengthening of the quality of care in primary care facilities.

Diarrhea: USAID's strategy for treating diarrheal disease consists of zinc treatment in conjunction with ORT using low-osmolarity ORS; effective home treatment (comprising continued breastfeeding, recommended home fluids, and increased fluids with continued feeding); and use of appropriate health facilities when needed. As with pneumonia, USAID focuses on:

- **Research.** USAID is supporting research and analysis, using recent survey data, to examine the reasons for declining ORT/ORS use in selected countries and guide the development of strategies for revitalizing ORT/ORS in these areas.

- **Program implementation and scale-up.** To revitalize ORT/ORS use, USAID's approaches include strengthened child health programming, including diarrhea case management; advocacy and planning to increase the commitments of health ministries and other partners; behavior change and communication to reinforce appropriate behaviors and practices; and improvements to facility- and community-based platforms for expanding access to and use of ORT.

USAID plans to implement revitalization strategies in at least six countries by the end of FY 2008 with the goal of increasing ORT use by 20 percent in intervention areas. Efforts to revitalize ORT are being paired with zinc introduction, through the public and/or private sectors, in such countries as Benin, Cambodia, the Democratic Republic of the Congo, Madagascar, Nepal, India, Indonesia, Tanzania, and Uganda, as these countries introduce new diarrhea control guidelines. In some countries (the Democratic Republic of the Congo, Madagascar, and Rwanda, for example), community-based malaria and pneumonia treatment provides a platform to integrate diarrhea case management and ORT use.

Integrated approaches to child health: USAID's pneumonia and diarrhea strategies also include support for Integrated Management of Childhood Illness (IMCI) guidelines, which provide health workers with clear protocols for diagnosis and treatment. USAID was a major supporter of the clinical and applied research that underlay the development of IMCI and has continued to

Figure 19: Pneumonia Treatment in CSHGP NGO Grantee Projects vs. National Survey Averages, Five USAID-Assisted Countries

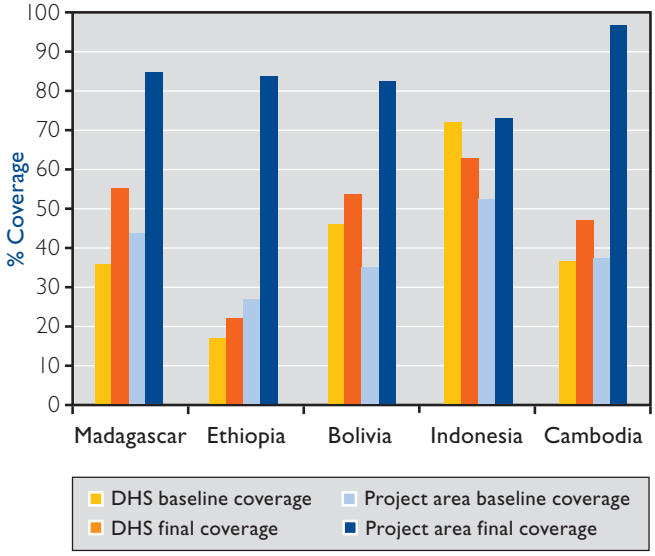
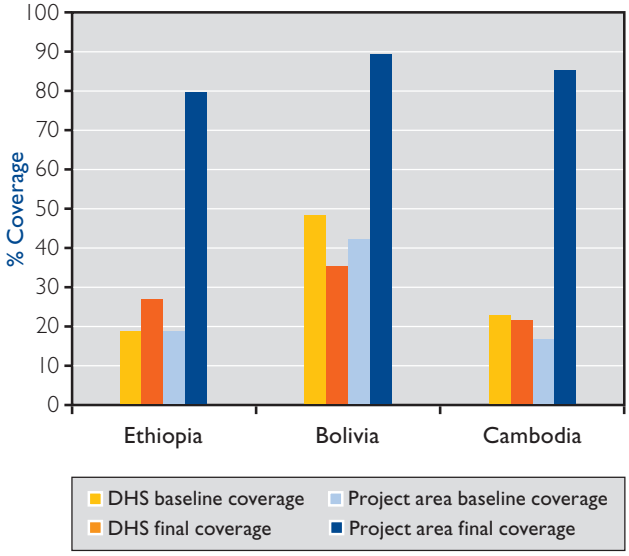


Figure 20: ORT Use in CSHGP NGO Grantee Projects vs. National Survey Averages, Three USAID-Assisted Countries



Notes: 1) Demographic and Health Surveys (DHS) are surveys of nationally representative populations. 2) Indicator for pneumonia treatment is not standardized across NGO projects and is "care-seeking for pneumonia" for some projects and actual treatment for others.

Source: Demographic and Health Surveys (Madagascar 1979, 2004; Ethiopia, Cambodia 2000, 2005; Bolivia 1998, 2003; Indonesia 1997, 2003) and USAID CSHGP grantees (Madagascar, Indonesia 2003, 2007; Ethiopia, Bolivia, Cambodia 2002, 2007).

support the expansion of the approach at the community, primary, and referral levels in many countries.

USAID also supports diarrhea prevention through improved access to safe water and sanitation, water disinfection, and improved hygiene behaviors. Diarrhea prevention strategies, interventions, and results are described in the next section of this chapter ("Water Supply, Sanitation, and Hygiene").

A young boy waits to be treated for diarrhea and impetigo in Nepal. The bottles in the background are test samples of his village's water supply. Yellow indicates the water tested positive for fecal coliform and *E. coli* bacteria.

Interventions and Results

Community-based treatment and zinc programs advance. USAID accelerated implementation of community-based treatment programs for child pneumonia in 11 countries in 2007 and zinc/ORS treatment of child diarrhea in 25 countries (see table next page). Figures 19 and 20 illustrate increases in the use of pneumonia treatment and ORT in USAID-supported projects in some of these (and other) countries.

Public-private partnership leads scale-up in Senegal. A partnership of USAID, the Ministry of Health, UNICEF, and the Pfizer pharmaceutical company spearheaded the scale-up of community-based pneumonia treatment in 18 districts, providing access to 395,000 children, more than 20 percent of the under-5 population. More than 90 percent of the program's community workers were aware of correct breathing rates for classifying pneumonia, and all knew at least four of six signs of infection.

Democratic Republic of Congo tries integrated community-based treatment. Scale-up of an integrated pneumonia-diarrhea-malaria community-based treatment

A health worker checks a child for possible pneumonia at a U.S.-funded clinic in Badakshan, Afghanistan.

model was tested in seven districts. Core trainers were provided to build district capacity and train community health workers. In three districts, 55 trainees demonstrated an average of 90 percent accuracy in classifying diseases, prescribing for pneumonia and pneumonia with fever, and knowing age-appropriate medication doses.

Private sector program promotes diarrhea management. In three states in northern **India** with high diarrheal disease prevalence and child mortality, a USAID-supported private sector partnership increased use of low-osmolarity ORS by 20 percent through integrated communications and marketing.

Nepal adopts national zinc program. USAID helped three Nepali pharmaceutical companies develop and launch zinc treatments for child diarrhea, with 700,000 treatments sold to private sector outlets between May 2007 and March 2008. The pediatric zinc products manufactured by these firms were quality tested and approved for use by United States Pharmacopeia (USP). As a result, the Ministry of Health approved the national zinc program launch, endorsed these products, and is considering procurement from these companies for the public sector. By mid-2008, zinc treatments for childhood

USAID-SUPPORTED CHILD PNEUMONIA AND DIARRHEA INTERVENTIONS, FY 2007

Community-Based Treatment of Child Pneumonia				
Intervention Phase	**Countries**			
Technical exchange/advocacy	Benin East Timor	Cambodia Niger	Chad Togo	
Introduction	Madagascar	Nicaragua	Rwanda	
Expansion	Dem. Rep. Congo	Senegal		
Zinc Use in Treating Child Diarrhea				
Activity	**Countries**			
Availability of quality zinc products	Bangladesh Madagascar	Dem. Rep. Congo Nepal	India Tanzania	Indonesia
Adoption of zinc policy	Afghanistan Cambodia Haiti Madagascar Pakistan Uganda	Bangladesh Dem. Rep. Congo India Mali Philippines Zambia	Benin Ethiopia Indonesia Mozambique Sudan	Burma Ghana Liberia Nepal Tanzania
Service delivery of zinc established	Bangladesh Nepal	Cambodia Tanzania	India	Indonesia
Increased consumer awareness and demand	Cambodia	India		

India Pharmaceutical Companies Make Zinc Available Nationwide

In India, more than 500,000 child deaths occur annually as a result of diarrhea. The use of zinc, along with oral rehydration therapy, is recommended by WHO and UNICEF to decrease the incidence and severity of diarrhea.

USAID has enlisted 14 of India's pharmaceutical firms – including Emcure, Dr. Reddy's, Zuventus, USV, and Wallace Pharmaceuticals – to invest in the effort to make zinc treatment available nationwide, with the goal of targeting low-income families in at-risk populations. Collaborations with civil society groups and NGOs have helped ensure that the zinc treatment reaches these groups.

PETER OYLOE, AED N-MARC DIRECTOR IN NEPAL

A child in India receives zinc syrup to treat diarrhea.

The first phase of the project aimed to promote zinc treatment for diarrhea to health professionals by creating "zinc champions." USAID funds have helped ensure the quality and design of marketing activities with public health messages. The pharmaceutical companies invested in promotion, product development, and distribution. More than 1,200 medical representatives from the partner companies have been trained on the benefits and promotion of the new zinc tablets and syrup in the treatment of child diarrhea. The project is now targeting more than 15,500 pediatricians and 60,000 licensed general practitioners across India. In its second phase, the project will begin marketing to promote zinc treatment for diarrhea to the general public.

With more than 1.2 million doses sold in the first six months of the project – up from 19,000 a year earlier – this public-private partnership has led to the creation of a new market, with sales expected to grow steadily over the next few years.

diarrhea will be widely available nationwide in both the commercial and public sectors.

USAID supports quality assurance for zinc products. At the request of USAID, WHO, and UNICEF, USP developed monographs for zinc sulfate tablets and oral solution to be included in its *National Formulary*, the official list of standards. The monographs will play an important role in ensuring that high-quality zinc products are produced, procured, and used with ORS to combat diarrhea in developing countries. USP has helped manufacturers in **Bangladesh**, **France**, **Nepal**, **Indonesia**, and **Tanzania** improve their zinc products, and Tanzania became the first African country to manufacture zinc pharmaceuticals. USAID also worked with local manufacturers in several countries to ensure quality zinc products are available and affordable. In **India**, these efforts resulted in sales in FY 2007 of more than 2 million courses of zinc treatments for child diarrhea.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Water Supply, Sanitation, and Hygiene

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PROGRESS TO DATE

- Between 1990 and 2006, increase in proportion of people in developing countries with improved sanitation from 41 to 53 percent.
- Since 1990, increase in world population using drinking water from improved sources from 4.1 billion to 5.7 billion.

KEY RESULTS REPORTED IN 2007

- 1.3 billion liters of water in Kenya and 2.3 billion liters in Zambia treated with point-of-use (POU) water purification products.
- 17 percent increase in Malawi in sales of POU products from 2006; more than 400 million liters of drinking water treated.
- 1.35 million households in four regions of Madagascar reached with water, sanitation, and hygiene messages through USAID-supported WASH (Water, Sanitation, and Hygiene) Initiative.

Nearly 900 million people around the world are estimated to lack a safe drinking water supply, and more than 2.5 billion (almost 1.8 billion of them in Asia) live without adequate sanitation services. Worldwide, these conditions, along with poor hygiene, account for nearly 90 percent of diarrheal diseases, which kill more than 1.5 million children each year and are one of the top three causes of death of children under age 5. Improving water, sanitation, and hygiene can potentially prevent as many as one-half of diarrheal deaths. The poor and other vulnerable groups are most affected by the lack of water and sanitation, and women and girls living in poverty often bear the greatest burden of all, spending hours each day collecting water from distant sources or caring for those sick from waterborne disease. The pursuit of water forces many women to give up opportunities to earn money, and a lack of adequate water and sanitation prevents many girls from attending school.

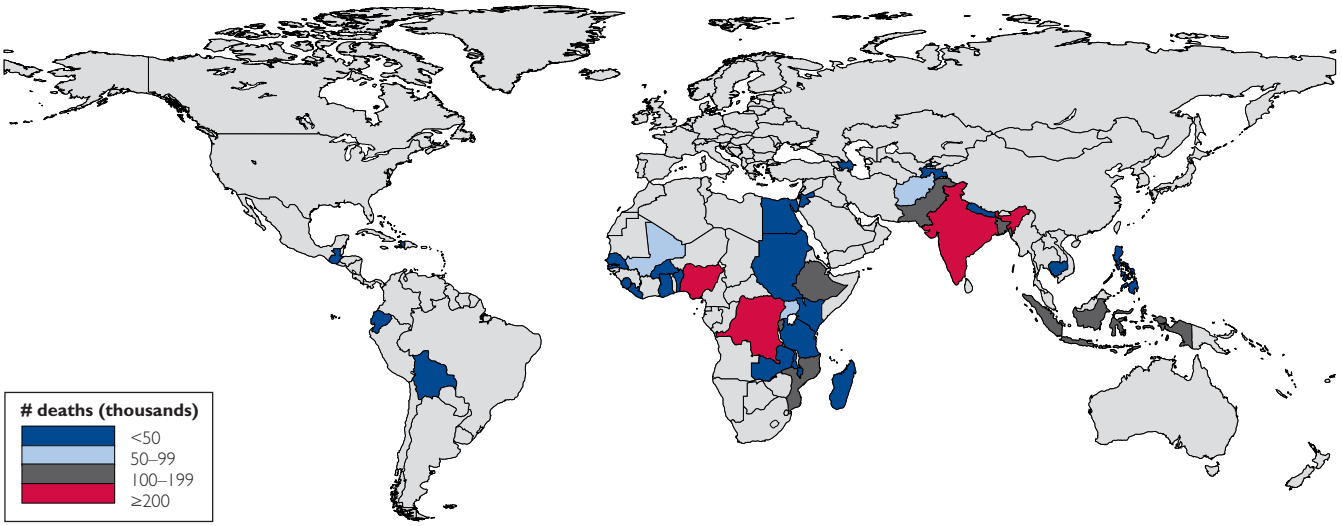
Hygiene Improvement Framework

USAID's approach to achieving health impact – mainly the prevention of diarrhea – from water supply, sanitation, and hygiene activities is pictured in the Hygiene Improvement Framework (figure 22), which has also been adapted by UNICEF, the World Bank, and other development partners. The Framework shows the three components of effective, sustainable strategies and programs:

- **Access to hardware/products.** USAID supports large- and small-scale infrastructure improvements, including water supply and storage, sanitation facilities, and household products and technologies.

- **Hygiene promotion/demand creation.** USAID promotes the behavior changes that need to accompany infrastructure improvements, targeting three key hygiene practices – household treatment and safe storage of water, safe disposal of human feces, and handwashing with soap. Each of these behaviors can reduce the incidence of diarrheal diseases by more than 30 percent.

Figure 21: Total Water, Sanitation, and Hygiene-Related Deaths, 39 USAID-Assisted Countries, 2002



Source: Prüss-Ustün A., et al. *Safer Water, Better Health: Costs, Benefits and Sustainability of Interventions to Protect and Promote Health*. WHO, 2008.

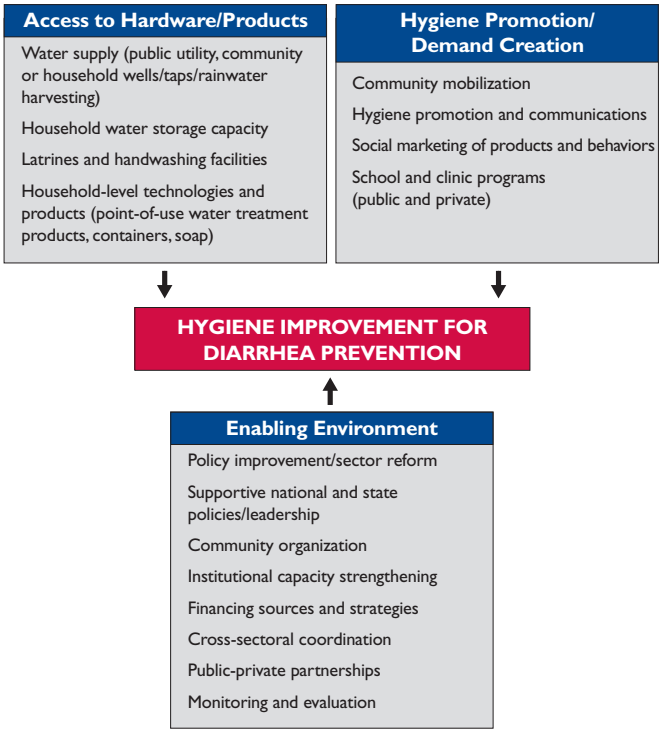
- **Enabling environment.** USAID encourages policies, capacity building, partnerships, financing, and community participation to help sustain improvements in water supply, sanitation, and hygiene. Efforts to promote an enabling environment can help promote private sector involvement, improve the performance of service providers, and increase household access to financing.

USAID health funding typically focuses more heavily on community- and household-level water supply, sanitation, and behavior change, providing effective complements to other USAID, U.S. Government, and other donor activities that address larger-scale, such as municipal, infrastructure needs.[1]

Interventions and Results

Water treatment products benefit high-risk groups and regions. Point-of-use (POU) safe water products were expanded into high-risk rural regions of **Kenya's** Coast province, with more than 2,000 outlets increasing sales at least 24 percent from 2006 and providing treatments for more than 230 million liters of drinking water. In **Haiti**, a small NGO program enrolled 1,125 new households covering 8,070 people, providing chlorine bleach, safe storage containers, and training on their use. In Uttar Pradesh state in **India**, USAID supported microfinancing activities by local women's groups to make POU water filters available in rural and urban slum areas. The private partners who manufacture the filters are extending the project to other parts of the state.

Figure 22: Hygiene Improvement Framework

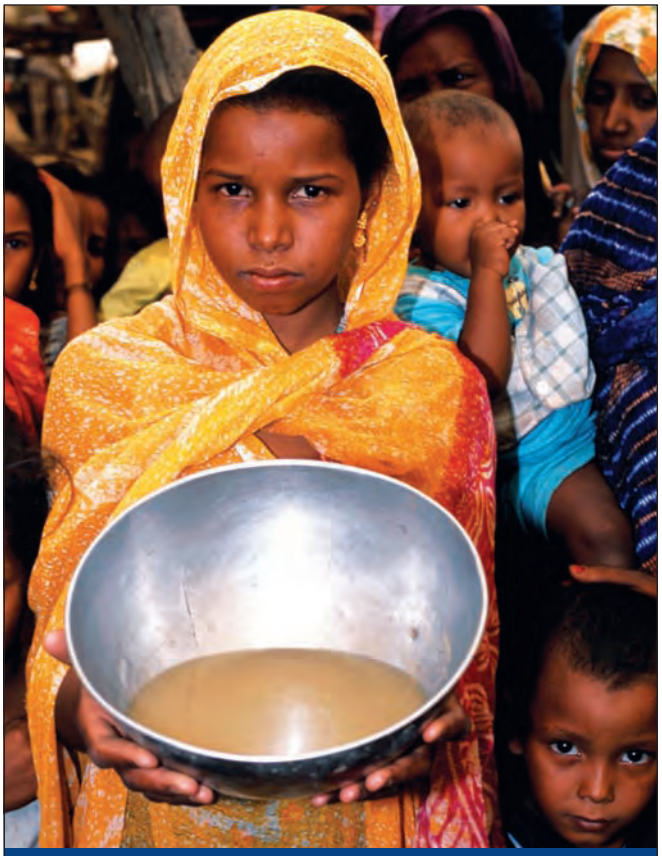


1. See also the *Water for the Poor Act Report to Congress* (http://www.state.gov/documents/organization/105643.pdf) and USAID's report on water obligations (http://www.usaid.gov/our_work/environment/water/congress_reports/2007_water_report_to_congress.pdf) for more information on U.S. Government water and sanitation assistance.

USAID increases supply and demand for hygiene improvement products and services. In **Nepal**, USAID and UNICEF worked with local producers, including small manufacturers, on improving technologies and increasing the availability of POU products for school and home use. In **Peru**, USAID and the World Bank implemented a pilot Sanitation as a Business marketing initiative in five regions that will guide the scale-up of sanitation marketing elsewhere in Peru, Latin America and the Caribbean. In **Madagascar**, USAID-supported NGOs developed promotional programs to increase household demand for products such as latrines.

Training programs cover disease risk, behavior changes, handwashing. In **Kenya's** Coast province, 1,060 community residents, health workers, and members of community-based drama and women's health groups received training about the risks of diarrheal disease and on hygiene behavior change communication. In **Indonesia**, training by civil society partners about effective handwashing reached more than double the number of people expected. In **Peru**, the Healthy Communities and Municipalities program trained community-level workers on safe water and sanitation practices and diarrhea treatment. The program, which reaches 35,000 families in 557 poor communities, also produced communication materials for rural communities on hygiene and safe drinking water that are being adapted for use all over Peru.

Analysis examines sales, use, impact of Sûr'Eau ("Safe Water") in Madagascar. To assess disparities in product use and awareness and address the needs of at-risk groups, USAID funded an analysis of sales data for **Madagascar's** Sûr'Eau water treatment product. The analysis highlighted key factors limiting uptake of Sûr'Eau and has been used in the design of a program expansion.



A young girl in Ehel Abeidalla, Mauritania, shows a sample of water from her village's only source – a shallow well dug by community members inside a dried-out riverbed.

Ethiopia pursues universal sanitation coverage. To help **Ethiopia** achieve universal sanitation coverage by 2012, USAID assisted the Government in coordinating the planning, financing, and implementing of the national hygiene and sanitation strategy in the Amhara region of 20 million people. The regionwide effort mobilized cadres of key stakeholders and built district and village capacity. Other activities included development of an interactive curriculum for school hygiene and sanitation promotion as well as a strategy and tools for integrating safe water, hygiene, and sanitation into home-based care for people living with HIV/AIDS.

III. CHILD SURVIVAL AND MATERNAL HEALTH

Maternal and Neonatal Health

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PROGRESS TO DATE

- Declines of 17 to 48 percent in maternal mortality in 11 USAID-assisted countries since the late 1980s.
- Decline in neonatal mortality from 47 to 36 deaths per 1,000 live births in 24 USAID-assisted countries between 1990 and 2007; 16 percent global decline in newborn deaths between 1996 and 2005.
- An increase in skilled birth attendance from 34 to 48 percent in 36 countries since 1990.

KEY RESULTS REPORTED IN 2007

- Maternal mortality ratio in Nepal of 281 deaths per 100,000 live births, a close to 50 percent decline in 10 years.
- USAID support for newborn activities extended to 24 countries, with several expanding beyond their initial pilot areas.
- More than 700,000 women in 31 countries protected from postpartum hemorrhage through active management of the third stage of labor.

Maternal and neonatal deaths remain persistent problems in the developing world. Globally, the number of maternal deaths – an estimated 536,000 per year – has remained essentially unchanged since 1990. No health indicator demonstrates a greater difference between the developed and the developing world. A woman's lifetime risk of dying in childbirth is 600 times greater in Afghanistan, for example, than in the United States. Mothers die most often from postpartum hemorrhage, which accounts for approximately 30 percent of all maternal deaths, followed by hypertensive disorders, infection, unsafe abortion, and obstructed labor. Newborns die from infections, asphyxia, and complications of premature birth. Worldwide, about 4 million newborn deaths occur each year, mostly among low-birthweight babies.

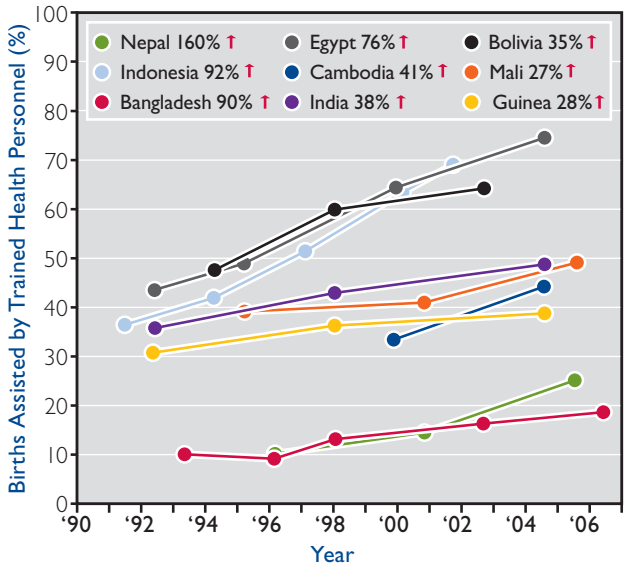
Despite the persistence of maternal and neonatal mortality, success in reducing them is possible. Since the late 1980s, 11 USAID-assisted countries[1] have reduced maternal mortality by 17 to 48 percent, five of them taking less than 10 years to do so. In nine of these countries, newborn mortality decreased by 16 to 36 percent. The use of skilled birth attendants has increased considerably, more than doubling in Nepal, Indonesia, Bangladesh, and Egypt (figure 23). The use of family planning to prevent pregnancy has also averted 4 million maternal deaths worldwide between 1985 and 2005. Figure 24 shows that USAID maternal and neonatal health programs in 14 countries saved nearly 450,000 newborn lives – more than 1,200 a day – in 2007. With USAID's recent increased focus on neonatal interventions, an accelerated decline in newborn mortality should occur.

USAID Strategy

As programs evolve to focus on skilled birth attendants and access to emergency obstetric care, USAID is focusing on the major causes of maternal and newborn death

1. Bangladesh, Benin, Bolivia, Ethiopia, Guatemala, Indonesia, Kenya, Mali, Nepal, Rwanda, and Senegal

Figure 23: USAID-Assisted Countries With Greatest Increases in Skilled Assistance at Birth, 1991–2007



Source: Demographic and Health Surveys, 1991–2007. Data are for the three-year period preceding the survey. Only countries with an increase of more than 25 percent are presented.

for which there are proven, low-cost interventions that can be applied at scale. Since most deaths occur in the home, USAID supports behavior change and family and community services that augment facility-based services. Interventions include infection prevention, detection, and treatment; nutritional interventions; postpartum hemorrhage prevention and treatment; and immediate newborn care. These interventions are carried out through:

- **Community preparation for birth and home-based essential care.** Community preparation allows women to assess their health needs, prepare for childbirth, recognize complications, and plan for emergencies.

- **Care during pregnancy, birth, and the postnatal period.** USAID is spotlighting the postnatal period because three-quarters of women and newborns receive no postnatal care, even though most maternal and neonatal deaths occur within one week of birth.

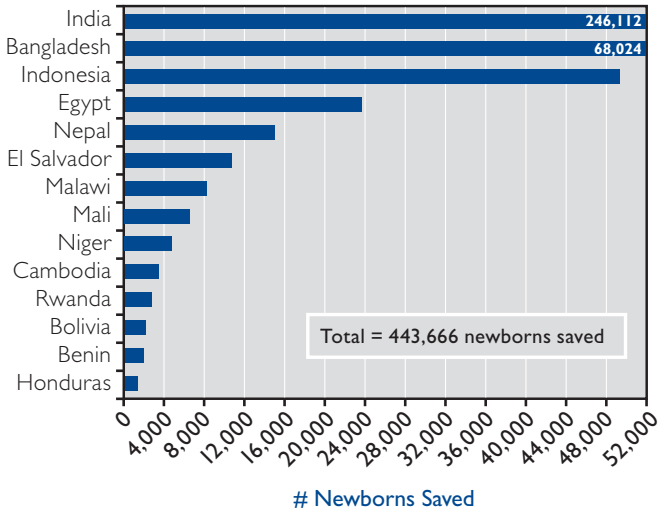
- **Care for complications and emergencies.** Mothers and newborns are highly vulnerable during labor, delivery, and the postnatal period. While focusing on prevention, USAID also builds capacity for treating complications and emergency response.

Globally, there is now considerable attention to newborn health and survival and to reducing newborn deaths, which account for nearly 40 percent of under-5 mortality. It is recognized that improving newborn survival is closely linked to improving maternal health, nutrition, and care during pregnancy, birth, and the postnatal period, and that community-based programs can achieve rapid, substantial reductions in newborn mortality. With new evidence supporting community-based care, USAID is expanding its newborn programs and strengthening their links to maternal and child health. The USAID-supported Latin America and Caribbean Newborn Health Alliance, for example, addresses newborn health within a reproductive, maternal, and child health continuum, promoting evidence-based policy and program interventions at the facility and community levels.

Interventions and Results

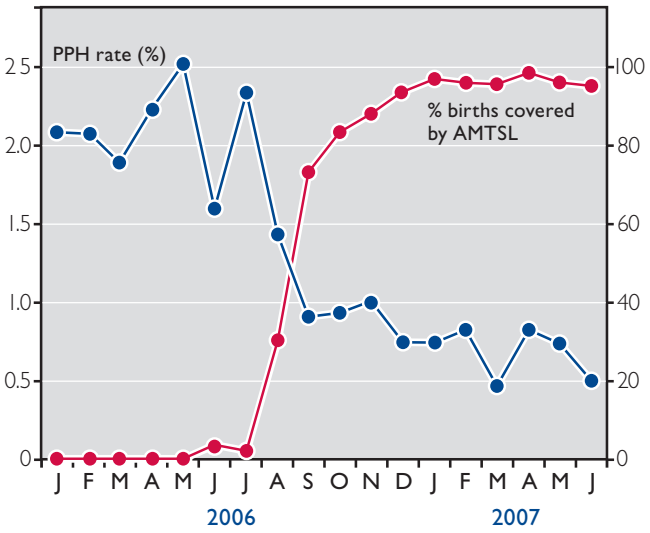
Antenatal care in Tanzania links with anemia, malaria, HIV, syphilis care. USAID supported nurse and midwife training to provide antenatal care that included prevention, diagnosis, and treatment for anemia and infectious diseases such as malaria, HIV/AIDS, and syphilis. A survey of USAID-supported facilities found that 59 percent of pregnant women received the first dose of preventive malaria treatment and 41 percent the

Figure 24: Estimated Newborn Lives Saved in 2007 Due to Decreased Mortality Rates, 14 Selected Countries With USAID Neonatal Programs



Source: Demographic and Health Surveys, 1989–2007; Honduras Reproductive Health Survey, 1996.

Figure 25: Reductions in Postpartum Hemorrhage (PPH) With Active Management of Third Stage of Labor (AMTSL) in Targeted Facilities in Niger, January 2006–June 2007



Source: USAID Quality Assurance Project.

second dose, compared with, respectively, 52 percent and 22 percent nationally.

Fistula centers treat more than 3,000 women. Obstetric fistula is a debilitating condition that results from obstructed labor. It can cause permanent urinary and fecal incontinence, and affected women are often ostracized by their families and communities. In 2007, USAID supported 24 fistula repair centers in **Bangladesh**, **Ethiopia**, **Uganda**, **Rwanda**, **the Democratic Republic of the Congo**, **Nigeria**, **Ghana**, **Sierra Leone**, **Guinea**, **Mali**, and **Niger**. The centers repaired 3,106 fistulas, more than triple the number in 2006. USAID assistance included facility renovations, training, and support for improved detection and treatment of prolonged labor, as well as repair of fistulas.

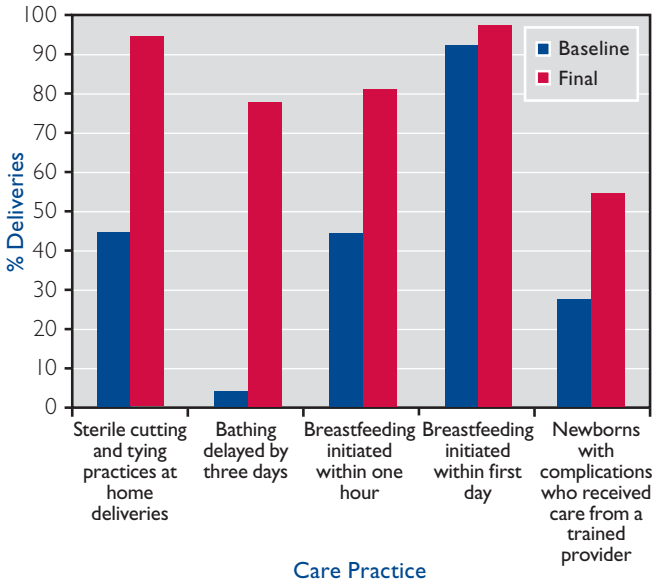
Postpartum hemorrhage program protects women in 37 countries. USAID is spearheading a global effort to prevent postpartum hemorrhage (PPH) through "active management of the third stage of labor" (AMTSL), in which drugs and physical procedures are used to reduce blood loss and transfusions. In 2007, USAID supported prevention programs in 37 countries, and more than 700,000 women in 31 of these countries received AMTSL. A project in **Nepal** that served more than 10,000 women with interventions to prevent PPH in home deliveries reduced mortality to a level one-eighth of the national rate. **Kazakhstan** also reduced PPH and blood transfusions with increased AMTSL. In **Armenia**, the Ministry of Health plans to expand AMTSL nationally after successfully introducing it in 2007, with USAID support, in target facilities. In addition, USAID supported a study in 10 countries in Africa, Asia, and Latin America that found a wide variation in the correct use of AMTSL and gave clear directions for program improvements.

Quality improvement collaboratives expand PPH prevention in Ecuador and Niger. After a USAID-supported quality improvement collaborative for obstetric care achieved 90 percent AMTSL coverage in nearly 40 percent of **Ecuador's** maternity facilities, the Ministry of Health adopted AMTSL as national policy. Within nine months, 80 percent of facilities had adopted the practice. In **Niger**, USAID support reached one-third of facility births nationwide. Among 46,000 women who delivered in 39 health facilities, AMTSL coverage increased from 5 percent in 2006 to 98 percent in 2007, with significant declines in hemorrhage from 2 to 0.4 percent (figure 25).

Countries adopt, expand essential newborn care. USAID helped countries implement interventions such as exclusive breastfeeding, clean delivery, umbilical cord care, and early recognition of and referral for complications. In **Bangladesh**, community health workers in a community-based maternal and newborn program reached about 15,000 mothers and newborns (about 80 percent) within the first week of life to provide them with essential newborn care in their homes. USAID-supported research has shown that such simple home-

Women wait outside a maternity ward at the district hospital in Guna, Madhya Pradesh, India.

Figure 26: Increases in Essential Newborn Care Practices, Projahnmo, Bangladesh



Source: Baqui, A. H. , et al. "Effect of community-based newborn-care intervention package implemented through two service-delivery strategies in Sylhet district, Bangladesh: A cluster-randomised controlled trial." *Lancet* 2008; 371: 1936–44.

and community-based interventions can reduce neonatal mortality by approximately 34 percent (figure 26).

USAID pilot projects in Russia reduce maternal mortality, abortion rates. Over the last four years, USAID-funded integrated maternal and child health/family planning projects in Vologda and Yakutiya helped these two regions cut maternal mortality rates in half and reduce abortion rates. USAID's maternal and child health care program in **Russia** covers 21 pilot regions that share best practices for integrating family planning into family doctor training, providing contraceptives through health insurance, educating rural health care providers in family planning counseling, and providing postpartum and postabortion care.

Programs focus on preventing hypothermia in newborns. USAID helped programs in **Rwanda**, **Nigeria**, **Malawi**, **Nepal**, and **Bangladesh** plan, introduce, or scale up interventions to prevent hypothermia in newborns. Low-birthweight babies are especially vulnerable to cold stress, which can be prevented by placing them on the chest of the mother or another caregiver, a practice known as kangaroo mother care. Research and interventions in **India** and **Ukraine** have shown that in combination with other newborn care behaviors, this practice can reduce neonatal mortality by 50 percent.

Fistula Repair in Ethiopia

USAID

Fistula repair center in Ethiopia, one of 24 supported by USAID in 11 countries in Africa and Asia.

One morning Tigist Dandena felt the first pangs of labor. At 17, she was pregnant with her first child and living with her family in a small community in the highlands of Ethiopia. On the third day of labor, it was obvious that Tigist needed help, and her family took her to the hospital. Once there, she delivered a stillborn baby.

Remaining in the hospital for a week, Tigist felt a constant leaking of urine and knew something was wrong. She was now one of approximately 9,000 Ethiopian women who experience obstetric fistula every year. Caused by prolonged labor and pressure from the unborn baby's head on the inside of the mother's pelvis, fistula is a major complication of childbirth in Ethiopia. It results in tissue death and the formation of a hole in the wall between the vagina and the bladder (vesico-vaginal fistula), the rectum (recto-vaginal fistula), or both. Physical consequences include incontinence and excoriation of the vulva from the constant leaking of urine and feces. Social consequences include divorce and social ostracism.

Once Tigist returned home, she was put in a separate hut near her family's house. She was not completely ostracized by her family, but neighbors no longer visited. Tigist could not sit or stand comfortably and spent her days in her dark hut.

Several months later, Tejitu Leta, a community-based reproductive health agent working for a USAID-funded NGO, learned of Tigist's problem. During her training, Tejitu had learned about fistula and understood the importance of immediate care. She spoke with Tigist's family, who agreed to send her to the Addis Ababa Fistula Hospital. Within weeks, Tigist's fistula was repaired, and she was back with her family in her village. Her leaking, and her shame, had stopped.

Of the thousands of Ethiopian women who suffer from fistula, Tigist is one of the few who have received care. With USAID support for community health workers promoting women's and family health, many more women can be identified and referred for care, giving them renewed hope for their futures. USAID now supports a satellite of the Addis Ababa Fistula Hospital, where Tigist was cured, in Bahar Dar and expects to expand support to two additional fistula repair centers in Ethiopia in 2008.

IV. FAMILY PLANNING AND REPRODUCTIVE HEALTH

Since 2002, USAID has increased its family planning support to Africa by 50 percent while continuing to assist family planning programs in Asia, Europe and Eurasia, Latin America and the Caribbean, and the Middle East.

A young Afghan mother receives contraceptive pills and family planning education during a visit to her midwife.

PROGRESS TO DATE

- Between 2000 and 2007, USAID family planning assistance in more than 35 countries contributed to:
  - An increase in the average modern contraceptive prevalence rate from 32 to 38 percent.
  - An increase in total satisfied demand for family planning from 44 to 52 percent.
  - A decrease in the total fertility rate from an average of 4.6 children per woman to 4.1.

KEY RESULTS REPORTED IN 2007

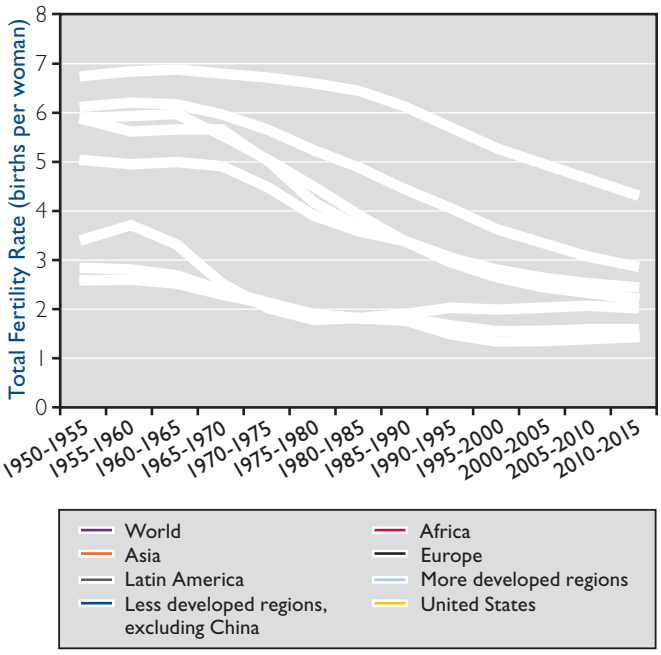
- More than 5.5 million people served by community-based family planning programs, mostly in marginalized communities in Africa and Asia.
- 485 shipments of family planning/reproductive health commodities valued at $80 million made to USAID Mission programs in 58 countries.
- More than 720,000 women in Nigeria provided with family planning counseling integrated with other health interventions, contributing to more than 2.4 million couple-years of protection.

World estimates show that more than 100 million women in developing countries would prefer to avoid a pregnancy but are not using any form of family planning. This unmet need for family planning is particularly acute in sub-Saharan Africa, which has rapidly growing numbers of women of reproductive age and where USAID estimates that 24 million women would like to limit or space their children but are not using any contraceptive method. In 35 of the world's poor countries, birth rates remain high, with an average of more than five children per mother. Thirty-two of these countries are in sub-Saharan Africa; the others are Timor-Leste, Afghanistan, and Yemen. The same countries also have low levels of education, high death rates, and extreme poverty.

Although childbearing has declined rapidly in many developing countries, the average pace of decline in sub-Saharan Africa slowed in the late 1990s (figure 27). Since 2002, USAID has nearly doubled family planning support to Africa while continuing to assist family planning programs in Asia, Europe and Eurasia, Latin America and the Caribbean, and the Middle East. Throughout USAID's Europe and Eurasia region, many countries continue to experience high levels of abortion, which has long been a major method of limiting and spacing births. However, a study completed in 2005 found that abortion rates in eight of these countries have recently declined, while the use of modern contraceptive methods has steadily increased.

Family planning is an effective, and cost-effective, response to the serious public health issues of maternal and child mortality. Studies show that family planning, through birth spacing, has immediate benefits for the lives and health of mothers and their infants. Ensuring

Figure 27: World Trends in Total Fertility Rates, 1950–2015



Source: World Population Prospects: The 2006 Revision, United Nations. Projections are medium variant.

A health officer in northern Ethiopia displays a vial containing the Depo-Provera injectable contraceptive and a flip chart for teaching couples about available family planning methods.

basic access to family planning could reduce maternal deaths by a third and child deaths by nearly 10 percent. Family planning also has social benefits: It enables women to stay in school longer, improving their ability to contribute to their families and societies. Parents with smaller families have an improved chance of raising healthy, well-nourished, educated children into productive adults. Family planning also mitigates the impact of population dynamics on natural resources, economic growth, and state stability.

USAID's family planning leadership has contributed to increased rates of contraceptive use over the past decades. However, continued efforts are needed as the largest cohort of youth in history enters the childbearing years. The demand for contraception in developing countries is expected to increase by 200 million by 2015. Meeting this demand will require significant investments in securing contraceptive supplies, increased policy and financial commitments, scaled-up services that are integrated with other services (such as HIV/AIDS and maternal health), and continued research to identify, develop, test, and introduce new contraceptive technologies and natural family planning methods.

USAID Strategy

The U.S. Government objective for family planning and reproductive health (FP/RH) is to expand sustainable access to quality voluntary family planning services and information and reproductive health care. This enhances the ability of couples to decide the number and spacing of births, including the timing of the first birth, and makes substantial contributions to reducing abortion, reducing maternal and child mortality and morbidity, and mitigating adverse effects of population dynamics on natural resources, economic growth, and state stability.

To achieve this objective, USAID activities focus on the following:

- **Ensuring the supply of FP/RH commodities.** USAID works to strengthen all components of the logistics cycle to ensure that the family planning supply chain works effectively and efficiently.

- **Supporting innovative research, technology, and utilization.** USAID supports biomedical research to increase understanding of contraceptive methods and to develop new fertility regulation technologies.

- **Increasing knowledge and use of quality FP/RH products and services.** USAID's information, education, and communications approaches, which include mass media, community outreach, and individual counseling, have reached millions of men and women throughout the world with information about family planning.

- **Improving the policy environment for effective program implementation.** USAID helps countries improve FP/RH policies and increase budgets for family planning in such key areas as improving access and quality, integrating services, systems strengthening, achieving contraceptive security, and supporting initiatives that address gender, poverty, and health equity.

- **Supporting policymakers and program managers through monitoring and evaluation.** USAID provides support to policymakers and program managers seeking to gain a better understanding of family planning programs by monitoring progress and documenting promising approaches and remaining challenges.

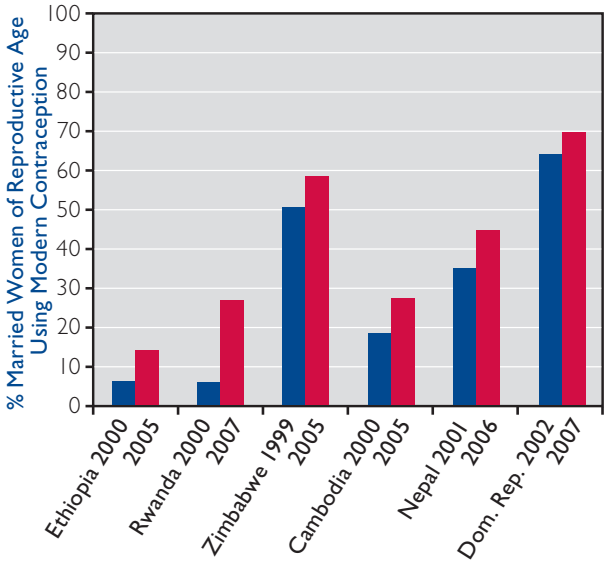
- **Improving performance and service delivery of FP/RH programs.** USAID increases the availability and quality of family planning and related reproductive health services through strengthening government programs, local PVOs, for-profit organizations, and commercial channels.

The selection and prioritization of programming approaches to achieve program objectives vary across countries. Specific needs often vary by geographic region.

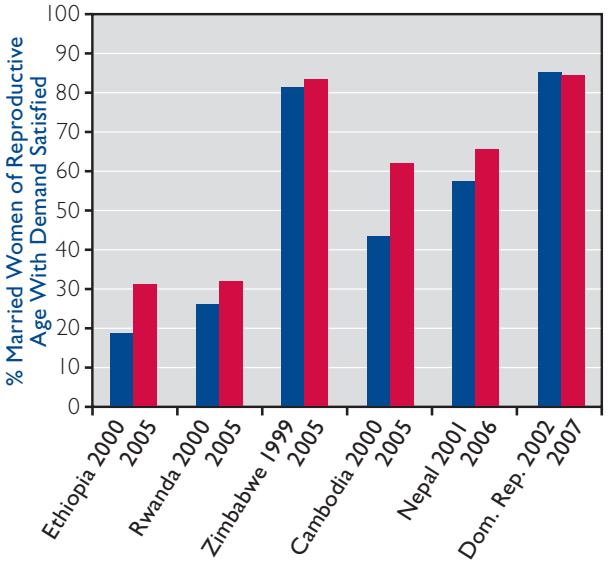
Eight Years of Family Planning in Six Countries

Between 1999 and 2007, modern contraceptive use among married women in six selected USAID-assisted countries showed increases ranging from 6 percent in the Dominican Republic to 162 percent in Rwanda. These six countries – Ethiopia, Rwanda, Zimbabwe, Cambodia, Nepal, and the Dominican Republic – show how family planning programs that have been adapted to a country's resources and meet the specific needs of its people can successfully provide women who desire to space or limit births with the means and access to do so. Except in the case of the Dominican Republic, an increase in use of modern contraceptive methods is associated with a greater percentage of demand for family planning satisfied.

Trends in Use of Modern Contraceptive Methods, Six USAID-Assisted Countries



Trends in Demand for Family Planning Satisfied,* Six USAID-Assisted Countries



Source: Demographic and Health Surveys, 1999–2007.

* "Demand satisfied": Of all women wishing to space or limit births, the percentage who are currently using some method of family planning.

In most sub-Saharan African and South Asian countries, unmet need remains high, and actual family size continues to exceed desired family size. In focus countries of the United States President's Emergency Plan for AIDS Relief and other countries where HIV prevalence is high, it is particularly important to promote practical integration of FP/RH and HIV activities, especially through wraparound funding. In Eastern European and some Central Asian countries, the total fertility rate is often at or below replacement level, and abortion is widely used as a method of limiting births. U.S. Government programs in these regions are designed to increase awareness and use of contraception as a substitute for abortion. In Latin America and the Caribbean, Central Asia, and East Asia, a number of countries are planning for graduation from U.S. Government FP/RH assistance. In these countries, the principal challenges are to address subnational disparities and inequities in access to FP/RH services and to solidify program sustainability.

Over the 2008–2012 period, the following progress is expected:

- ***Aggregate goal:*** At the global level across 40 USAID-assisted countries, the modern contraceptive prevalence rate (MCPR) will increase one percentage point a year, a goal that has been achieved consistently over the past three years.

- ***MCPR goal:*** Within this set of countries, the 25 countries that have an MCPR of 10 to 50 percent and receive at least $4 million in FY 2008 population funds will achieve a one percentage point increase in MCPR annually.

- ***Equity goal:*** In addition, 10 countries where MCPR at the national level is between 30 and 50 percent will each achieve a one percentage point increase in MCPR annually in the lowest two wealth quintiles.

- ***Graduation goal:*** In addition, five countries are expected to graduate from U.S. Government FP/RH assistance.

Interventions and Results

Communications campaigns increase knowledge, change behavior. A communications campaign in **Benin** reached more than 36,000 men and women with FP/RH information. A toll-free telephone line received more than 50,000 calls. The number of new family planning acceptors increased after the launch of the campaign, and couple-years of protection (CYP) provided by family planning clinics exceeded targets. In **Egypt**, NGOs conducted multichannel campaigns that reached 26 million youth, newlyweds, and poor women (vs. 24 million planned) with messages promoting birth spacing, informed choice, and use of family planning methods.

USAID-supported programs reach out to men. Targeted awareness campaigns and improved community outreach in **Cambodia** increased men's involvement in family planning and the reproductive health of their partners. FP/RH messages reached nearly 400,000 people, and more than half a million counseling visits took place. In **Ghana**, a new campaign encouraged men's involvement in family planning with the theme "Are you a real man? Real men plan their families." An estimated 650,000 people saw or heard the campaign.

A family planning user in the Democratic Republic of the Congo explains the Standard Days Method using cycle beads.

Couples increase condom use as a result of India campaign. The USAID-funded Just Say It condom campaign in urban areas of north **India**, aired between 2004 and 2007, addressed the stigma of condom use by eliminating the embarrassment associated with purchasing condoms. By the end of the campaign, use of condoms by married men with their spouses increased 30 percent. The campaign's television ads were picked up by the National AIDS Control Organization and were aired during the Cricket World Cup. The campaign is receiving continued coverage on YouTube.

Community-based programs extend FP/RH services. USAID's Champion Commune program in **Madagascar** used community-based agents to expand use of family planning in rural areas. A 2006 survey found that much of the increase in national contraceptive use to 24 percent from 18.8 percent in 2004 occurred in rural areas. In **Jordan**, NGO outreach workers provided FP/RH information in community and home visits. Combined with training for midwives and female physicians in FP/RH counseling and inserting intrauterine devices, this outreach increased access to services for women, especially rural women, most of whom prefer female providers. In **Pakistan**, nearly 210,000 women attended community information sessions and received cassette tapes to help them discuss birth spacing with their husbands.

USAID phasing out family planning activities in Dominican Republic. USAID support helped strengthen the national Contraceptive Security Committee in its role of ensuring that a sufficient budget is available for procuring and distributing contraceptives. USAID assistance contributed to more than 141,000 CYP. According to recent Demographic and Health Survey (DHS) data, the total fertility rate dropped from 3.2 children in 2002 to 2.4 in 2007.

Programs focus on commodity supply and delivery. In **Benin**, USAID support for the Government's FP/RH commodities security strategy reduced the percentage of clinics experiencing stock-outs of contraceptives from 92 percent in FY 2006 to 50 percent in FY 2007. In **Nepal**, the USAID-supported Logistics Management Information

System covered 93 percent of the country's 4,012 health facilities. The reported 7 percent stock-out rate for contraceptive commodities was below the targeted maximum of 10 percent. The high reporting and low stock-out rates indicate an effective logistics system that delivers a steady supply of contraceptives. In **Rwanda**, USAID has supported the development of an active management system for contraceptive products, which as recently as 2002 did not exist. The management system in Rwanda has an impressive reporting rate of 92 percent, which ensures that critical data are available to program managers for decisionmaking and future planning.

USAID leverages support for fertility awareness-based methods. USAID leveraged funds to increase support for programming for the Standard Days Method (SDM) in the **Democratic Republic of the Congo**. The program was introduced with great success in 2004, beginning with health centers and pharmacies in Kinshasa province. However, evaluation of the project showed the need for additional financial support for training and revision of family planning tools, which was ultimately provided by other donors.

SDM studies show high effectiveness. Studies on long-term continuation showed that in **India** the 36-month continuation rate for SDM was 67 percent. The main reason for discontinuation was desired pregnancy. Moreover, extended use of SDM in **Benin**, **Honduras**, **Ecuador**, and **India** shows a significant decrease in unplanned pregnancies as duration of use increases.

Countries increase numbers of trained FP/RH providers. In **Madagascar**, a USAID-supported program trained 1,820 community-based agents and 2,423 public and private sector providers in the use of modern contraceptive methods. All of the country's 2,475 public health clinics now provide voluntary family planning services. In **Guinea**, USAID trained 1,507 community-based volunteer distributors in family planning counseling and service delivery. In the **Philippines**, USAID supported clinical training on family planning and maternal and child health services for 570 local government staff, 117 midwives, 2,115 company employees, and 17 medical representatives.

Public-private partnerships in Egypt ensure sustainability of contraceptive supplies. In 2007, **Egypt's** Ministry of Health and Population received its last shipment of USAID-funded contraceptives. The Ministry now procures all family planning methods itself. A Contraceptive Security Working Group was formed to ease this transition and ensure the sustainability of contraceptive supplies. Public-private partnerships developed in FY 2007 helped promote sustainability, yielding nearly $971,000 vs. $740,000 targeted.

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Male participants in the Mohalla Sangat family planning outreach program in Pakistan display information cassettes they received.

Postabortion family planning acceptors increase as FP/RH services expand. In **Kazakhstan**, USAID introduced and strengthened postpartum and postabortion family planning services in 18 maternity wards, 19 postabortion wards, and 15 primary health care sites in Astana and Almaty cities and the Karaganda region. The increase in service delivery was accompanied by an impressive increase in acceptance of a modern family planning method from 33 to 71 percent of postabortion clients between 2006 and 2007.

Integrated interventions maximize FP/RH counseling in Nigeria. USAID integrated family planning counseling into emergency obstetric care, antenatal care, obstetric fistula repair, and HIV/AIDS counseling. More than 720,000 women – over double the target – received counseling, and the interventions contributed to more than 2.4 million CYP, also surpassing the goal.

USAID assists countries with national policy development. With USAID assistance, **Kenya's** Ministry of Health completed its new national reproductive health policy in 2007. The policy guides all service provision, emphasizing equitable access and quality of care. Reproductive health services integrating HIV/AIDS is also a guiding principle. In **Nigeria**, USAID assistance facilitated approval of national policies and guidelines on adolescent health, gender, and integrating reproductive health and HIV/AIDS services. In **Ukraine**, USAID

Indonesia's Family Planning Program Due to Graduate From USAID Assistance

After nearly four decades of support, USAID is graduating one of the most successful family planning programs in the developing world – that of Indonesia. USAID assistance for other health sector priorities, including maternal and neonatal health and child survival, will continue beyond the country's graduation from population assistance.

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Staff of Indonesia's national family planning program attend a conference on the importance of providing quality reproductive health services at the district level.

The partnership among USAID, the Indonesia Government, and the country's NGOs has stressed the importance both of access to high-quality family planning services and of helping families make informed decisions on some of the most personal aspects of their lives. In a predominately Muslim country, the unwavering support of Muslim religious leaders has also been a key to program success, and USAID has collaborated for many years with Muhammadiyah, one of Indonesia's largest and most influential Muslim organizations, to help improve the provision of family planning services. Muhammadiyah encourages its members to consider birth spacing and limiting the number of children as ways to improve the lives of their families. It has also provided family planning services in its extensive system of hospitals and health clinics.

The success of Indonesia's program is best illustrated by those who have benefited from the effort. According to Mrs. Meutia Soraya, she and her husband adopted family planning because "we could manage the number of children that we wanted, in our case two, and we could raise them better than if we had more children and save money to give them a good education. So, our decision to use family planning was for our children."

Mr. Nawawi comes from a family of nine children, and he feels that he and his wife could ill afford to have such a large family, especially living in an expensive city like Jakarta. The couple's decision to control family size is typical of many in their generation. In the 1970s, families often had six, seven, or more children; today, the average Indonesian family consists of around three children.

This decrease in family size has translated into healthier and better-educated children. In a developing-country context, the single most important factor in the survival of young children is a mother's ability to space her births, and this is reflected in Indonesia. Infant mortality underwent a greater than fourfold decline from 142 deaths per 1,000 live births to 35 deaths per 1,000 live births between 1967 and 2000. Attention to the health and well-being of Indonesian families has also resulted in some significant demographic dividends. The country's estimated population today is around 220 million people. Without the family planning program, it would likely have been nearly 280 million. This means that the world's fourth most populous nation has 60 million fewer people today because of family planning.

supported the Government's adoption of the $150 million State Program on Reproductive Health of the Nation to 2015, which commits national and local government resources to increasing contraceptive use, reducing unintended pregnancies, and decreasing rates of abortion.

"Family planning is a tool of development." This statement by **Rwanda's** Minister of Health demonstrates the political will encouraged by a USAID-supported presentation on the social and economic consequences of high fertility and population growth. Rwanda's family planning program has made remarkable progress. Before the genocide, the 1992 DHS found that 13 percent of married women were using a modern contraceptive method. This dropped to only 4 percent in 2000, after the destruction of so much of the country's infrastructure. By 2005, contraceptive use had rebounded to 10 percent. Preliminary results from a mini-DHS conducted

in early 2008 indicate that it had almost tripled, reaching 27 percent.

Leadership development pays off in Nepal. The USAID-supported Leadership Development Program (LDP) is providing local communities with leaders who are bringing about change. In one underserved Muslim community in a district that held an LDP, contraceptive prevalence increased from 5 to 13 percent in seven months. Another district held reproductive health classes for 500 youth. An external evaluation recommended that the Ministry of Health expand LDPs on a wide scale.

Peru includes family planning counseling in insurance coverage. USAID-supported research and recommendations were instrumental in the Peruvian Government's decision to include family planning counseling in its health insurance program for the poor, which previously covered only antenatal and postpartum care.

East African providers receive training on obstetric fistula, gender violence. USAID funded training for 50 practitioners on fistula prevention and care and 73 media representatives on the need to address gender-based violence against women, a major barrier to increased use of FP/RH services. In addition, medical and nursing schools in **Kenya**, **Tanzania**, and **Uganda** received assistance in integrating prevention and treatment of violence into their reproductive health preservice curricula, better enabling them to provide services to clients.

Partners support USAID reproductive health data collections. USAID continued to leverage support from host-country governments and multinational donors for its demographic and reproductive health data collections, which increase the global availability of data and lead to key programmatic improvements. In FY 2007, non-USAID support for these activities totaled over $9 million, bringing the total to more than $50 million since 2003.

Analyses show family planning contributions to achieving Millennium Development Goals. USAID supported analyses in 30 countries of how family planning contributes to achieving Millennium Development Goals (MDGs). The analyses show how meeting the unmet need for family planning can decrease the costs of meeting the MDGs. **Nepal**, **Pakistan**, and a number of countries in Africa, Latin America, and the Caribbean have used the analyses' findings to develop evidence-based advocacy strategies and messages for mobilizing funds for contraceptives.

USAID focuses on graduation. USAID formed a Graduation Working Group in 2004 that developed a strategy to identify criteria for graduation from family planning assistance. A number of countries have already graduated from USAID family planning assistance, including **Brazil**, **Chile**, **Colombia**, **Indonesia**, **Jamaica**, **Mexico**, **Morocco**, **Tunisia**, and **Turkey**. Graduation normally requires a total fertility rate of less than 2.6 and an MCPR of more than 60 percent. Countries must also demonstrate in-country technical, administrative, and program capacity to maintain service delivery, to adapt to changes as appropriate, and to sustain ongoing financing of essential aspects of service delivery and products, including contraceptives.

V. VULNERABLE CHILDREN

DCOF programs focus on children and demonstrate measurable improvements in the social, psychological, educational, and economic well-being of beneficiaries.

Zambian orphans huddle together outside the home of their new caretaker after losing both their parents to the AIDS epidemic, which has left more than a half a million children without families.

PROGRESS TO DATE

- Approximately 694,000 children, mostly in Africa and Asia, reached through current portfolio of projects.

KEY RESULTS REPORTED IN 2007

- More than 1,100 children reunited with their families; 350 illegally imprisoned children released; and 25,000 decisionmakers, religious leaders, community members, and parents and children sensitized on child rights and protection in a new program in the Democratic Republic of the Congo.
- More than 2,000 street children enrolled in school through the Africa KidSAFE network in Zambia, as well as 800 served via a mobile health service, up to 600 provided outreach services, and 295 reunited with families or communities.
- Expansion to more than 1,100 in worldwide membership of the Better Care Network; 15,000 visits per month to the organization's Web site.

When countries face long-standing conflict, economic collapse, or the marginalization of segments of society, the most vulnerable populations – children among them – typically bear the brunt of the devastation. Since its inception in 1989, USAID's Displaced Children and Orphans Fund (DCOF) has worked to improve the well-being of these vulnerable populations. Other USAID programs help local and international NGOs reduce child blindness in countries where basic eye care services are either inadequate or nonexistent.

USAID Strategy

DCOF emphasizes community-based projects developed in close collaboration with local organizations, coalitions, and community members, and targeting the specific needs and strengths of the regions and populations they serve. Programs are child-focused and demonstrate measurable improvements in areas such as the social, psychological, educational, and economic well-being of beneficiaries, and also show progress in capacity building and institutional strengthening. Projects focus on:

- **Tracing and reunifying children into families or family-like situations and ensuring community inclusion.** With a focus on strengthening the child care capacity of families and communities, DCOF invests significantly in family reunification.

- **Strengthening support systems such as social service networks, community resources, and national policies and laws.** DCOF strengthens and broadens these networks by involving key stakeholders, including children, families, community actors, civil society, and government. It also creates a supportive environment by ensuring basic legal protections for families and children.

- **Economic strengthening for families, adolescents, and communities.** Livelihood development is an increasing component of programming, as are microenterprise and microfinance programs.

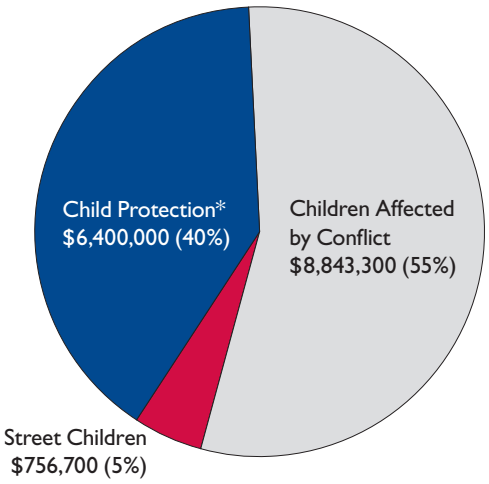
- **Social reintegration of children affected by war, including child soldiers.** DCOF protects children from the impacts of armed conflict through programs that safeguard their rights and meet their needs for education, health care, psychosocial support, economic strengthening, and vocational training. Post-conflict family reunification in countries such as Rwanda and Sierra Leone has been a highlight of past DCOF support.

In 2007, DCOF projects operated in 22 countries with a budget of $16 million. Figure 28 illustrates DCOF's funding in 2007 by program activity. Additional program information can be found on the USAID Web site at: http://www.usaid.gov/our_work/humanitarian_assistance/the_funds/dcof/index.html.

Interventions and Results

New program in Democratic Republic of the Congo improves social and legal protection of children. DCOF's new Reducing Abandonment of Children program helped children who were separated from parents

Figure 28: Displaced Children and Orphans Fund, Funding by Program Activity, FY 2007



* Includes activities such as preventing abandonment, family preservation and reunification, and deinstitutionalization
Source: USAID.

or caregivers, abandoned, accused of witchcraft, or unjustly imprisoned. The program also worked with the Government to improve the social and legal protection of children. Through sensitization and by showing a readiness to bring those responsible for child abuse and maltreatment to trial, particularly for accusations of witchcraft, it made significant progress in preventing public denunciations of children as child witches.

Zambia network helps street children. The Africa KidSAFE network in **Zambia** addressed the needs of street children by developing community-based solutions for them and their families. Along with key government agencies, 16 nonprofit organizations make up the network, which identifies and supports street children and reunites them with their families or refers them to community-based arrangements. To keep at-risk children from leaving home for the street, the network's Mothers Program helped families supplement their incomes. Nearly 1,150 mothers of about 2,500 children benefited from the Mothers Program.

Sri Lanka program brings holistic approach to protecting vulnerable children. The New Beginnings for Children Affected by Violence and Conflict project in **Sri Lanka** worked to create a sustainable system for protecting vulnerable children, addressing such issues as armed forces recruitment, internal displacement, poverty, limited school access, and safety concerns. The project built awareness of children's rights and strengthened community-based structures to protect children from armed forces recruitment and prevent family separation. It also worked with government stakeholders to increase their ability to protect vulnerable children.

Azerbaijan and Russia assume responsibility for support centers and services. The **Azerbaijan** Government took over financial and management responsibility for three DCOF-assisted children and family support centers. Through community development and family and child support activities, the centers facilitate family reunification, promote the social integration of vulnerable children, increase community care capacity, and demonstrate community-based alternatives to institutional care. In **Russia**, the Government took over 80 percent of financial and management responsibility for formerly DCOF-supported services for street children and youth in St. Petersburg. The services include outreach, emergency assistance, crisis wards, and halfway houses to secure rehabilitation and community reintegration of more than 2,270 children.

Better Care Network provides comprehensive resources. This DCOF-supported online network is a comprehensive information and resource service for assisting children without adequate family care that addresses such issues as family preservation and reunification, alternative family care for children, and ways to strengthen national social welfare systems. In 2007, the Network secured new donations and expanded its steering committee, began work to help shape a global agenda for targeted research into care issues, and developed a dialogue with influential religious groups interested in responding to orphans and vulnerable children, especially in sub-Saharan Africa.

USAID restores sight and delivers comprehensive eye health programs to children. USAID's Child Blindness Program involves a wide spectrum of interventions, including vision screening and distribution of eyeglasses for visually impaired children, education and rehabilitation for blind children, sight-restoring surgery, and training to increase access to quality eye care services. In 2007, the Child Blindness Program screened 190,000 children, provided more than 12,000 pairs of glasses, conducted 500 sight-restoring surgeries, and trained pediatric ophthalmologic teams in Africa and Asia.

USAID Plays Key Role in U.S. Government Vulnerable Children Programming

USAID is the lead agency supporting Public Law (PL) 109-95, the Assistance for Orphans and Other Vulnerable Children in Developing Countries Act, signed by President Bush in November 2005 and enacted to improve U.S. assistance to children orphaned or made vulnerable by any cause, including disease, disability, disaster, conflict, exploitation, abandonment, and extreme poverty. USAID is working with multiple U.S. Government agencies to address the needs of highly vulnerable children by:

- Improving coordination among government agencies and with nongovernmental partners and donors
- Strengthening country-level coordination and programming, with a focus on community-based responses
- Improving the targeting of resources through comprehensive monitoring and evaluation (M&E)
- Compiling and disseminating best practices to country teams and implementing partners

An 11-year-old orphan in Pakistan attends a free adult class at a training center in Fatehjang district. As an orphan, she cannot afford to go to school, and this class is her best chance to learn.

A Special Advisor for Orphans and Vulnerable Children has been appointed and, reporting to the Office of the Assistant Administrator for Global Health, has convened an interagency committee[1] that in the past year focused on the following activities:

- Coordinating agencies addressing the needs of highly vulnerable children in Uganda and Ethiopia, identifying areas for coordination, establishing baselines and an understanding of in-country operations, and appointing a regional adviser in southern Africa to work on country-level coordination
- A U.S. Government meeting to consider operations research investments
- Strengthening M&E by conducting an inventory of indicators used by U.S. Government agencies with the goal of identifying a set of common indicators to allow for consistent reporting
- Compiling and disseminating promising practices from U.S. Government programs, culminating in *Highly Vulnerable Children: Causes, Consequences and Actions*, the first PL 109-95 report to Congress (also available at http://pdf.usaid.gov/pdf_docs/PDACK053.pdf)

1. The committee comprises representatives from the Departments of Labor, Health and Human Services, State, and Defense; USAID; the United Nations High Commissioner for Refugees; UNICEF; and the NGO sector.

VI. HEALTH SYSTEMS STRENGTHENING

Global understanding of what constitutes an effective, sustainable health system has advanced rapidly since 2000.

Community-level health workers are strengthening health workforces in many countries. Here, a family welfare assistant in Bangladesh provides and explains contraceptives to family planning clients. JSI

PROGRESS TO DATE

- 190 Demographic and Health Surveys (DHS) in more than 75 countries; DHS recognized for innovation in data collection, analysis, and dissemination, and acknowledged as "gold standard" in household survey methodology and bedrock of the evidence base for national and global health policymaking.
- Increases in skilled birth attendance as a result of health financing arrangements demonstrated in Bolivia and Rwanda.
- National health accounts in use in more than 100 developing countries to track and improve health financing.
- 29 quality improvement collaboratives established since 2002 to improve health care in 13 countries.

KEY RESULTS REPORTED IN 2007

- Reduction in estimate of global HIV infections from 39.5 million to 33.2 million based on USAID-supported AIDS Indicator Survey results.
- Health insurance extended by Rwanda to more than half its population.
- Performance-based financing of primary health care services targeting entire population initiated in Tanzania; country teams throughout Africa trained in applying performance-based financing.

Developing countries need working health systems to deliver services that improve people's health. Global understanding of what constitutes an effective, sustainable system, and of benchmarks for system performance, has advanced rapidly since WHO's *World Health Report 2000*, a watershed document that focused on health system performance assessment. A consensus recognition has since formed that *service delivery*; *health workforce*; *information*; *medical supplies, vaccines, and technology*; *health financing*; and *governance and leadership* constitute the six core functions of a working health system. Knowledge about these functions has increased rapidly, and ongoing efforts continue to improve our ability to measure health system performance.

USAID Strategy

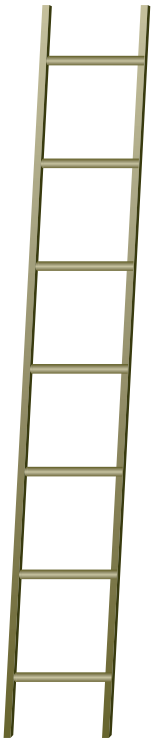
USAID promotes promising approaches that enable national health systems to work better on a sustainable basis to improve health. The Agency invests in activities that are highly relevant to the successful implementation of health interventions in HIV/AIDS, malaria, TB, nutrition, maternal and newborn health, and family planning/reproductive health. These investments have great potential to improve access to care, quality of care, and affordability of care. They demonstrate measurable improvement within three to five years and are suitable for sustained use in low-resource settings.

USAID's strategy is to improve the six core functions of a working health system:

- **Service delivery.** USAID works to ensure safe, high-quality health interventions based on scientific evidence – including an organized program for

Figure 29: Building a USAID Health Systems Initiative

THE NATIONAL HEALTH ACCOUNTS LADDER



2006–2011
International and national institutionalization and policy use; global national health accounts database accessible to all; integration with routine health management information systems; subaccounts implemented; methodological refinements. Global standards for health accounts in all countries.

1999–2005
International standardization; subaccount methodologies developed. WHO, World Bank, USAID provide leadership for Producers Guide and expert panels. HIV/AIDS, reproductive health, and maternal/child health are priority areas.

1998–present
Networks in Middle East, Africa, former Soviet states. Policy and institutional support from international agencies (World Bank, regional development banks, WHO, PAHO) and donors, including United States, Sweden, Belgium, Norway, France, Netherlands, Canada, European Union.

1996–1998
Pan American Health Organization (PAHO) and USAID Latin America/Caribbean Bureau fund first regional network.

1992–1996
USAID Missions in Philippines and Egypt fund country-led national health accounts.

1991–1993
World Development Report (1993) exposes lack of health financing information; Organization for Economic Cooperation and Development works on standardizing health accounts information systems for its developed-country members.

measuring and improving quality – for those who need them with a minimum waste of resources.

- **Health workforce.** USAID works to improve human resource management, helping health systems ensure they have the optimal mix and distribution of sufficient numbers of competent, efficient, and responsive staff and volunteers.

- **Information.** USAID supports the production, analysis, dissemination, and use of reliable and timely health information.

- **Medical supplies, vaccines, and technology.** USAID helps ensure equitable, timely access to essential products and technologies, including contraceptives, vaccines, and medicines, of assured quality, safety, efficacy, and cost-effectiveness, and the scientifically sound, cost-effective use of these commodities.

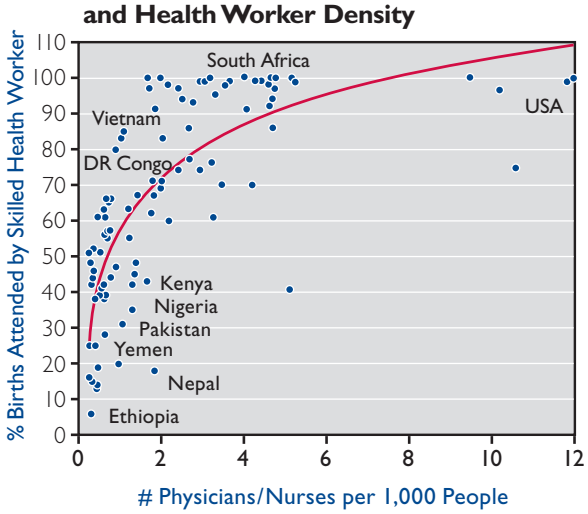
- **Health financing.** USAID assistance helps countries mobilize resources to pay for health needs from reliable, sustainable sources; pool these resources efficiently and equitably; and allocate them in ways to optimize impact, promote efficiency, and enhance equity. Innovative financial measures include expanded health insurance, community-based financing, and targeted subsidies.

- **Governance and leadership.** USAID works to rationalize national health systems so that the health ministry operates with oversight and accountability as the steward of the system, while citizens, civil society, and the private sector provide input and assume new roles and responsibilities. Effective governance depends on effective leadership and management from all parties.

Interventions and Results

National health accounts, community-based financing, and health equity funds improve health care financing. In 2007, USAID continued to lead global efforts to track resource flows for health through national health accounts (figure 29). USAID also encouraged community-based financing, and communities throughout Africa now pool their health funds to increase access to services. Through USAID-supported *mutuelles* (community prepayment health insurance schemes), pay-for-performance schemes, decentralization, and private-public partnerships, **Rwanda** increased access to health insurance from 7 to 51 percent of its population, resulting in increased use of health services. In **Cambodia**, more than 350,000 of the country's poorest people benefited from health equity funds assisted by USAID.

Figure 30: Skilled Assistance at Delivery and Health Worker Density



Source: WHO Statistical Information System, 2007.

Multiple efforts take on health workforce challenges. Globally, there is a shortage of at least 4 million health workers, 1 million in sub-Saharan Africa alone. Such shortages affect the use of health care services; for example, figure 30 illustrates how greater skilled birth attendance is associated with greater availability of health care personnel. In 2007, USAID continued to address the global health human resource shortage through a variety of interventions. In eight African countries,[1] USAID implemented a system to track health worker training, certification and licensure; manage and deploy personnel; and provide long-term modeling and planning. USAID also helped countries meet immediate needs – in **Pakistan**, for example, USAID supported training for 10,000 "lady health workers" who will serve 12 million people in rural districts. USAID helped the midwives association in **Indonesia** add 500 new members, bringing the national total to 7,000 in 12 provinces, an important workforce in a country where midwives provide half of all family planning services. In **Malawi**, USAID trained nearly 4,000 health staff and volunteers in community management of acute malnutrition.

Quality initiatives improve institutional services. USAID improved management capacity and service

1. Rwanda, Uganda, Tanzania, Kenya, Lesotho, Swaziland, Sudan, and Namibia

Capacity Project Supports Innovative Contracting Mechanism in Kenya

A USAID-supported public-private partnership in Kenya provided technical assistance to the Ministry of Health's Emergency Hiring Plan (EHP) on an innovative recruitment model to hire and train health workers and deploy them to facilities with persistent staffing shortages. With the project's assistance, the Ministry hired nearly 1,000 health workers, including community and registered nurses, laboratory and pharmacy technologists, and clinical officers, on three-year contracts and deployed them to 200 government facilities and faith-based hospitals in 66 of Kenya's neediest districts. In addition to a computerized human resource management and payroll system, the model featured a fair and transparent recruiting process, timely receipt of job descriptions and appointment letters, prompt salary payments, and training on the Ministry's sectorwide programs, including integrated HIV/AIDS prevention, care, and treatment. The project worked closely with the Ministry to ensure that all EHP-supported posts were included in future budgets to facilitate keeping the EHP workers at the end of their contracts.

CAPACITY PROJECT FILE PHOTO

An EHP nurse checks a patient's blood pressure at Kajiado Hospital in Kenya.

quality in 14 hospitals in the **Dominican Republic**. The hospitals received national quality awards for their management improvements and provided a showcase for adopting standards nationwide. In **Niger**, USAID worked with 36 maternity centers to increase compliance with essential newborn care standards from starting points as low as 8 percent to an average of 96 percent. In the five **Central Asian Republics**, a regional program introduced concepts of evidence-based medicine into national training programs in maternal and child health, anemia, and hypertension.

Health information helps global partners and nations build better services. In 2007, results from USAID-supported AIDS Indicator Surveys led the United Nations to reduce its global estimate of people infected with HIV from 39.5 million to 33.2 million. In **Kenya**, DHS results showed a high share of women delivering babies without professional assistance and a high neonatal mortality rate. These findings led to a new policy abolishing maternity fees in public dispensaries and health centers as part of a health care reform to increase access to care.

Improved logistics strengthen medical supplies, vaccines, and technologies management. USAID support for logistics systems in 2007 helped six countries in West Africa implement a computerized contraceptive procurement system. Because 10 to 35 percent of drugs in developing countries are counterfeit or of substandard quality, monitoring drug quality is also a critical need, and USAID helped establish 25 surveillance sites to monitor antiretroviral drug quality throughout Asia. In Central America, **Nicaragua** implemented a new logistics management information system that reduced the number of clinics experiencing stock-outs of key medicines from 1,175 to 201 in one year.

Wide availability of health system information improves evidence base for policymaking. USAID introduced the Health Systems Database, an open Web-based database that benchmarks health system performance for developing countries and provides automated country reports and tools for data analysis.

India DHS leads to national call to improve child nutrition. The **India** DHS report published in 2007 showed high and increasing anemia in women and children, prompting the Prime Minister to call on all state ministers to improve nutrition programs. The USAID-supported Micronutrient Initiative launched a nutrition investment plan. Indian researchers and international stakeholders used results to seek changes in nutrition strategies, including iron fortification of wheat flour.

VII. RESEARCH AND TECHNICAL INNOVATION

USAID maintains close connections between research, product development, and field implementation following a research-to-use model.

Researchers in Ethiopia examine slides for malaria parasites.

PROGRESS TO DATE

- More than 1 billion auto-disable syringes, which prevent reuse of contaminated needles and syringes, supplied to public health programs in more than 40 countries.
- Development and operational research on long-lasting insecticide-treated mosquito nets for malaria prevention, with more than 4 million nets distributed throughout Africa in the past two years through the President's Malaria Initiative.

KEY RESULTS REPORTED IN 2007

- A study in Bangladesh showing that a home care strategy to promote an integrated package of preventive and curative newborn care reduces newborn deaths in low-resource and low-access communities with high neonatal mortality.
- A neonatal trial demonstrating that giving a single oral dose of vitamin A (50,000 IU) to Bangladeshi newborns shortly after birth reduced infant deaths by 15 percent.
- A comprehensive worldwide review supported by USAID showing that progestin-only injectable contraceptives are safe for use by women with sickle cell anemia, a finding particularly relevant in sub-Saharan Africa.

USAID is a world leader in undertaking research and producing technical innovations that help developing countries implement low-cost, effective public health programs. The Agency maintains close connections between research, product development, and field implementation following a research-to-use model. The mid-term report on USAID's five-year health research strategy (2006–2010) will be presented to Congress in September 2008 and be publicly available at http://www.harpnet.org. The strategy was first reported in May 2006 (*Report to Congress: Health-Related Research and Development Activities at USAID*, http://pdf.usaid.gov/pdf_docs/PDACH111.pdf).

USAID Strategy

The research-to-use model is an iterative process that includes ongoing validation and evaluation (figure 31). USAID enters the model at various stages, depending on the nature of the health issue and the health policy and systems context. The process comprises:

- **Assessment:** Assessment or formative research that identifies the nature, determinants, or extent of a public health problem and opportunities to address that problem in partnership with host countries and international organizations.

- **Development:** Applied biomedical research that develops new or improves existing health products, technologies, and interventions.

- **Introduction:** Operations research and programmatic health services research that improve information and service delivery, and social and behavioral science research that advances knowledge of determinants and consequences of health behavior and develops or improves tools and approaches to change individual, community, and institutional health-related behaviors.

- **Field implementation:** Mobilization of political commitment and resources and scaling up of an intervention in conjunction with monitoring and evaluation.

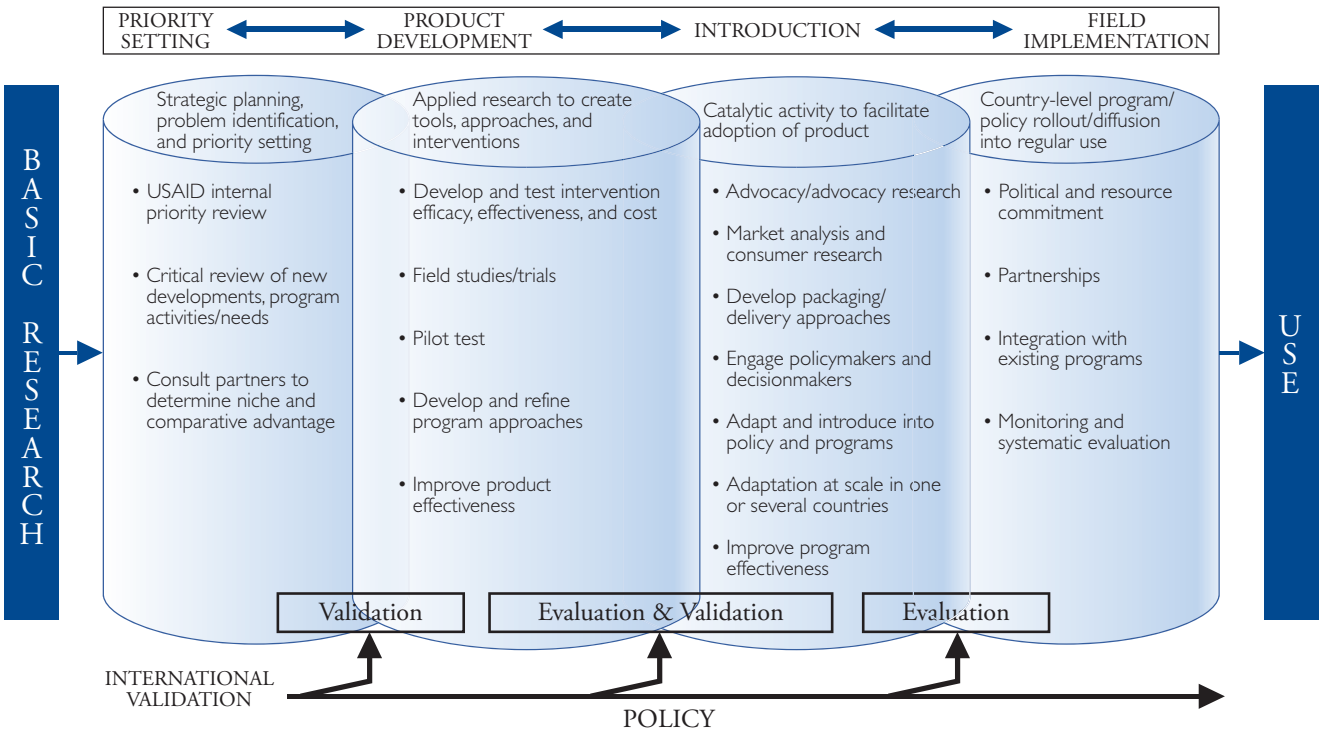
During the different stages of the research-to-use process, USAID often joins with multiple partners to engage their strengths to achieve the greatest health impact. These partners include, among others, the Centers for Disease Control and Prevention and the National Institutes of Health of the Department of Health and Human Services, the Department of Defense, WHO, UNICEF, host-country governments, universities, NGOs, and commercial sector partners.

Interventions and Results

Maternal, Newborn, and Child Health

Association between longer pregnancy intervals and lower mortality, nutrition risks confirmed. The largest study to date of the relationship between pregnancy intervals and perinatal, newborn, infant, child, and under-5 mortality and nutrition status was completed. The findings confirm that 36-month birth-to-pregnancy intervals are associated with the lowest risk of mortality

Figure 31: Pathway From Research to Field Implementation and Use



Source: USAID.

and poor nutrition status. These findings are being integrated into postpartum education programs and other venues.

New sampling tool introduced. An analysis of existing tools to measure maternal mortality and develop a set of tools to evaluate safe motherhood interventions was finished. Among the most promising new developments is the now-completed Sampling at Service Sites, which measures rates of maternal mortality in the community and offers potential low cost and time savings over traditional house-to-house surveys.

Study demonstrates effectiveness of newborn home care strategy. A study in **Bangladesh** showed that a home care strategy to promote an integrated package of preventive and curative newborn care reduces newborn deaths in communities with a weak health system, low health care use, and high neonatal mortality. Neonatal mortality was reduced by up to 34 percent through combined prenatal and neonatal care.

Infection prevention is focus of research and product development in Bangladesh. Studies are under way in **Bangladesh** to assess the effectiveness and feasibility of infection prevention in the community through use of an antiseptic wash on the umbilical cord. Simultaneously, product development and testing are under way to accelerate uptake of a product by the public and private health sectors, should the replication study confirm effectiveness.

Home and facility-based care of severe child pneumonia found equally effective. Published research supported by USAID demonstrated the equivalence of home treatment of severe pneumonia in young children to facility-based care. This finding could significantly change the way the illness is managed in developing countries, saving a significant number of lives every year and taking pressure off health systems.

Nutrition

Trial demonstrates that vitamin A reduces infant mortality. A neonatal trial demonstrated that giving a single oral dose of vitamin A (50,000 IU) to newborns in **Bangladesh** shortly after birth reduced infant deaths

by 15 percent. These findings show great promise for South Asia, where administering vitamin A to newborns could save from one-quarter to one-half million infant deaths each year.

Trials provide direction for introducing combined zinc/oral rehydration diarrhea treatment. Introduction trials of combined zinc and low-osmolarity oral rehydration solution (ORS) for diarrhea treatment have been completed, providing an understanding of how to increase the treatment's availability and uptake in the public and private sectors. Studies in **India**, **Mali**, and **Pakistan** demonstrated that diarrhea is more effectively treated when caregivers receive education on zinc treatment and have ready access to supplies of ORS and zinc, particularly at the community level. Promotion of zinc for diarrhea significantly increased ORS use and decreased antibiotic use.

USAID analyses benefit maternal anemia programs in India. To assist maternal anemia programs in **India**, USAID-supported analyses generated solutions to supply and logistics problems that had been major program barriers in the past. Now, more than 3.3 million pregnant women in Uttar Pradesh and Jharkhand states have access to iron-folic acid as a direct result of USAID intervention.

USAID and partners collaborate on community-based approach to malnutrition. USAID worked with WHO and UNICEF to develop internationally accepted normative standards and guidelines to facilitate the integration of community management of severe acute malnutrition into national health systems. In May 2007, WHO, the World Food Programme, the United Nations System Standing Committee on Nutrition, and UNICEF issued a joint statement supporting this approach.[1]

Family Planning and Reproductive Health

Study moves contraceptive ring toward Phase III trials. Results of a pharmacokinetic study of the NES/EE contraceptive vaginal ring showed that a manufactured ring was as effective as the handmade ring previously tested. The advantages of the manufactured ring include low cost, high quality, and a greatly expanded capacity for manufacturing the quantities needed to continue product development. The findings allowed for the start-up of Phase III trials.

Review demonstrates safety of progestin-only injectable for women with sickle cell disease. USAID supported a comprehensive worldwide review that showed that progestin-only injectable contraceptives are safe for use by women with sickle cell anemia. This finding is particularly relevant in sub-Saharan Africa, where the Depo-Provera injectable contraceptive is highly popular and sickle cell disease is widespread.

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Researchers from South Africa, Ethiopia, Zimbabwe, Uganda, Kenya, Cameroon, Côte d'Ivoire, and the United States attend a workshop on HIV drug resistance and vaccine design at the University of Cape Town Medical School in South Africa.

Quality assurance tool supports service delivery in India. A simple quality assurance tool designed to improve family planning service delivery, developed with USAID support, is now being used in all districts of Gujarat state in **India**. The national Ministry of Health and Family Welfare is scaling up use of the tool in six more states with technical assistance from USAID-supported implementing partners.

HIV/AIDS

Microbicide trials successfully implemented. At the recommendation of their respective Data Safety Monitoring Boards, the Phase III trials for the Savvy and Ushercell microbicides have been ended. The Carraguard Phase III trial is a milestone for being the first large clinical trial for effectiveness to be successfully completed. The results indicate that the product is safe and acceptable but did not significantly prevent infection in this trial. Despite this outcome, the Carraguard trial demonstrates for the microbicide field the feasibility of and best practices for conducting large trials with extensive community involvement in developing countries.

1. Community-Based Management of Severe Acute Malnutrition: A Joint Statement by the World Health Organization, the World Food Programme, the United Nations System Standing Committee on Nutrition, and the United Nations Children's Fund, May 2007.

Large-scale, long-term microbicide trials continue. USAID continues to support large-scale multiyear clinical effectiveness trials for microbicide candidates. These Phase IIB/III trials are evaluating tenofovir 1% vaginal gel and oral Truvada in women in international Phase III studies involving thousands of volunteers.

Infectious Diseases

Research and development continue for malaria drugs. USAID supports the Medicines for Malaria Venture (MMV), a nonprofit, public-private partnership created to replenish and then sustain the global pipeline of antimalarial drugs. MMV's goal is to register at least one new antimalarial drug every five years, with an emphasis on drugs that are effective against drug-resistant strains of *Plasmodium falciparum* and can be used safely in young children and pregnant women. MMV currently has a portfolio of 38 different pharmaceuticals at various stages of development from initial laboratory studies to Phase III field-testing and registration.

USAID-supported trials advance TB diagnostics. A new diagnostic technology for TB detection and a revised diagnostic approach were adopted into global policy through WHO. Included in the new policy recommendations were two liquid culture techniques for which USAID supported the field trial. These techniques are more sensitive for detection of mycobateria than the current solid culture method and reduce the time for determining drug-resistant TB from weeks to days.

Operations research studies TB-HIV care, treatment compliance. Important operational research has been conducted to better inform programmatic investments and improve the performance of national TB programs. This year, research identified barriers to coordinated TB-HIV care and assessed reasons for poor treatment compliance among patients.

Health Systems

Quality improvement methodologies bring results in Niger. Through the use of "quality improvement collaboratives," a quality improvement approach developed in the United States, **Niger** increased compliance with evidence-based guidelines for children hospitalized with severe malnutrition, facilitating a drop in the case fatality rate from 29 to 13 percent. One such collaborative increased the average level of compliance with standards for child health services from 37 to 76 percent.

Partners collaborate to develop M&E tool. The Monitoring & Evaluation System Strengthening Tool was developed collaboratively with the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Office of the U.S. Global AIDS Coordinator; the Joint United Nations Programme on HIV/AIDS; the World Bank; the Health Metrics Network; and Roll Back Malaria. The Global Fund now mandates the tool's use as part of its grant negotiation process. The tool is easily adapted for use by any development partner or government.

National health account study reveals need for new financing mechanisms in Malawi. The application of the national health accounts framework revealed that despite a huge increase in household spending, free-of-charge public services, and increased donor expenditures for health, there was no improvement in the quality of care or utilization of public services. The Ministry of Health is using these findings to reinforce the need for new health care financing mechanisms, such as performance-based financing.

FINANCIAL ANNEX

Funding Tables

The Department of State, Office of the Director of Foreign Assistance, established a joint data system that manages the budget process for USAID and the Department of State. The data system is based on the F 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.

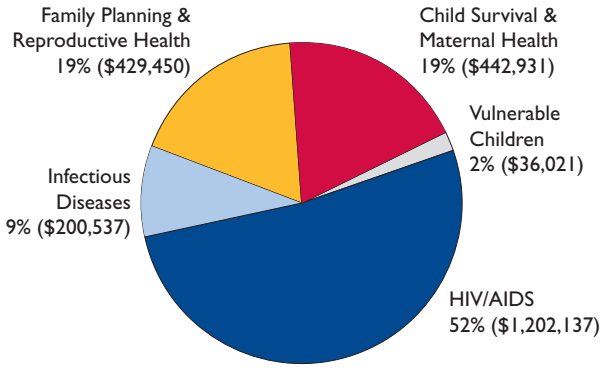
Table 1: FY 2007 USAID Total Health Budget by Program Category and Bureau

($ thousands)

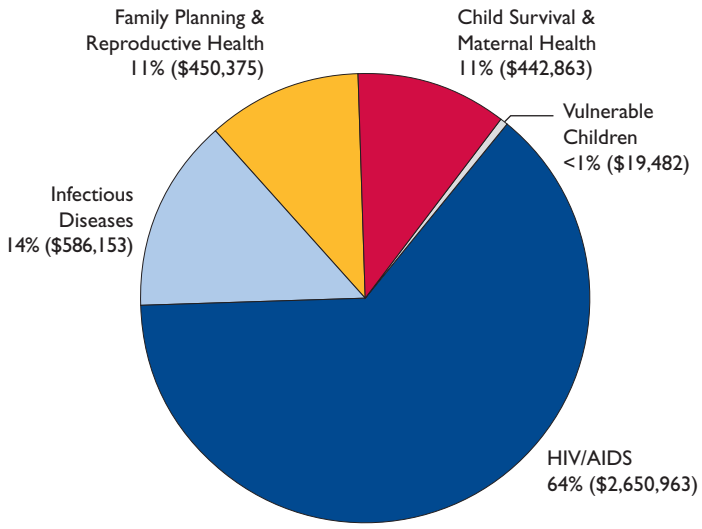
Program Category	AFR	ANE	E&E	LAC	DCHA	GH	Int'l. Partners	Total
Child Survival & Maternal Health	94,636	163,801	8,330	41,622	-	63,194	71,280	442,863
Vulnerable Children	1,300	400	-	-	16,000	-	1,782	19,482
HIV/AIDS	1,388,741	117,224	27,731	80,894	-	200,294	836,080	2,650,963
Infectious Diseases	233,968	73,798	19,489	18,875	-	64,173	175,850	586,153
Family Planning & Reproductive Health	140,335	143,064	10,653	44,748	-	111,575	-	450,375
Total	1,858,980	498,287	66,203	186,139	16,000	439,236	1,084,992	4,149,836

FY 2004 and FY 2007 Total Health Budget by Program Category

($ thousands)



FY 2004 Total = $2.31 billion



FY 2007 Total = $4.15 billion

Note: Percents may not total 100 due to rounding.

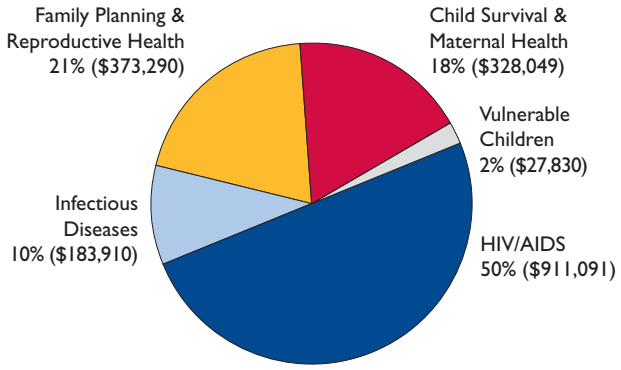
Table 2: FY 2007 Child Survival and Health Programs Fund Budget by Program Category and Bureau

($ thousands)

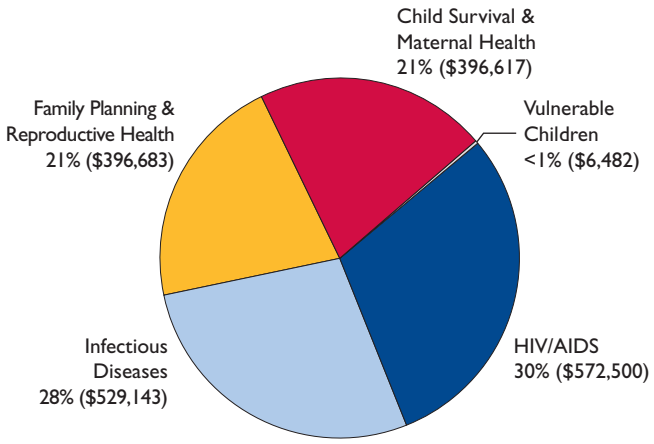
Program Category	AFR	ANE	E&E	LAC	DCHA	GH	Int'l. Partners	Total
Child Survival & Maternal Health	94,036	126,485	-	41,622	-	63,194	71,280	396,617
Vulnerable Children	1,300	400	-	-	3,000	-	1,782	6,482
HIV/AIDS	81,301	67,184	6,378	33,578	-	54,179	329,880	572,500
Infectious Diseases	233,893	36,352	-	18,875	-	64,173	175,850	529,143
Family Planning & Reproductive Health	137,610	102,750	-	44,748	-	111,575	-	396,683
Total	548,140	333,171	6,378	138,823	3,000	293,121	578,792	1,901,425

FY 2004 and FY 2007 Child Survival and Health Programs Fund Budget by Program Category

($ thousands)



FY 2004 Total = $1.82 billion



FY 2007 Total = $1.90 billion

Note: Percents may not total 100 due to rounding.

Table 3: FY 2007 USAID Total 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	1,000	-	3,600	409	18,500	-	2,501	26,010
Benin	2,050	-	2,340	-	3,600	-	2,175	10,165
Botswana	-	-	11,627	-	-	-	-	11,627
Burundi	1,200	-	2,680	-	-	-	-	3,880
Cameroon	-	-	660	-	-	-	-	660
Congo, Dem. Rep of	8,798	1,300	5,660	1,550	6,700	273	6,700	30,981
Cote d'Ivoire	-	-	27,164	-	-	-	-	27,164
Djibouti	500	-	150	150	-	-	-	800
Ethiopia	8,431	-	139,460	1,200	6,700	500	16,882	173,173
Ghana	3,000	-	6,360	500	5,000	495	6,347	21,702
Guinea	2,813	-	2,658	-	-	-	2,373	7,844
Kenya	1,000	-	228,594	1,500	6,050	-	10,400	247,544
Lesotho	-	-	5,026	-	-	-	-	5,026
Liberia	1,500	-	2,110	-	2,500	-	3,093	9,203
Madagascar	3,475	-	2,030	-	5,000	-	6,500	17,005
Malawi	2,549	-	12,955	1,381	18,500	-	5,600	40,985
Mali	3,900	-	4,240	-	4,500	-	6,500	19,140
Mozambique	4,805	-	93,085	1,000	18,000	412	5,048	122,350
Namibia	-	-	39,255	1,180	-	-	-	40,435
Nigeria	8,789	-	135,471	1,600	6,500	-	18,225	170,585
Rwanda	1,321	-	72,484	-	20,000	-	6,700	100,505
Senegal	2,650	-	5,466	800	16,700	-	3,500	29,116
Sierra Leone	300	-	480	-	-	-	-	780
Somalia	500	-	-	-	-	-	-	500
South Africa	1,704	-	226,078	3,000	-	-	1,000	231,782
Sudan	11,645	-	3,995	500	3,000	3,570	1,191	23,901
Swaziland	-	-	5,131	-	-	-	-	5,131
Tanzania	3,530	-	98,162	400	31,000	-	8,100	141,192
Uganda	2,260	-	110,421	1,900	21,500	-	8,300	144,381
Zambia	4,408	-	116,993	1,000	9,470	-	5,800	137,671
Zimbabwe	-	-	14,701	-	-	-	1,200	15,901
Africa Regional	9,720	-	2,013	2,410	2,000	2,273	2,000	20,416
East Africa Regional	1,776	-	2,800	745	-	-	2,300	7,621
Southern Africa Regional	-	-	2,611	-	-	-	-	2,611
West Africa Regional	1,012	-	2,280	-	-	-	7,900	11,192
Total	94,636	1,300	1,388,741	21,225	205,220	7,523	140,335	1,858,980

Table 3 (cont'd.): FY 2007 USAID Total 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 NEAR EAST (ANE)								
Afghanistan	62,199	400	-	1,000	-	2,830	46,343	112,772
Bangladesh	8,884	-	2,673	1,700	-	-	16,700	29,957
Burma	-	-	2,100	-	-	-	-	2,100
Cambodia	4,794	-	15,552	3,428	-	1,952	3,000	28,726
China	-	-	5,175	-	-	-	-	5,175
Egypt	13,144	-	1,488	-	-	31,822	13,017	59,471
India	14,555	-	22,232	4,700	-	1,485	14,707	57,679
Indonesia	15,191	-	8,316	3,000	-	-	1,000	27,507
Jordan	11,750	-	500	-	-	0	10,874	23,124
Laos	-	-	1,000	-	-	-	-	1,000
Nepal	5,438	-	6,000	-	-	352	6,300	18,090
Pakistan	19,014	-	5,220	3,371	-	1,784	11,914	41,303
Papua New Guinea	-	-	1,500	-	-	-	-	1,500
Philippines	4,362	-	990	4,510	-	-	14,500	24,362
Thailand	-	-	1,400	-	-	-	-	1,400
Timor-Leste	1,040	-	-	-	-	-	2,000	3,040
Vietnam	-	-	38,789	-	-	1,500	-	40,289
West Bank Gaza	200	-	-	-	-	-	-	200
Yemen	2,000	-	-	-	-	-	1,509	3,509
Regional Development Mission	-	-	3,200	2,589	5,500	2,200	-	13,489
ANE Regional	1,230		1,089	-	-	75	1,200	3,594
Total	163,801	400	117,224	24,298	5,500	44,000	143,064	498,287

Table 3 (cont'd.): FY 2007 USAID Total 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		
EUROPE AND EURASIA (E&E)								
Albania	538	-	-	100	-	500	550	1,688
Armenia	2,575	-	-	100	-	805	3,761	7,241
Azerbaijan	-	-	-	-	-	1,700	1,300	3,000
Belarus	-	-	-	450	-	-	-	450
Georgia	1,281	-	1,500	898	-	405	742	4,826
Kazakhstan	471	-	1,200	655	-	536	-	2,862
Kyrgyz Republic	846	-	1,000	980	-	906	224	3,956
Moldova	-	-	-	-	-	400	-	400
Russia	-	-	12,873	3,490	-	450	2,630	19,443
Tajikistan	416	-	1,154	843	-	652	47	3,112
Turkmenistan	284	-	657	1,114	-	317	14	2,386
Ukraine	530	-	6,344	1,660	-	-	385	8,919
Uzbekistan	999	-	1,200	938	-	823	222	4,182
Central Asia Regional	-	-	1,238	-	-	-	-	1,238
Eurasia Regional	288	-	305	341	-	236	541	1,711
Europe Regional	102	-	260	107	-	83	237	789
Total	8,330	-	27,731	11,676	-	7,813	10,653	66,203

Table 3 (cont'd.): FY 2007 USAID Total 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		
LATIN AMERICA AND THE CARIBBEAN (LAC)								
Belize	-	-	485	-	-	-	-	485
Bolivia	5,500	-	1,000	1,000	-	1,485	7,900	16,885
Brazil	-	-	1,000	2,095	-	105	-	3,200
Costa Rica	-	-	242	-	-	-	-	242
Dominican Republic	3,639	-	5,538	1,320	-	-	1,394	11,891
Ecuador	2,000	-	-	-	-	-	-	2,000
El Salvador	3,000	-	2,166	-	-	1,115	2,144	8,425
Guatemala	4,346	-	3,364	-	-	-	6,300	14,010
Guyana	-	-	13,808	-	-	-	-	13,808
Haiti	7,900	-	32,851	600	-	-	11,300	52,651
Honduras	3,552	-	5,557	-	-	-	3,482	12,591
Jamaica	-	-	1,300	-	-	601	909	2,810
Mexico	-	-	2,200	1,520	-	-	-	3,720
Nicaragua	3,000	-	2,177	-	-	-	2,661	7,838
Panama	-	-	458	-	-	-	-	458
Paraguay	1,000	-	-	-	-	-	2,100	3,100
Peru	5,200	-	1,200	600	-	545	5,191	12,736
Caribbean Regional	-	-	6,070	570	-	-	-	6,640
Central American Regional	-	-	969	700	-	-	-	1,669
LAC Regional	2,485	-	509	1,150	5,000	469	1,367	10,980
Total	41,622	-	80,894	9,555	5,000	4,320	44,748	186,139

Table 3 (cont'd.): FY 2007 USAID Total 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		
CENTRAL PROGRAMS								
Democracy, Conflict & Humanitarian Asst.	-	16,000	-	-	-	-	-	16,000
Global Health	63,194	-	200,294	28,110	32,280	3,783	111,575	439,236
Total	63,194	16,000	200,294	28,110	32,280	3,783	111,575	455,236
INTERNATIONAL PARTNERSHIPS								
Avian Influenza	-	-	-	-	-	161,000	-	161,000
Blind Children	-	1,782	-	-	-	-	-	1,782
Commodities	-	-	14,070	-	-	-	-	14,070
GAVI	69,300	-	-	-	-	-	-	69,300
Global Fund to Fight AIDS, TB & Malaria	-	-	724,000	-	-	-	-	724,000
IAVI	-	-	28,710	-	-	-	-	28,710
Iodine Deficiency Disorder	1,980	-	-	-	-	-	-	1,980
Microbicide Research	-	-	39,600	-	-	-	-	39,600
Neglected Tropical Diseases	-	-	-	-	-	14,850	-	14,850
UNAIDS	-	-	29,700	-	-	-	-	29,700
Total	71,280	1,782	836,080	-	-	175,850	-	1,084,992
Total Health Budget	442,863	19,482	2,650,963	94,864	248,000	243,289	450,375	4,149,836

Table 4: FY 2007 Child Survival and Health Programs Fund 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	1,000	-	3,272	409	18,500	-	2,501	25,682
Benin	2,050	-	2,340	-	3,600	-	2,175	10,165
Burundi	1,100	-	2,680	-	-	-	-	3,780
Cameroon	-	-	660	-	-	-	-	660
Congo, Dem. Rep of	8,798	1,300	5,360	1,550	6,700	273	6,700	30,681
Djibouti	-	-	-	75	-	-	-	75
Ethiopia	8,431	-	-	1,200	6,700	500	16,882	33,713
Ghana	3,000	-	6,330	500	5,000	495	6,347	21,672
Guinea	2,813	-	2,658	-	-	-	2,373	7,844
Kenya	1,000	-	0	1,500	6,050	-	10,400	18,950
Lesotho	-	-	3,000	-	-	-	-	3,000
Liberia	1,500	-	1,410	-	2,500	-	3,093	8,503
Madagascar	3,475	-	2,030	-	5,000	-	6,500	17,005
Malawi	2,549	-	12,385	1,381	18,500	-	5,600	40,415
Mali	3,900	-	4,240	-	4,500	-	6,500	19,140
Mozambique	4,805	-	-	1,000	18,000	412	5,048	29,265
Namibia	-	-	-	1,180	-	-	-	1,180
Nigeria	8,789	-	-	1,600	6,500	-	15,500	32,389
Rwanda	1,321	-	-	-	20,000	-	6,700	28,021
Senegal	2,650	-	5,466	800	16,700	-	3,500	29,116
Sierra Leone	300	-	480	-	-	-	-	780
Somalia	500	-	-	-	-	-	-	500
South Africa	1,704	-	-	3,000	-	-	1,000	5,704
Sudan	11,645	-	3,885	500	3,000	3,570	1,191	23,791
Swaziland	-	-	2,600	-	-	-	-	2,600
Tanzania	3,530	-	-	400	31,000	-	8,100	43,030
Uganda	2,260	-	-	1,900	21,500	-	8,300	33,960
Zambia	4,408	-	-	1,000	9,470	-	5,800	20,678
Zimbabwe	-	-	12,801	-	-	-	1,200	14,001
Africa Regional	9,720	-	2,013	2,410	2,000	2,273	2,000	20,416
East Africa Regional	1,776	-	2,800	745	-	-	2,300	7,621
Southern Africa Regional	-	-	2,611	-	-	-	-	2,611
West Africa Regional	1,012	-	2,280	-	-	-	7,900	11,192
Total	94,036	1,300	81,301	21,150	205,220	7,523	137,610	548,140

Table 4 (cont'd.): FY 2007 Child Survival and Health Programs Fund Budget by Program Category and Country

($ thousands)

Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	TB	Malaria	Antimicrobial, Surveillance, & Other ID	Family Planning & Reproductive Health	Total
ASIA AND NEAR EAST (ANE)								
Afghanistan	62,199	400	-	1,000	-	2,830	34,343	100,772
Bangladesh	8,862	-	2,673	1,700	-	-	16,700	29,935
Burma	-	-	2,100	-	-	-	-	2,100
Cambodia	4,794	-	14,652	3,428	-	1,952	3,000	27,826
China	-	-	4,800	-	-	-	-	4,800
India	14,555	-	17,964	4,700	-	1,485	14,707	53,411
Indonesia	15,191	-	8,316	3,000	-		1,000	27,507
Laos	-	-	1,000	-	-		-	1,000
Nepal	5,438	-	6,000	-	-	352	6,300	18,090
Pakistan	9,854	-	1,500	1,031	-	-	10,000	22,385
Papua New Guinea	-	-	1,500	-	-	-	-	1,500
Philippines	4,362	-	990	4,510	-	-	14,500	24,362
Thailand	-	-	1,400	-	-	-	-	1,400
Timor-Leste	-	-	-	-	-	-	1,000	1,000
Regional Development Mission	-	-	3,200	2,589	5,500	2,200	-	13,489
ANE Regional	1,230	-	1,089	-	-	75	1,200	3,594
Total	126,485	400	67,184	21,958	5,500	8,894	102,750	333,171
EUROPE AND EURASIA (E&E)								
Russia	-	-	2,970	-	-	-	-	2,970
Ukraine	-	-	2,170	-	-	-	-	2,170
CAR Regional	-	-	988	-	-	-	-	988
Europe Regional	-	-	250	-	-	-	-	250
Total	-	-	6,378	-	-	-	-	6,378

Table 4 (cont'd.): FY 2007 Child Survival and Health Programs Fund 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		
LATIN AMERICA AND THE CARIBBEAN (LAC)								
Belize	-	-	485	-	-	-	-	485
Bolivia	5,500	-	1,000	1,000	-	1,485	7,900	16,885
Brazil	-	-	1,000	2,095	-	105	-	3,200
Costa Rica	-	-	242	-	-	-	-	242
Dominican Republic	3,639	-	5,538	1,320	-	-	1,394	11,891
Ecuador	2,000	-	-	-	-	-	-	2,000
El Salvador	3,000	-	2,166	-	-	1,115	2,144	8,425
Guatemala	4,346	-	3,364	-	-	-	6,300	14,010
Haiti	7,900	-	-	600	-	-	11,300	19,800
Honduras	3,552	-	5,000	-	-	-	3,482	12,034
Jamaica	-	-	1,300	-	-	601	909	2,810
Mexico	-	-	2,200	1,520	-	-	-	3,720
Nicaragua	3,000	-	2,077	-	-	-	2,661	7,738
Panama	-	-	458	-	-	-	-	458
Paraguay	1,000	-	-	-	-	-	2,100	3,100
Peru	5,200	-	1,200	600	-	545	5,191	12,736
Caribbean Regional	-	-	6,070	570	-	-	-	6,640
Central American Regional	-	-	969	700	-	-	-	1,669
LAC Regional	2,485	-	509	1,150	5,000	469	1,367	10,980
Total	41,622	-	33,578	9,555	5,000	4,320	44,748	138,823

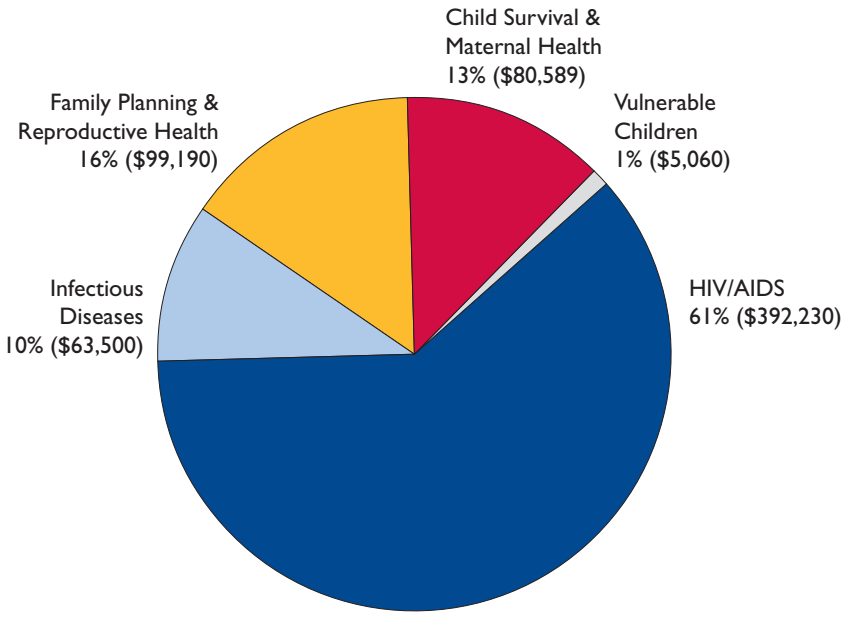
Table 4 (cont'd.): FY 2007 Child Survival and Health Programs Fund Budget by Program Category and Country

($ thousands)

Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	Infectious Diseases			Family Planning & Reproductive Health	Total
				TB	Malaria	Antimicrobial, Surveillance, & Other ID		
CENTRAL PROGRAMS								
Democracy, Conflict & Humanitarian Asst.	-	3,000	-	-	-	-	-	3,000
Global Health	63,194	-	54,179	28,110	32,280	3,783	111,575	293,121
Total	63,194	3,000	54,179	28,110	32,280	3,783	111,575	296,121
INTERNATIONAL PARTNERSHIPS								
Avian Influenzia	-	-	-	-	-	161,000	-	161,000
Blind Children	-	1,782	-	-	-	-	-	1,782
Commodities	-	-	14,070	-	-	-	-	14,070
GAVI	69,300	-	-	-	-	-	-	69,300
Global Fund to Fight AIDS, TB & Malaria	-	-	247,500	-	-	-	-	247,500
IAVI	-	-	28,710	-	-	-	-	28,710
Iodine Deficiency Disorder	1,980	-	-	-	-	-	-	1,980
Microbicide Research	-	-	39,600	-	-	-	-	39,600
Neglected Tropical Diseases	-	-	-	-	-	14,850	-	14,850
Total	71,280	1,782	329,880	-	-	175,850	-	578,792
Total CSH	396,617	6,482	572,500	80,773	248,000	200,370	396,683	1,901,425

FY 2004 Total Health Budget by Program Category, Africa Region

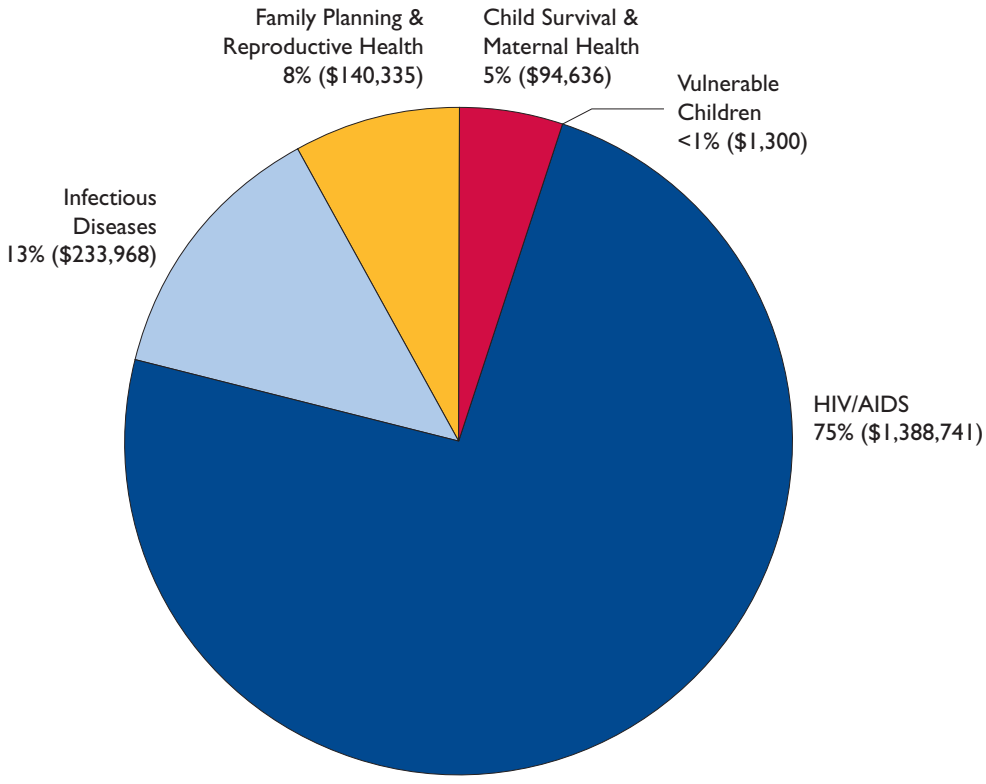
($ thousands)



Note: Percents do not total 100 due to rounding.

FY 2007 Total Health Budget by Program Category, Africa Region

($ thousands)

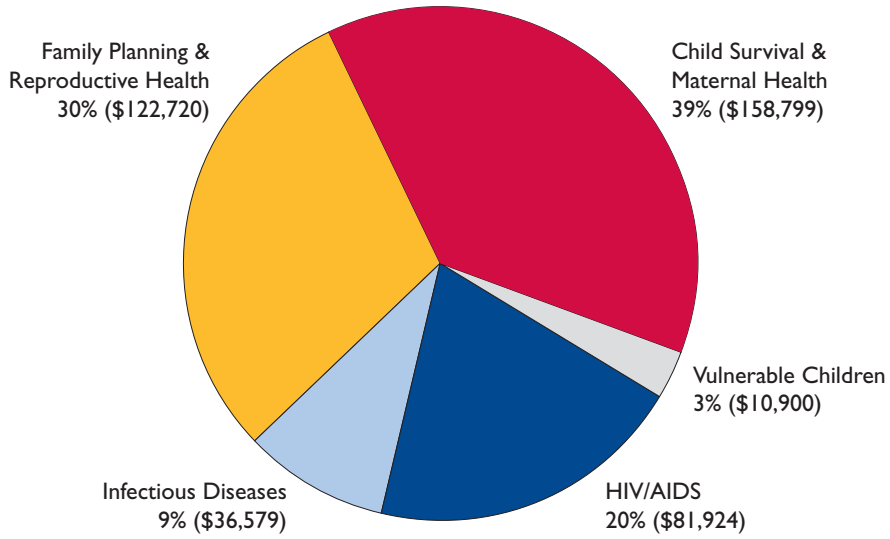


FY 2007 Total = $1.86 billion

Note: Percents do not total 100 due to rounding.

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

($ thousands)

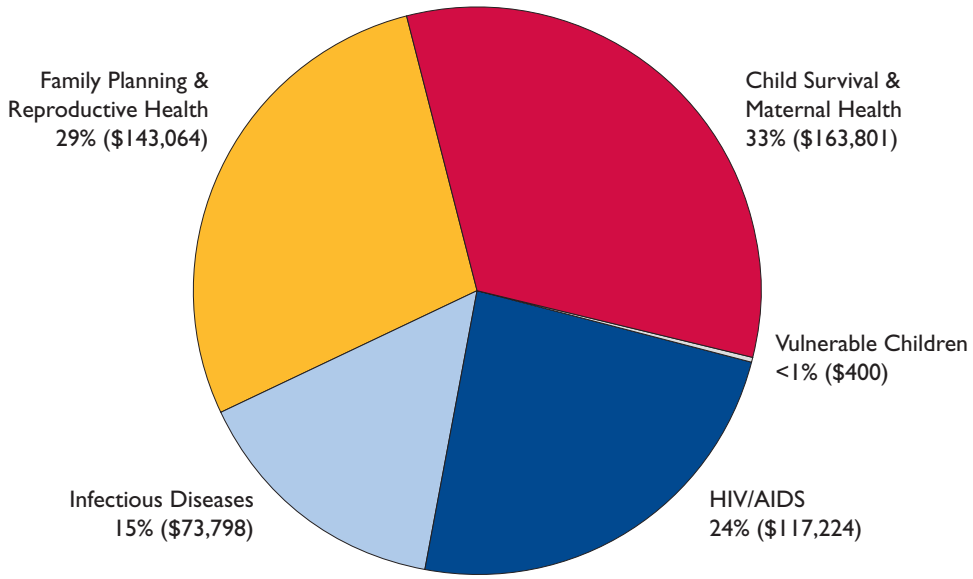


FY 2004 Total = $410.92 million

Note: Percents do not total 100 due to rounding.

FY 2007 Total Health Budget by Program Category, Asia and Near East Region

($ thousands)

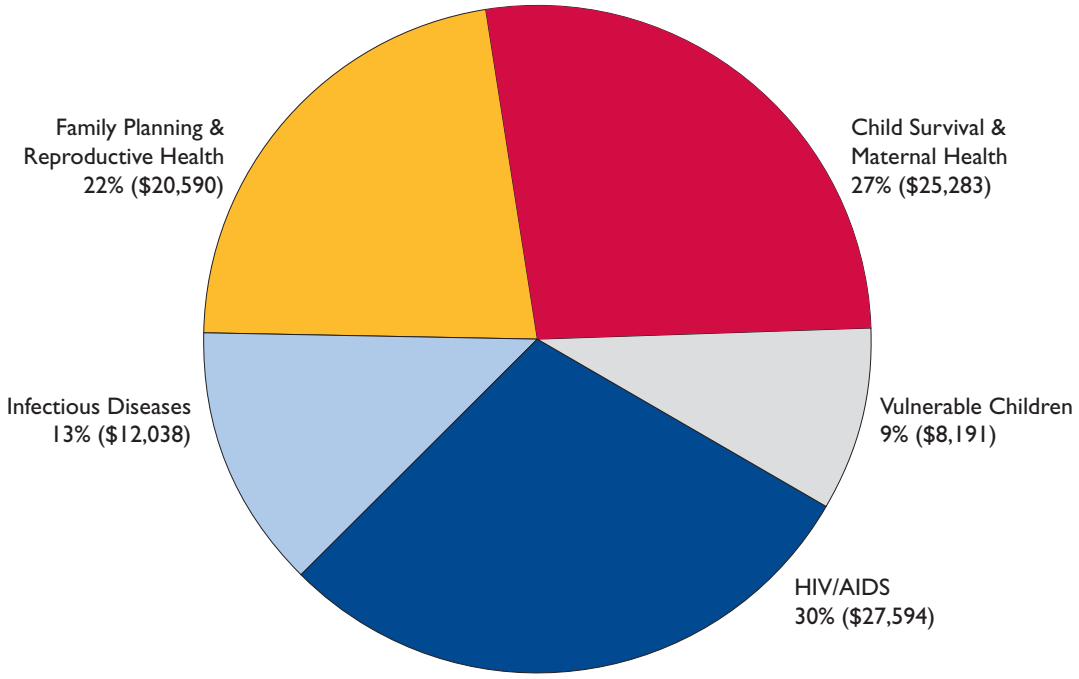


FY 2007 Total = $498.29 million

Note: Percents do not total 100 due to rounding.

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

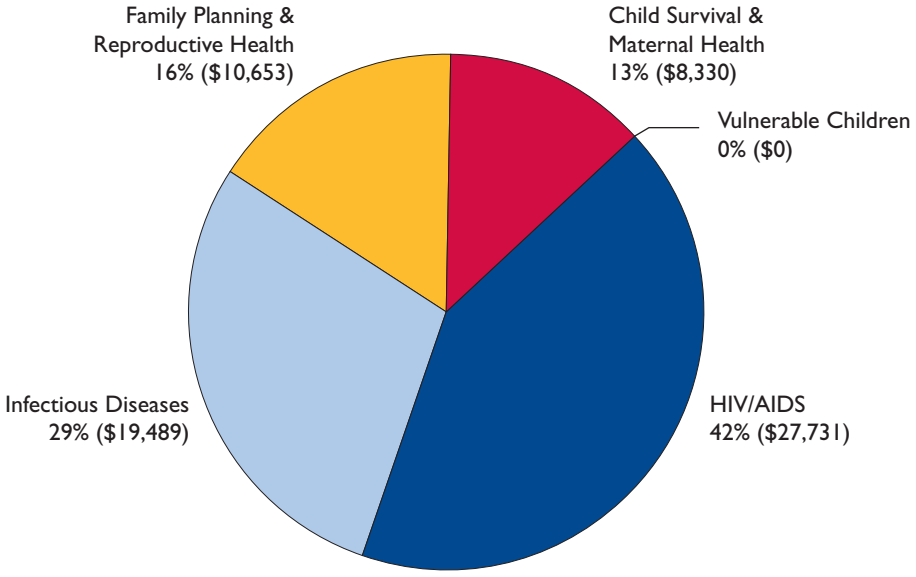
($ thousands)



Note: Percents do not total 100 due to rounding.

FY 2007 Total Health Budget by Program Category, Europe and Eurasia Region

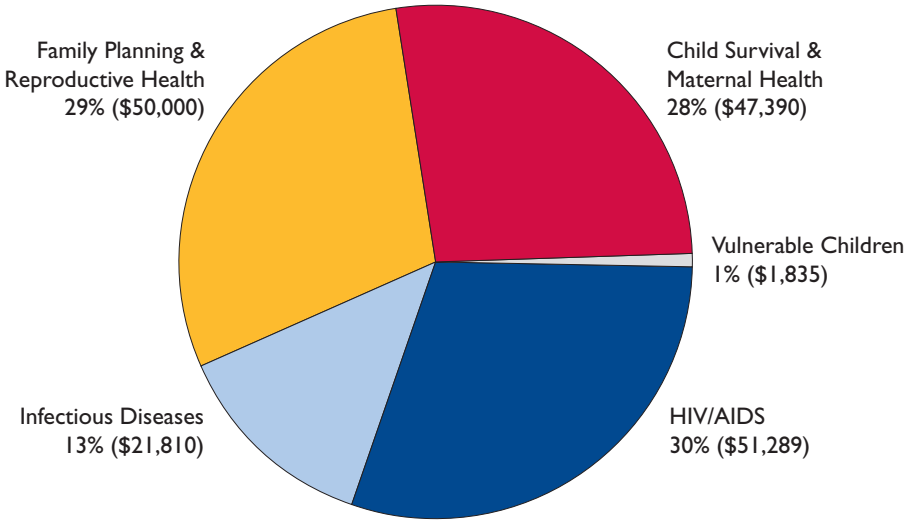
($ thousands)



FY 2007 Total = $66.20 million

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

($ thousands)

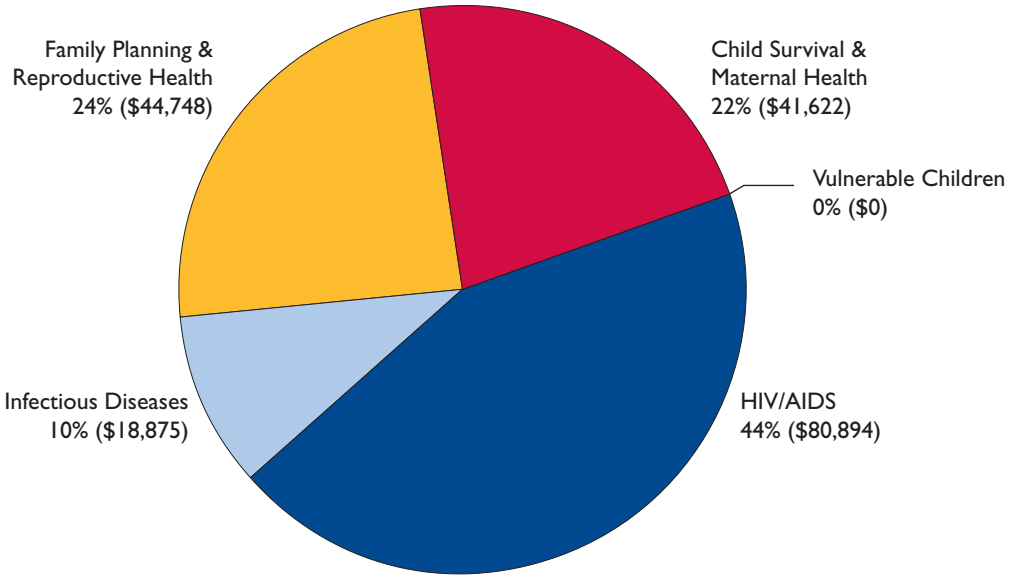


FY 2004 Total = $172.32 million

Note: Percents do not total 100 due to rounding.

FY 2007 Total Health Budget by Program Category, Latin America and Caribbean Region

($ thousands)



FY 2007 Total = $186.14 million

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