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At Work for Global Health

REPORT TO CONGRESS
GLOBAL HEALTH AND CHILD SURVIVAL PROGRESS REPORT

FISCAL YEAR 2008

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GLOBAL HEALTH AND CHILD SURVIVAL PROGRESS REPORT

U.S. Agency for International Development

2009

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Cover photograph: Virginia Lamprecht

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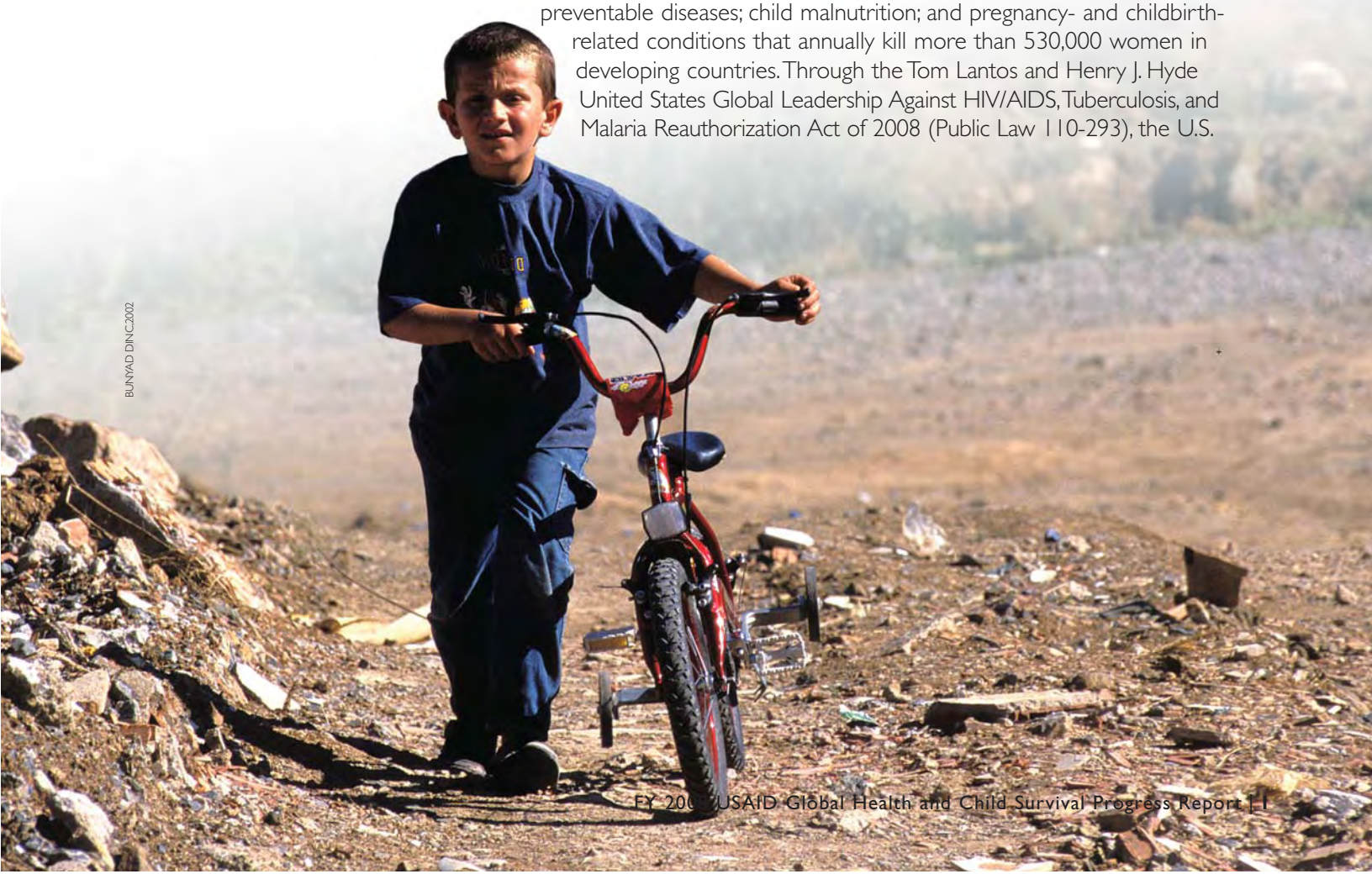
EXECUTIVE SUMMARY

In fiscal year (FY) 2008, the United States Agency for International Development (USAID) continued as a leader on the global health stage. The Agency made substantial contributions to protecting the health of mothers, young children, infants, and other vulnerable populations, including those at high risk for HIV/AIDS and other infectious diseases such as malaria and tuberculosis (TB), in some of the world's poorest countries. These contributions were realized through a wide range of partnerships with international agencies, other bilateral donor countries, developing-country governments, civil society and nongovernmental organizations (NGOs), and private sector commercial groups. Such alliances ensured the most effective, and cost-effective, delivery of lifesaving services to populations in need.

USAID's global health and child survival programs targeted the most prolific killers of men, women, and children in developing countries: infectious diseases such as malaria and TB; HIV/AIDS; the common but dangerous diseases of early childhood, including diarrhea, pneumonia, and vaccine-preventable diseases; child malnutrition; and pregnancy- and childbirth-related conditions that annually kill more than 530,000 women in developing countries. Through the Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008 (Public Law 110-293), the U.S.



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KEY RESULTS

Infectious diseases:

- With USAID a major partner, the President's Malaria Initiative reached more than 32 million people in its 15 focus countries with lifesaving prevention and treatment services.
- More than 1.2 million tuberculosis (TB) patients successfully completed TB treatment in 20 USAID priority (Tier One) countries, resulting in more than 600,000 lives saved.
- The number of countries reporting H5N1 (avian influenza) outbreaks in poultry decreased 60 percent since 2006, and the number reporting H5N1 in humans decreased more than 60 percent.
- More than 57 million drug treatments for neglected tropical diseases were delivered to more than 30 million people in four countries.

HIV/AIDS:

- In FY 2008, USAID managed $3.06 billion, or more than 65 percent, of the U.S. President's Emergency Plan for AIDS Relief funds.
- USAID reached 58.3 million people with messages on the ABC (Abstain, Be faithful, correct and consistent use of Condoms) approach to preventing sexual transmission of HIV.
- Nearly 2.2 billion condoms were supplied worldwide between 2004 and 2008.
- More than 750,000 patients receive antiretroviral treatment annually through USAID-supported commodities and systems.

Child survival and maternal health:

- Since the late 1980s, USAID maternal health programs have helped reduce maternal mortality in 15 countries by 9 to 48 percent. In 11 of these countries, newborn mortality also decreased by 16 to 42 percent.
- Immunizations prevented more than 2.5 million deaths from diphtheria, tetanus, pertussis, and measles.
- USAID's infant and young child nutrition programs reached more than 20 million children.

Family planning and reproductive health:

- In more than 30 USAID-assisted countries, the number of married women of reproductive age using a modern contraceptive method increased to 110 million, representing an increase in the modern contraceptive prevalence rate from 28 to 34 percent since 2000.
- The percentage of births spaced 36 months apart or more in these USAID-assisted countries increased from 43 to 49 percent between 2000 and 2008, and the percentage of women ages 18 to 24 who gave birth before age 18 decreased from 25 to 23 percent.

Vulnerable children:

- More than 137,000 children and adults in 17 countries benefited from activities of USAID's Displaced Children and Orphans Fund, and more than 1 million received vision care through the Child Blindness Program.

Health systems strengthening:

- Improved procurement, supply management, and work plans accelerated the disbursement of malaria grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria in 10 countries.
- More than 5,000 program managers, policymakers, supervisors, and health workers received training in managing pharmaceuticals and other public health commodities.

Research and technical innovation:

- The report of a USAID-supported study on a home care strategy to reduce newborn deaths in Bangladesh received the *Lancet* Paper of the Year award.

Government renewed its commitment to the continuing success of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the President's Malaria Initiative (PMI), both of which relied heavily on USAID as a leading implementing partner. USAID also continued to scale up programs and services in countries with a high burden of TB.

A nurse in a clinic in Huambo province, Angola, checks a client and her baby before prescribing antimalarial drugs supplied by USAID.

Photo: © Alison Bird, USAID/Angola

In 2008, USAID continued a significant trend toward integrated programming within its technical areas and also with other U.S. Government initiatives in such areas as food security and water supply. The Agency increased and improved integration of its maternal health and family planning/reproductive health programs with PEPFAR and PMI. USAID programs also implemented assertive women-centered programs to accelerate progress to improved health for women and their children, families, and communities.

Other areas of emphasis in 2008 included fostering the future sustainability of partner-country health programs and strengthening the health systems of partner countries. The need for systems strengthening was evident across all technical areas and is of paramount concern, because only through efforts to strengthen health workforces, service delivery, commodities management, information systems, financing, and governance can the technical successes of recent decades – and new ones to come – be extended to all who need them in sustainable ways. USAID's support for research and technical innovations also made significant contributions to health systems strengthening as well as in the technical programming areas.

USAID's focus in 2008 on the elements of long-term program success across its technical areas has also provided a foundation for the new Global Health Initiative announced by President Obama in May 2009. The Initiative has adopted integrated programming, women-centered programs, partner-country ownership, health systems strengthening, and sustainability among its key principles and components.

Highlights from Intervention Areas

This report describes USAID's global health strategies, interventions, and achievements in 2008 in the following technical areas:

- Infectious diseases – malaria, tuberculosis, avian and pandemic influenza, and neglected tropical diseases
- HIV/AIDS
- Child survival and maternal health – maternal and neonatal health, immunization, polio eradication, nutrition, pneumonia and diarrhea, and water sanitation and hygiene
- Family planning and reproductive health
- Vulnerable children
- Health systems strengthening
- Research and technical innovation

INFECTIOUS DISEASES

Malaria: PMI is a historic $1.2 billion, five-year expansion of U.S. Government resources to reduce malaria-related deaths by 50 percent in 15 focus countries in sub-Saharan Africa. Implemented jointly by USAID and the Centers for Disease Control and Prevention (CDC), the Initiative operates in these countries on a national scale, working through country-driven programs in coordination with other national and international partners. In 2008, its third year, PMI reached more than 32

million people with lifesaving prevention and treatment services. Results included spraying 6 million houses (protecting more than 24.7 million people); procuring more than 6.4 million long-lasting insecticide-treated mosquito nets for free distribution to pregnant women and young children; expanding preventive treatment for pregnant women; and procuring 15.6 million doses of artemisinin-based combination therapies. There is strong evidence from several PMI countries that the scale-up of these interventions is making a strong contribution to declines in deaths among children under age 5.

Tuberculosis: USAID programs support global targets to halve TB prevalence and death rates by 2015 from 1990 baselines and to achieve or exceed the targets of an 85 percent treatment success rate and a 70 percent case detection rate. USAID collaborates with national governments and multinational organizations, including the Stop TB Partnership and the Global Fund to Fight AIDS, Tuberculosis and Malaria, in this effort. For the latest World Health Organization (WHO) reporting years, 13 USAID-assisted countries met or surpassed the treatment success target, and 12 USAID-assisted countries met or surpassed the case detection target. The number of new TB patients successfully treated increased by 54 percent, from 805,800 to nearly 1.25 million between 2003 and 2006, saving more than 600,000 lives. In 2008, USAID provided approximately 464,000 patient treatments through the Global TB Drug Facility and trained more than 57,000 health workers in TB treatment and other components of TB control.

Avian and pandemic influenza: In 2008, USAID helped counter the threats of avian and pandemic influenza by improving global and national capacity for surveillance and diagnosis; establishing trained response teams; and strengthening communication to reduce the risk of human infections. USAID trained more than 40,000 health workers, volunteers, government officials, and journalists in various aspects of surveillance, diagnosis, response, and communication. The Agency shipped nearly 145,000 personal protective equipment kits and 2,800 decontamination kits to 64 countries.

Neglected tropical diseases (NTDs): These tropical diseases afflict 1 billion people – one-sixth of the world's population – causing illness, disability, blindness, and disfigurement, and contributing to child malnutrition and impaired child development. USAID's NTD Control Initiative targets the most prevalent NTDs in 12 focus countries in Africa, Asia, and the Caribbean, working closely with pharmaceutical partners. During 2008, over $591 million worth of drugs for NTD control were donated by the pharmaceutical industry to the countries where USAID supported mass drug administration campaigns. More than 57 million NTD drug treatments were delivered to more than 30 million people, 50 percent of them women, in four countries. The program in Mali reached an estimated 10 million people, and the Niger and Uganda programs each reached approximately 8 million.

HIV/AIDS

In FY 2008, the United States continued its leadership in the global HIV/AIDS response, with $6 billion dedicated through PEPFAR. USAID managed $3.06 billion, or more than 65 percent, of PEPFAR funds in 2008 and supported programs in more than 50 countries, including the original 15 PEPFAR focus countries. Key results featured reaching 58.3 million people with ABC (Abstain, Be faithful, correct and consistent use of Condoms) programs to prevent sexual transmission of HIV; providing basic care and support services to 5.7 million people living with HIV; and delivering antiretroviral treatment to more than 750,000 patients, with pediatric treatment expanding rapidly to cover 130,100 children, up from 85,900 in 2007. USAID achievements outside of PEPFAR focus countries included a successful mass media campaign in Honduras, prevention interventions with high-risk groups in Burma, nutrition assistance for people living with HIV/AIDS in Burkina Faso, collaborative HIV-TB programming in USAID's Eastern Caribbean subregion, and decentralization of Nicaragua's HIV/AIDS program. Through PEPFAR's Supply Chain Management System project, administered by USAID, the Agency continued to provide technical assistance in commodities logistics and management in 25 countries with PEPFAR funding.

CHILD SURVIVAL AND MATERNAL HEALTH

Maternal and neonatal health: In 2008, USAID intensified efforts to reduce maternal and child mortality by 25 percent by 2013 in 30 countries with great need. USAID's strategy emphasizes proven low-cost approaches that can be scaled up. It addresses "essential care" and care for the high-mortality complications of pregnancy and birth, including hemorrhage, infections, and prolonged labor for the mother and infections, asphyxia, and low birthweight for the newborn. Achievements in 2008 included providing essential and emergency care for tens of thousands of women at 34 USAID-supported facilities in Nigeria; delivering essen-

tial postnatal care to more than 60,000 newborns in Bangladesh and Nepal; and providing quality improvement and training programs in 11 countries.

Immunization: In 2008, immunizations prevented more than 2.5 million deaths from diphtheria, tetanus, pertussis (whooping cough), and measles, but nearly 10 times this number – 24.1 million children worldwide – went unimmunized. During the year, USAID provided immunizations in low-coverage regions of India and Nigeria, which together have about half of the world's unimmunized children, and continued its successful participation in the GAVI Alliance, which was established in 2000 to increase access to immunization in 72 low-income countries. USAID helped Rwanda become the first African country to receive GAVI approval to introduce a new pneumonia vaccine for children under age 2.

Polio eradication: USAID has long been a major partner in the global effort to achieve a polio-free world. In 2008, eradication activities included supplemental immunization campaigns in the four remaining polio-endemic countries (Afghanistan, India, Nigeria, and Pakistan); planning, mapping, training, supervision, communications, transportation, and commodities supply activities in countries no longer endemic but still at risk; and monitoring and evaluation. USAID supported 241 supplementary immunization campaigns in 36 countries, through which 340 million children under age 5 received 2.46 billion doses of oral polio vaccine.

Nutrition: In the past two years, the problem of global malnutrition has worsened due to the drastic rise in food prices, and today more than 1 billion people are hungry or malnourished. In 2008, USAID nutrition programs mitigated some of the effects of this crisis on the most vulnerable women and children through a package of "essential nutrition actions." To scale up its approach, USAID trained 500,000 health workers in 40 countries. More than 20 million children benefited from USAID infant and young child nutrition programs, and USAID's vitamin A program reached more than 54 million children.

Pneumonia and diarrhea: To combat these preventable and treatable child illnesses, which are the two leading killers of children under age 5, USAID focuses on community-based pneumonia treatment and, for diarrhea, use of oral rehydration solution, effective home treatment, and, more recently, zinc. In 2008, USAID introduced or expanded community-based pneumonia treatment in 12 countries and introduced the use of zinc for diarrhea treatment in eight. In Nepal, nearly 540,000 children received appropriate pneumonia treatment through USAID programs. In Indonesia, USAID significantly increased diarrhea coverage, and more than 1.2 million children received treatment. In USAID project areas in the Democratic Republic of the Congo (DR Congo), treatment of child pneumonia with antibiotics increased from 13.5 percent of cases in FY 2007 to 51 percent in FY 2008, and proper diarrhea treatment tripled from about 15 to 44 percent of cases.

Water sanitation and hygiene: Hygiene promotion is among the most cost-effective interventions for averting diarrhea-caused deaths in children under age 5, 88 percent of which are due to poor water supply, sanitation, and hygiene. USAID focuses on low-cost interventions, such as household water treatment and community-led approaches to end open defecation, that have proved

Women in a remote village in Cambodia examine materials on hygiene to prevent diarrhea.

Photo: © 2005 Stéphane Janin, courtesy of Photoshare

effective. In FY 2008, USAID Missions implemented household drinking water disinfection programs in 14 countries, and more than 8 billion liters of drinking water were disinfected.

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

Photo: © 2005 Project Concern International, courtesy of Photoshare

FAMILY PLANNING AND REPRODUCTIVE HEALTH

For more than 40 years, USAID has been in the vanguard of family planning programs that have helped couples plan the number and spacing of their births. This has helped lower child deaths, reduce recourse to abortion, and otherwise improve family health. Between 1965 and 2008, the percentage of women of reproductive age in the developing world (excluding China) using a modern family planning method rose from less than 10 percent to 43 percent in 2008 (or, in actual numbers, from 30 million users to 363 million), resulting in a decline in the number of births per woman from, on average, more than six to just over three. In 2008, many of USAID's country programs increased the availability of long-acting and permanent methods and expanded community-based and private sector services to improve outreach and coverage. In Ethiopia, expanded outreach in recent years through more than 40,000 community-based reproductive health agents and health extension workers added nearly 4 million new clients to the family planning program. In other countries in 2008, USAID implemented integrated family planning-HIV services (Ghana and Uganda); promoted delayed childbearing (Nepal); and addressed gender-based violence (Bolivia). In Guatemala, APROFAM, the national family planning NGO, "graduated" from donor support and became self-sustaining.

VULNERABLE CHILDREN

Since its inception in 1989, USAID's Displaced Children and Orphans Fund (DCOF) has worked to improve the lives of children at risk, including orphans, unaccompanied minors, children affected by armed conflict, and children with disabilities. Other USAID programs help local and international NGOs reduce child blindness. In 2008, DCOF projects operated in 17 countries, with a budget of $13 million, benefiting 358 organizations and more than 137,000 children and adults through services or training. DCOF provided assistance to family reunification programs in Kenya, DR Congo, and Sri Lanka; interventions to protect Afro-Colombian children from illegal military recruitment in Colombia; gender-based violence studies in Ethiopia and Sri Lanka; a support program for street children in Zambia; family support services in Georgia; and adoption and foster care projects in Belarus.

HEALTH SYSTEMS STRENGTHENING

To promote sustainability, USAID is active in strengthening health systems, working with governments, NGOs, and donor agencies in six key areas (human resources; medical supplies, vaccines, and technology; health financing; information; leadership and governance; and service delivery) to improve the quality and use of, and access to, health services. Country-specific results in 2008 included government registration and introduction of zinc and/or low-osmolarity oral rehydration salts for treating diarrhea in Afghanistan, DR Congo, and Tanzania; decentralization of health services in Honduras, resulting in substantial improvements in prenatal care, skilled birth attendance, growth monitoring, and postpartum care; and expanded support for health financing in Senegal through 14 new community-based

mutual health organizations that extended coverage to 76,000 new beneficiaries. In many countries, United Nations estimates of HIV prevalence were adjusted downward in response to results from blood testing conducted during USAID's population-based Demographic and Health Surveys.

RESEARCH AND TECHNICAL INNOVATION

USAID understands the importance of funding research and producing technical innovations to implement low-cost, effective health programs. Working with multiple partners, the Agency pursues a proactive strategy to stimulate the development and introduction of key products. In 2008, several USAID studies demonstrated the effectiveness and safety of oxytocin and misoprostol for control of postpartum hemorrhage in home deliveries, and two efficacy trials strengthened the evidence base of the impact of ready-to-use supplementary foods on preventing chronic malnutrition. The report of a USAID study on a home care strategy to reduce newborn deaths in Bangladesh received the *Lancet* Paper of the Year award, while findings from USAID-supported research in Pakistan provided the basis for new 2008 WHO guidelines for community- and home-based management of severe child pneumonia.

Funding

USAID's FY 2008 health programs and activities were largely financed through the Agency's Global Health and Child Survival (GH&CS) account, as well as other accounts and international partnerships. USAID's total health budget was $4.8 billion, which included $1.8 billion from the GH&CS account. The following amounts for each technical area include funding from all accounts.

Infectious Diseases: $663.9 million ($628.8 million from the GH&CS account) funded the presidential malaria and neglected tropical diseases initiatives and activities to reduce the threats of tuberculosis and avian and pandemic influenza.

HIV/AIDS: Slightly more than $3 billion funded USAID-managed prevention, care, and treatment programs to mitigate the impact of the HIV/AIDS pandemic through PEPFAR. This included $347.2 million from the GH&CS account.

Child Survival and Maternal Health: $581.7 million funded maternal and neonatal health, immunization, nutrition, and other core child and maternal health programs. GH&CS funds accounted for $451.4 million of this amount.

Family Planning and Reproductive Health: $473.4 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 $393.9 million from the GH&CS account.

Vulnerable Children: $20.6 million funded programs that benefit vulnerable children, of which $14.9 million was from the GH&CS account.

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

Reaching Villagers, Saving Lives in Senegal

Children of Keur Aly Samba village stand with their village chief, Momath Cissé. PMI's support of indoor residual spraying helps protect them from malaria, which caused the deaths of seven children in 2006.

Photo: Robert Perry/CDC

"In 2006, during the rainy season, we lost seven children from malaria," said Momath Cissé, chief of the village of Keur Aly Samba, Senegal. "But after the people sprayed our houses last year, not one child died during the rains." A community health worker also noted that the number of children referred to the health post for treatment of severe malaria fell from more than 20 to "a handful."

The village of roughly 1,600 people is located in Nioro du Rip district, one of three districts where the President's Malaria Initiative (PMI) supports indoor residual spraying to prevent malaria. In 2007, nearly 30,800 households were sprayed, representing more than 99 percent of the 31,000 households approached by spray teams. Almost 276,000 people gained protection.

In Thiobe village in Diourbel region, in the heart of Senegal's millet basin, PMI distributed long-lasting insecticide-treated mosquito nets. The net distribution was part of a mass campaign carried out in five regions in conjunction with the Ministry of Health's micronutrient supplementation days. In June 2008, just before the start of seasonal rains and the peak malaria transmission season, more than 700,000 children ages 6 to 59 months received free nets, vitamin A supplements, and deworming medication. The Thiobe health post reported a decline in malaria cases from 584 the year before to 104. "This," according to the post's chief nurse, "is the difference that having mosquito nets makes." ■

INFECTIOUS DISEASES

KEY RESULTS

- In its third year, the President's Malaria Initiative reached more than 32 million people in its 15 focus countries with high-impact prevention or treatment services.
- In USAID's 20 priority (Tier One) countries for tuberculosis (TB), the number of new TB patients successfully treated increased by 54 percent, from 805,800 to nearly 1.25 million between 2003 and 2006, saving more than 600,000 lives.
- The number of countries reporting H5N1 (avian influenza) outbreaks in poultry decreased 60 percent since 2006, and the number reporting H5N1 in humans decreased more than 60 percent.
- More than 57 million drug treatments for neglected tropical diseases reached more than 30 million people in four countries.

Across the globe, the human and economic costs of preventable, treatable infectious diseases are enormous, and these costs are most pronounced in the world's poorest regions. More than 11 million people worldwide die each year from infectious diseases, including 900,000 from malaria and 1.7 million from tuberculosis (TB). More than 1 billion are affected by neglected tropical diseases (NTDs), which cause severe disability and sickness, compromise mental and physical development, and hinder economic productivity. Most of those affected by these infectious diseases live in developing countries. Infectious diseases are among the leading causes of child mortality and morbidity and, as such, among the leading threats to child survival.

USAID is an important leader of global efforts to reduce the threats of malaria, TB, avian influenza, and NTDs in countries poorly equipped to meet them. Working with international and country-level partners, the Agency conducts a broad range of activities to develop and implement new and better programs. USAID's work includes advancing proven methods of managing these diseases in children, expanding disease surveillance, and combating drug resistance. These efforts have led to declines in mortality from meningitis and cholera, as well as progress against the diseases addressed here.

Under the Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008, USAID renewed its commitment to fight infectious diseases. As a result, populations will be healthier and safer due to broader prevention and treatment services, stronger local capacity for disease control, and expanded global alliances working together to curb these diseases.

Malaria

Controlling malaria, a preventable and treatable disease, is a major objective of the U.S. foreign assistance program. Malaria remains one of the major causes of illness and death among children in Africa and accounts for an estimated 300 million to 500 million illnesses and nearly 1 million deaths worldwide each year, 90 percent of them in children under 5. Malaria also places a tremendous burden on health systems and individual families in Africa. Economists estimate that it causes an annual loss of $12 billion (1.3 percent) of the continent's gross domestic product. Malaria and poverty are closely linked, and the greatest burden of malaria usually falls on residents of rural areas, where access to health care is limited by cost or distance.

Led by USAID and implemented jointly with the Centers for Disease Control and Prevention (CDC), the President's Malaria Initiative (PMI) is a historic $1.2 billion, five-year expansion of U. S. Government resources to reduce the intolerable burden of malaria and help relieve poverty on the African continent. PMI funding steadily increased from $30 million in FY 2006 to $135 million in FY 2007 and to $300 million in FY 2008. Working closely with governments and other donors (including the Global Fund to Fight AIDS, Tuberculosis and Malaria, the World Bank Malaria Booster Program, and the Roll Back Malaria Partnership), as well as the private sector and nongovernmental, faith-based, and community groups, PMI is helping partner countries rapidly build malaria control programs to national scale.

The goal of PMI is to reduce malaria-related deaths by 50 percent in 15 focus countries[1] with a high burden of malaria by expanding coverage of four highly effective prevention and treatment measures to 85 percent of

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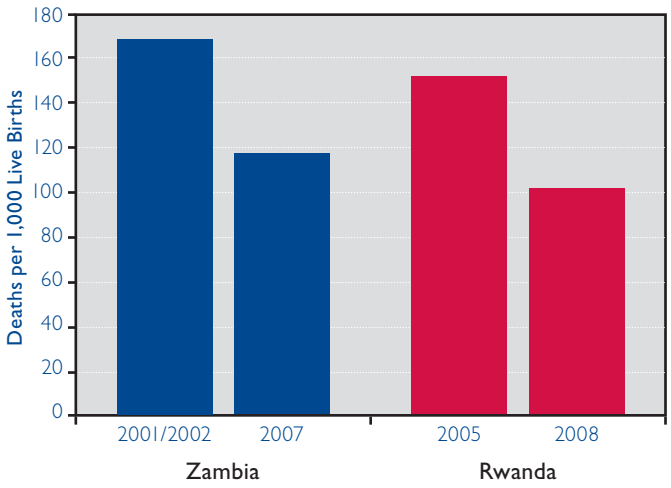
"To build country capacity and promote sustainability, PMI also helped strengthen pharmaceutical management, drug quality assurance, and health management information systems, and trained more than 35,000 health workers and community volunteers."

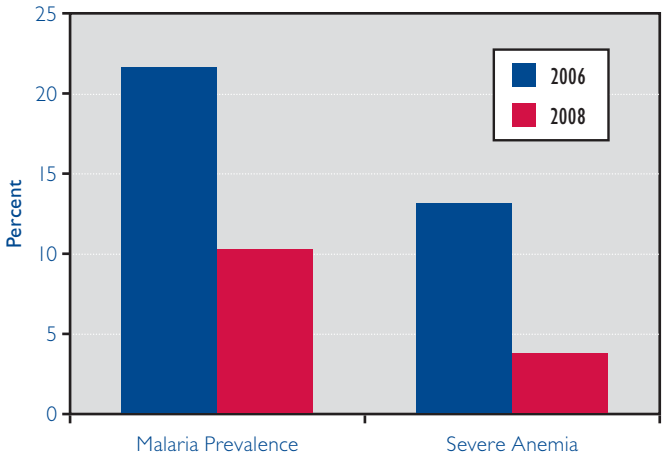
1. Angola, Benin, Ethiopia (Oromia region), Ghana, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Rwanda, Senegal, Tanzania, Uganda, Zambia

Figure 1: Reductions in Under-5 Mortality Associated with Scale-Up of Malaria Prevention and Treatment Measures, Zambia and Rwanda



Source: Demographic and Health Surveys

Figure 2: Decline in Malaria Prevalence and Severe Anemia in Children Under 5 Years of Age, Zambia, 2006–2008



Source: Malaria Indicator Surveys

pregnant women and children under age 5 – the two most vulnerable populations. These measures are:

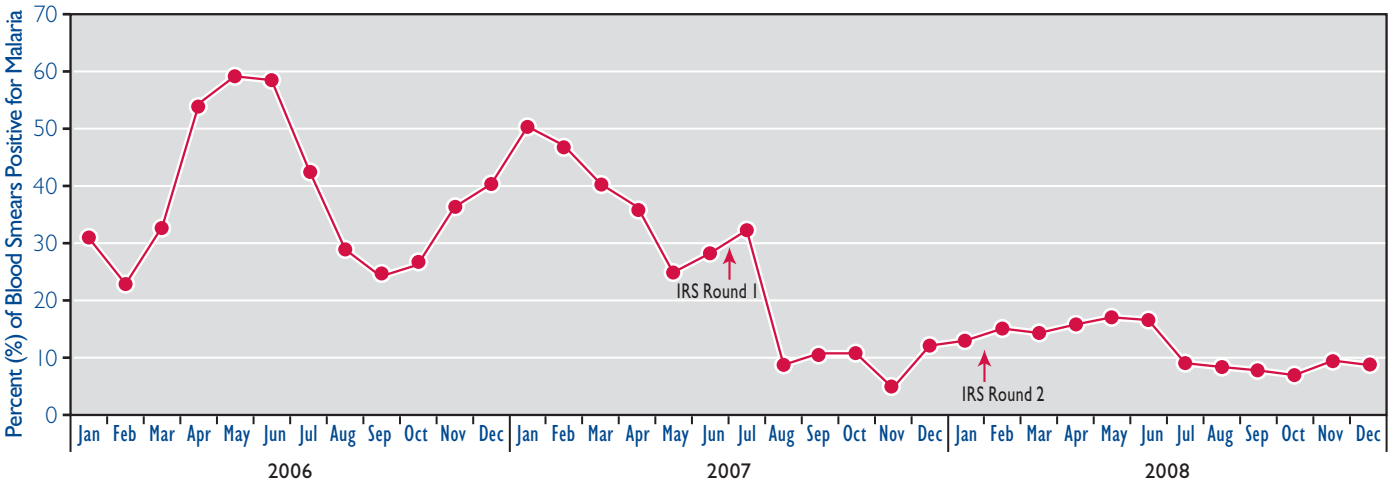
- Indoor residual spraying (IRS) with insecticides
- Insecticide-treated mosquito nets (ITNs)
- Intermittent preventive treatment for pregnant women (IPTp)
- Artemisinin-based combination therapies (ACTs)

During 2008, the Initiative's third year, PMI-supported malaria prevention and treatment measures were expanded across all 15 focus countries and reached more than 32 million people. PMI procured more than 6.4 million long-lasting ITNs (LLINs) to be distributed free of charge to pregnant women and young children. IRS activities were also expanded, and 6 million houses were sprayed with synthetic pyrethroids, carbamates, or DDT, helping to protect more than 24.7 million people. During 2008, 15.6 million ACTs for treating acute malarial illnesses were procured in nine focus countries. PMI also supported the expansion of IPTp as part of broader efforts to improve and expand antenatal care services.

To build country capacity and promote sustainability, PMI also helped strengthen pharmaceutical management, drug quality assurance, and health management information systems, and trained more than 35,000 health workers and community volunteers. In addition, PMI promoted increased understanding of and demand for malaria prevention and treatment interventions by funding a wide range of behavior change communication and education activities across the focus countries.

There is clear evidence that the malaria burden is declining in several PMI focus countries. Recent data analysis from **Benin**, for example, indicates that ITN ownership is a leading contributor to declining under-5 mortality, while data from **Rwanda** put it among the top three contributors. Rwanda has a strong malaria control effort led by its National Malaria Control Program (NMCP) with support from PMI, the Global Fund, and other donors. Preliminary results of a 2008 interim nationwide Demographic and Health Survey showed about a fourfold increase between 2005 and 2008 in ownership of one or more ITNs, from 13 to 57 percent, and in the proportion of children under 5 sleeping under an ITN, from 15 to 58 percent. The data indicated that these increases, together with targeted IRS and rollout of ACTs at the community and health facility levels, were associated with a fall in malaria prevalence to less than 3 percent and an overall reduction in under-5 mortality of 32 percent, from 152 deaths per 1,000 live births in 2005 to 103 in 2008 (figure 1).

Figure 3: Decline in Proportion of Malaria-Positive Blood Smears, Muleba District Hospital, Tanzania, 2006–2008



Source: The President's Malaria Initiative: Working with Communities to Save Lives in Africa, Third Annual Report, March 2009

Malaria control efforts in **Zambia**, led by the NMCP and supported by PMI, the Global Fund, the Bill & Melinda Gates Foundation, the World Bank, and other partners, are also having a dramatic impact. A 2007 survey showed a 29 percent reduction in under-5 mortality from all causes, to which malaria is a major contributor (figure 1). Nationwide Malaria Indicator Surveys in 2006 and 2008 found that over the three-year period, malaria prevalence fell by 53 percent, and the prevalence of severe anemia in children under 5, which is closely associated with malaria, fell by 68 percent (figure 2).

Other PMI focus countries are making progress as well. On **Tanzania's** Zanzibar archipelago, a rapid scale-up of ITNs, IRS, and ACTs between 2005 and 2007 (supported by PMI, the Global Fund, and other partners) was followed by a drop in the proportion of malaria-positive blood smears in children under 2 attending health clinics, from 22 percent to fewer than 1 percent. This low level of positive blood smears was sustained during 2008. The focus has now turned to strengthening case surveillance to allow rapid detection and response to any potential resurgence of malaria cases. In Muleba district of mainland Tanzania, PMI continued to support IRS and consolidate the gains of the previous year, with a 55 percent drop in positive blood smears in patients of all ages observed during 2008. Between 2006 and 2008, the prevalence of malaria during the June–July peak transmission period fell by 73 percent (figure 3).

In **Malawi**, household surveys conducted in 2007 and 2008 in Nkhotakota district demonstrated a relative reduction of 28 percent in severe anemia in children 6 to 30 months old. A closer look at areas in the district where PMI supported IRS in October and November 2007 shows an even greater reduction of 44 percent. In light of these positive results, the Ministry of Health plans to scale up IRS in six more high-risk districts.

PMI also helped expand and strengthen the **Mozambique** Government's IRS program in Zambézia province, supporting a second round of IRS between September and November 2008 that sprayed nearly 413,000 homes and provided protection to more than 1.4 million people. This followed an earlier 2007 round of PMI-supported spraying of more than 568,000 houses, which protected more than 2.5 million people. A November 2008 survey in the six IRS districts, funded by the Gates Foundation through the Innovative Vector Control Consortium, found a 38 percent decline in malaria prevalence from 2007.

In FY 2008, USAID also conducted malaria activities in non-PMI countries in sub-Saharan Africa, as well as in Asia (Mekong subregion) and Latin America (Amazon Malaria Initiative). In **Nigeria**, USAID support for the private sector resulted in the sale of more than 5.7 million ITNs, compared with 3.5 million the previous year. Nearly half the nets sold were LLINs. In the **Democratic Republic of the Congo (DR Congo)**, USAID supported the development and dissemination of the National Malaria Strategic Plan (2007–2011), which includes the national scale-up of sulfadoxine-pyrimethamine use for IPTp and ACTs as the first-line treatment for uncomplicated malaria. More than 357,000 LLINs were procured by USAID and distributed to pregnant women and children under 5 in 80

USAID-supported health zones in Katanga, South Kivu, and East and West Kasai provinces.

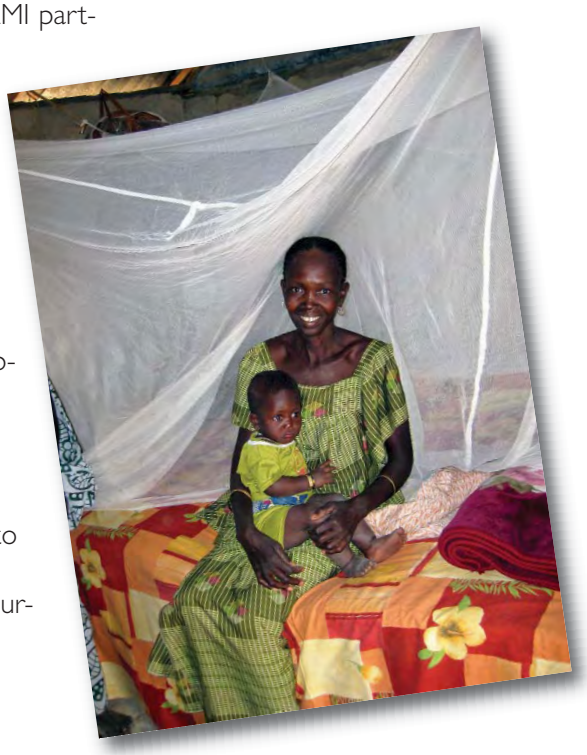
In the Mekong subregion of Southeast Asia, USAID focused on critical malaria control strategies. Working with the World Health Organization (WHO), USAID and implementing partners worked with ministries of health to improve community response to malaria, diagnostics quality, drug quality, drug supply logistics, and resistance monitoring throughout the subregion. The two most critical geographical areas are southeastern **Thailand**/western **Cambodia**, where USAID, the Global Fund, and their partners collaborated with a Gates Foundation initiative to contain and eliminate the emergence of artemisinin-resistant falciparum malaria, and **Burma**, which accounts for about half of all malaria cases in the subregion and where USAID works with WHO to strengthen malaria control capacity and prevent the emergence of new artemisinin resistance.

In South America, USAID worked with the Pan American Health Organization and the Amazon Malaria Initiative (AMI) to improve vector control, drug and insecticide surveillance, microscopic diagnosis, rapid diagnostics, standardized approaches to monitoring resistance, and evaluation of the public health impact of malaria in pregnancy. All AMI countries (**Bolivia**, **Brazil**, **Colombia**, **Ecuador**, **Guyana**, **Peru**, and **Suriname**) have changed their first-line malaria therapies to ACTs, and some have already seen a reduction in malaria infections. AMI partners are currently working to develop an effective strategy to deal with malaria in low-transmission environments.

In 2007 and 2008, PMI, the ExxonMobil Foundation, Malaria No More, and others contributed funding to the Roll Back Malaria Partnership's Harmonization Working Group to improve the success of African countries in applying for Global Fund malaria grants. This support had a major impact. In the most recent round of Global Fund grants, 14 of the 18 African countries that received Working Group support succeeded in their applications. The increased Fund support will greatly contribute to the rapid scale-up of prevention and treatment interventions in PMI countries and other high-burden African countries.

USAID support for vaccine development also remained strong. USAID's Malaria Vaccine Development Program partners with the Department of Defense, the National Institutes of Health, and the PATH Malaria Vaccine Initiative to develop vaccines to protect children and other vulnerable populations in developing countries. These efforts range from the design of new vaccines based on the latest scientific knowledge to field trials in Africa. Two trials were completed in 2008 in Kenya and the United States.

USAID also continued its drug development activities through the Medicines for Malaria Venture (MMV). MMV has more than 30 candidate compounds under development, as well as agreements with three institutions for intensified research to discover new compounds with potential as antimalarial drugs. In December 2008, MMV delivered its first new formulation – dispersible artemether-lumefantrine – which is already being provided to people with malaria in a number of countries. Two more new drug combinations developed with MMV support are awaiting final approval by European regulatory authorities and should be available in the coming year. The recent identification of reduced effectiveness of ACTs in the Thai-Cambodian border region underscores the importance of MMV's mission to develop new low-cost malaria treatments.



In Senegal, Marietou Sarr and her 11-month-old baby received a long-lasting ITN through a recent PMI campaign.

Photo: Debie Gueye/ USAID Senegal

Tuberculosis

Tuberculosis (TB) is a major public health threat worldwide. WHO estimates that there were nearly 9.3 million new TB cases and 1.7 million TB deaths in 2007. Eighty percent of the global TB burden is found in 22 high-burden countries. TB is the leading cause of death in people who have HIV infection. The global TB situation is further complicated by increases in multidrug-resistant TB (MDR-TB), which does not respond to the standard first-line drug treatment, and extensively drug-resistant TB (XDR-TB), which is resistant to most second-line TB drugs.

USAID plays an active role in the Stop TB Partnership.[2] USAID programs support the Stop TB targets of 1) halving TB prevalence and death rates by 2015, relative to 1990 baselines, and 2) achieving or exceeding the targets of 70 percent case detection and 85 percent treatment success rates among new sputum smear-positive pulmonary TB patients. The major focus of USAID's program is to support the scale-up of the Stop TB Strategy in 20 priority (Tier One) countries.[3] Smaller-scale programs are also supported in an additional 20 countries.[4]

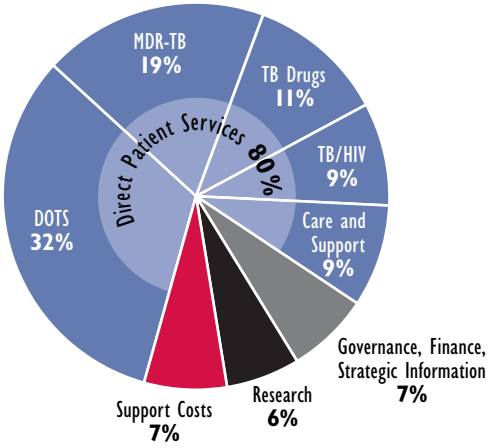
Under the Stop TB Strategy, USAID's TB activities seek to:

- Pursue quality DOTS[5] expansion and enhancement
- Address TB-HIV, MDR-TB, and other challenges
- Contribute to health systems strengthening
- Involve all care providers
- Engage people with TB and affected communities
- Enable and promote research

"Twelve USAID-assisted countries met or surpassed the 70 percent case detection target . . . The 85 percent treatment success target was met or surpassed in 13 USAID-assisted countries."

2. The Stop TB Partnership consists of about 1,000 international and national-level organizations, technical institutions, civil society organizations, and individuals.
3. Afghanistan, Bangladesh, Brazil, Cambodia, Democratic Republic of the Congo, Ethiopia, India, Indonesia, Kenya, Mozambique, Nigeria, Pakistan, Philippines, Russia, South Africa, Tanzania, Uganda, Ukraine, Zambia, Zimbabwe. All except Ukraine and Zambia are among the world's 22 high-TB burden countries.
4. Angola, Armenia, Azerbaijan, Bolivia, Djibouti, Dominican Republic, Georgia, Ghana, Haiti, Kazakhstan, Kyrgyzstan, Malawi, Mexico, Namibia, Peru, Senegal, Southern Sudan, Tajikistan, Turkmenistan, Uzbekistan
5. Directly observed treatment, short course

Figure 4: USAID FY 2008 Funds Allocated for Tuberculosis



Source: Foreign Assistance and Coordination Tracking System (FACTS)

USAID collaborates with national governments, multilateral institutions, nongovernmental groups, and the private sector. The Global Fund provides two-thirds of all international TB funding, and the U.S. Government continues to be the largest bilateral donor, having provided almost 29 percent of the more than $15 billion in total contributions as of October 2009. USAID provides technical leadership to the Global Fund at the country level through participation in Country Coordinating Mechanisms, proposal development, and grant implementation. USAID continues to fund the Stop TB Partnership and the Green Light Committee, which provide technical assistance to Global Fund TB grant recipients. Additionally, a senior USAID staffer chairs the Stop TB Partnership Coordinating Board.

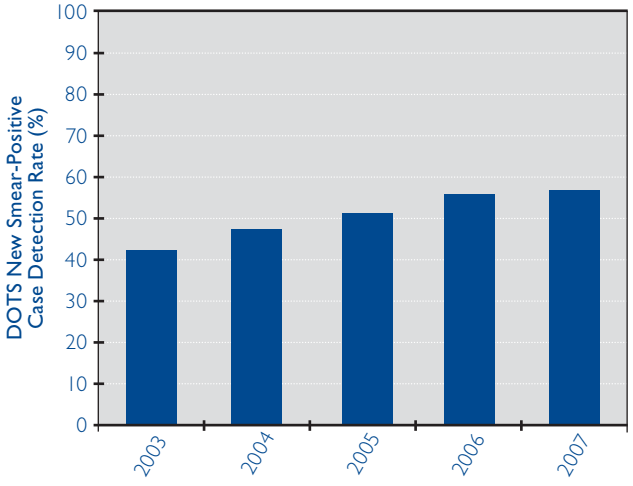
USAID also remains the leading bilateral donor to the Global TB Drug Facility (GDF). The GDF provides grants for TB drugs and technical assistance to countries in need and also monitors grant recipients. In 2008, USAID funding supported approximately 464,000 patient treatments provided by the GDF. USAID also trained more than 57,000 health workers in DOTS and other components of the Stop TB Strategy.

In FY 2008, USAID's TB investment was $162,154,000. As figure 4 shows, 80 percent was allocated to direct patient services and strengthening of health care systems, including DOTS, anti-TB drugs, MDR-TB, TB-HIV/AIDS, and care and support for TB patients. Support for direct patient services contributes to health systems strengthening by strengthening the primary health care level where the majority of TB services are provided and by improving the quality of laboratory services, drug supply, and service provision by providers. The strengthening of all these areas benefits the overall health system. The remaining 20 percent was specifically for health governance, finance, host country strategic information, research, and program support costs.

USAID's TB programs and partners have made impressive achievements in providing countries access to standardized high-quality packages of tools for scaling up TB interventions. For example, USAID has worked with international and U.S. Government partners to support new tools and skills for managers to run complex and integrated programs, including support systems for improved TB drug management and a national TB planning and budgeting tool now in use all over the world.

Proper investments in infection control measures are critical to the prevention of MDR-TB and the spread of TB. USAID is a leader in supporting the development of guidance, tools, and the implementation of these TB infection control interventions. USAID has also established regional MDR-TB "Centers of Excellence" in Russia and elsewhere to increase capacity for national programs to adequately manage and support MDR-TB treatment. In collaboration with other partners, USAID supports the global "supranational" laboratory network, with particular attention to helping expand these supranational laboratories in Africa. USAID has supported

Figure 5: Average DOTS Case Detection Rate in Priority (Tier One) Countries, 2003–2007



Source: Global Tuberculosis Control WHO Report 2009

development of the *International Standards for Tuberculosis Care*, one of the driving tools for ensuring that all providers follow appropriate treatment regimens. WHO has also introduced and scaled up public-private TB partnerships in many countries.

A community DOTS worker in Cambodia observes a patient's home treatment.

Photo: Reproductive and Child Health Alliance

USAID's programs are making a difference. The latest data from WHO's 2009 TB report show that in priority (Tier One) countries, the case detection rate for new smear-positive TB cases[6] increased from 43 percent on average in 2003 to 57 percent on average in 2007 (figure 5). Twelve USAID-assisted countries met or surpassed the 70 percent case detection target.

The number of new smear-positive TB patients successfully treated in USAID-assisted countries increased from 805,800 in 2003 to 1,246,100 in 2006,[7] a 54 percent increase. As a result, more than 600,000 lives were saved. The 85 percent treatment success target was met or surpassed in 13 USAID-assisted countries. On average, Tier One countries achieved a treatment success rate of 80 percent in 2006. These achievements made an important contribution to the increase in the global case detection rate to 63 percent in 2007 and the increase in the treatment success rate to 85 percent in 2006, because the Tier One countries include most of the countries most affected by TB. The expansion of DOTS services, improvements in program quality, increased engagement of private sector health care providers, and social mobilization at the community level were the key factors underlying this progress.

To improve DOTS delivery, USAID has made significant contributions to the improvement of primary health services. For example, USAID's TB program in **Afghanistan** supported the expansion of DOTS through primary health care services. More than 12 million people in rural areas in 13 target provinces gained access to improved primary health, including DOTS, through the program. Basic TB diagnostic services were decentralized, and more than 90 percent of the laboratories in target provinces developed the capacity to accurately diagnose TB.

In the **Philippines,** USAID's TB control activities have contributed significantly to increased case detection and improved quality of DOTS. In 28 USAID-assisted provinces, covering a population of about 38 million, an estimated 52,000 people with TB have been diagnosed and treated. USAID assists the national TB program, the Department of Health, and local government units in strengthening the public and private sectors' capacities to implement and expand DOTS. Other activities include improving the policies and financing of TB control, strengthening service delivery, and increasing the knowledge and demand for TB services.

Engaging the private sector is another focus. In **Cambodia**, 60 percent of people with TB symptoms first seek care from private sector providers who often do not provide quality treatment or have access to approved treatment drugs. To develop a partnership with the public sector, which follows international quality standards of care and has access to quality drugs, and ensure better care and referral, USAID supported the country's first public-private DOTS pilot project, which is now being scaled up nationally. Almost 13,000 persons

6. The TB detection rate is the percentage of estimated new smear-positive cases detected under the internationally recommended tuberculosis control strategy DOTS, relative to the estimated number of new smear-positive TB cases.
7. WHO's *Global Tuberculosis Control Report 2009* reports data from 2007 for case detection and 2006 for treatment success.

with TB symptoms were identified and referred by private clinics and pharmacies for sputum examinations at public DOTS facilities during the three-year pilot period.

USAID's comprehensive approach to TB includes preventing the spread of MDR-TB by ensuring the delivery of effective basic TB services and diagnosing and treating MDR-TB. In **Russia**, USAID worked closely with the national TB program and other partners to expand MDR-TB treatment. USAID supported the development of three regional "Centers of Excellence" for MDR-TB that serve as training sites for MDR-TB-related topics. The first Center opened in Orel oblast in 2007 and serves as a model site for infection control, MDR-TB treatment, and laboratory analysis.

Addressing TB-HIV/AIDS co-infection is a key component of the USAID TB program. In **South Africa**, where progress against TB has been hampered by dual infection with HIV (44 percent of new TB patients test positive for HIV), USAID support for TB control is closely coordinated with TB-HIV/AIDS activities supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). This includes the provision of HIV counseling and testing of TB patients, testing of HIV-infected individuals for TB, and improving the referral mechanisms to ensure a continuum of care for patients. As a result of these well-coordinated activities, TB-HIV/AIDS integration has improved, with 75 percent of USAID-supported facilities providing TB-HIV/AIDS integrated care. HIV testing among TB patients increased from 20 percent in 2006 to 64 percent in 2007. Using PEPFAR funding, USAID started 13,713 HIV-positive people on TB treatment.

USAID also supports a strategically focused set of TB-related research activities. In 2008, WHO incorporated a new diagnostic technology and a revised diagnostic approach into its global policy. Two liquid culture techniques, for which USAID supported field trials, were included in the new policy. USAID also contributed to the research leading to a new global policy changing the diagnostic criteria for TB from three to two positive sputum smears. This policy change has the potential to increase case detection rates while reducing the burden of multiple tests on both patients and laboratories.

Avian and Pandemic Influenza

The H5N1 avian influenza virus continues to pose a serious worldwide public health threat. Cases of human infection are rare, but unlike the new 2009 H1N1 influenza virus, H5N1 is quite deadly, with an average human fatality rate of 59 percent. In addition, new genetic variants of the H5N1 virus continue to emerge, raising the possibility that over time the virus could become more transmissible among humans and start a pandemic. Based on previous flu pandemics, experts predict that up to 95 percent of deaths in such a pandemic could occur in the developing world.

While the 2009 H1N1 influenza virus appears to be much milder than H5N1 in terms of the average case fatality rate, this new flu variant also poses a significant public health threat because of its high transmissibility and the huge number of people already infected, which threatens to overwhelm health facilities in some countries. Since April 2009, at least 5,000 people worldwide have died from pandemic H1N1, compared with fewer than 500 deaths from H5N1 avian influenza since 2003. USAID, already a leader in the global response to the emergence and spread of H5N1, is building on platforms developed for H5N1 to help ensure a strategically sound response to the 2009 H1N1 influenza pandemic.

By FY 2008, with a commitment totaling $468 million, USAID efforts to combat the spread of H5N1 and develop capacity in 54 countries continued to help limit opportunities for the virus to mutate into a pandemic strain while enhancing pandemic readiness. In support of this effort, nearly 90 countries have received emergency commodities for outbreak containment. These activities were imple-

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"In FY 2008, USAID shipped nonmedical emergency commodities, including nearly 145,000 personal protective equipment kits and 2,800 decontamination kits, to 64 countries."

mented according to the U.S. Government's Implementation Plan for the National Strategy for Pandemic Influenza to support a comprehensive U.S. Government approach to addressing pandemic threats.

While significant progress has been achieved in controlling the H5N1 threat in many parts of the world, the possibility remains that the virus could once again spread around the globe as it did during its peak in 2006 or it could recombine with the pandemic H1N1 virus to form yet another new variant. It is therefore critical to remain vigilant in the fight against H5N1 while broadening the focus of work to include the 2009 H1N1 influenza pandemic and other similar disease threats.

USAID's avian and pandemic influenza (API) prevention and response efforts have contributed to significant reductions in the number of reported poultry outbreaks and human infections worldwide and a decrease in the number of countries affected by H5N1. At the peak of its spread in 2006, H5N1 was reported in 53 countries. By the end of 2008, however, the number of countries affected had declined to 21. Total H5N1 poultry outbreaks declined from 1,339 in 2006 to 535 in 2008, while human infections decreased from 115 to 44 over the same period of time. Detection of H5N1 outbreaks in birds was 55 percent faster in 2008 compared with 2006, with the average number of days for laboratory confirmation after an H5N1 outbreak declining from 12 days to just over five. As a result, rapid response and early outbreak containment efforts were strengthened, leading to significant reductions in the number of poultry affected and thus reducing the risk of human infections.

H5N1 not only affected fewer countries in 2008, but its geographic range also shrank. By the end of 2008, about 80 percent of poultry outbreaks and 98 percent of human cases were concentrated in just five countries (Bangladesh, China, Egypt, Indonesia, and Vietnam). Even in these countries, there were reductions in the number of poultry outbreaks and human cases, indicating that containment measures are having an impact.

USAID's twofold API strategy addresses the following main areas of work:

- Preventing and controlling outbreaks among animals and minimizing human exposure
- Strengthening global pandemic preparedness and response

In implementing this strategy, USAID collaborates with other U.S. Government, international, NGO, and private sector partners to ensure program activities are technically sound and well coordinated. Activities in FY 2008 included strengthening the capacity of countries to monitor the spread of the H5N1 virus in wild birds, domestic poultry, and humans to enable countries to mount fast and effective efforts to contain the virus following detection. USAID's API activities also emphasized strengthening national planning, preparedness, and communications about API risks and ways to limit the spread of the disease.

In FY 2008, USAID supported training for nearly 17,400 village volunteers, journalists, and government officials in 21 countries to integrate avian influenza messages into community-level health activities, enhance accuracy and fairness in reporting, and increase government officials' abilities to communicate with the public and press about the disease. To help countries ensure they are well positioned to prevent and respond to H5N1 outbreaks, USAID supported surveillance training for more than

A poultry farmer in Vietnam's northern Ha Nam province brings a chicken to be vaccinated by local animal health workers. Vaccination days are part of the government's comprehensive strategy, supported by USAID and other donors, to combat avian influenza.

Photo: Richard Nyberg

15,300 human and veterinary health workers and outbreak and response training for over 8,200 health officials. In Africa, USAID field epidemiology and laboratory training programs trained public health workers in detecting and investigating emerging zoonotic threats. Nigeria's program is the first in sub-Saharan Africa and one of the first worldwide to integrate field epidemiology, laboratory training, and veterinary medicine.

USAID also continued to provide key commodities that improve the ability of countries to respond rapidly to poultry outbreaks. In FY 2008, USAID shipped emergency commodities, including nearly 145,000 personal protective equipment kits and 2,800 decontamination kits, to 64 countries. USAID also pre-positioned commodities in a regional distribution center in Bangkok, Thailand, to help first responders mount rapid response activities within 24 to 48 hours of outbreaks in Asia.

USAID continued to support activities in Africa, Asia, Europe, Latin America and the Caribbean, and the Middle East to reduce excess mortality in the event of a pandemic. These activities included preparing national- and community-level pandemic response plans and facilitating tabletop exercises to test the United Nations' and joint United Nations/NGO/International Federation of the Red Cross emergency responses. In line with these efforts, an interagency agreement with the U.S. Department of Defense was initiated to begin supporting military pandemic preparedness in 25 countries in Africa and Asia through technical assistance for policy reform, pandemic planning, and operational readiness.

Successes in containing H5N1 are promising, but countries continue to face the threat of its introduction or reintroduction. To address the main sources of the virus, USAID increased its focus on the five highly affected countries and others vulnerable to introduction of the virus, while also continuing support for strategic regional programs in Asia, Africa, Latin America and the Caribbean, and Eurasia. In Bangladesh, China, Egypt, Indonesia, and Vietnam, USAID expanded its technical and financial support to further improve farm and market biosecurity and hygiene in order to limit further spread of H5N1 within these countries.

USAID's H5N1 investments in 2008 contributed to:

- Improving capacity for early warning surveillance in domestic poultry, wild birds, and humans
- Improving capacity for veterinary and human laboratory diagnosis
- Establishing response teams of veterinary and human public health professionals trained in core principles of field epidemiology
- Strengthening communications efforts to reduce the risk of human infections
- Improving pandemic preparedness

While all of these capacities are critical for addressing API, they can also be used for other emerging infectious diseases of animal origin that pose a public health threat. As the pandemic H1N1 influenza virus began spreading in April 2009, WHO Director-General Dr. Margaret Chan said that the world is now more prepared for an influenza pandemic than at any time in history. She emphasized that this was in large part due to the investments made over the past several years to combat the pandemic threat presented by H5N1.

USAID is currently building on its H5N1 programs to find cost-effective ways of utilizing its surveillance and response platforms to address other emerging zoonotic disease threats, including H1N1. USAID, working closely with the CDC and U.S. Department of Agriculture, has launched an emerging pandemic threats program to pre-empt or combat, at their source, such diseases. USAID is also working closely with WHO, the United Nations Food and Agriculture Organization, and the World Organization for Animal Health to conduct pandemic readiness and disease surveillance activities and strengthen countries' laboratory diagnostic capacities and laboratory networks. This program is building on many of the platforms that USAID established for the H5N1 program. These platforms include:

- Expanding current wild bird surveillance activities to address the role of other wildlife in the emergence and spread of new pathogens
- Enhancing support for diagnostic laboratories and field epidemiology training of animal and human health teams to identify and investigate outbreaks involving new animal diseases with a potential to impact human health
- Expanding other ongoing efforts to prevent H5N1 transmission from poultry to humans, including communications campaigns, to include potential transmission of other emergent wildlife pathogens to humans

Neglected Tropical Diseases

Neglected tropical diseases (NTDs) disproportionately impact poor and rural populations in developing countries who lack access to safe water, sanitation, and essential medicines. These diseases cause sickness and disability, contribute to childhood malnutrition, compromise the mental and physical development of children, and can result in blindness and severe disfigurement. The magnitude of the burden of NTDs is massive, and they are among the most common infections in the poorest parts of the world. One billion people – one-sixth of the world's population – suffer from one or more NTDs.

Fortunately, there are safe and effective drug therapies available for seven of the most prevalent NTDs (see box next page) that can be delivered through mass drug administration (provision of a medication to all eligible individuals in an affected community once or twice a year). When treatment is provided to at-risk populations annually over successive years, many of these diseases may be eliminated or reduced to an extent that they no longer pose a public health threat.

Historically, these seven diseases were targeted individually through separate disease-specific programs. However, tremendous efficiency gains can be made when mass drug administrations for these diseases are co-implemented through the "integrated approach to mass drug administration." This strategy is safe for communities and more efficient for governments to manage than separate programs for single diseases.

CURT CARNEMARK/WORLD BANK

"In 2008, more than $591 million worth of drugs for NTD control were donated by the pharmaceutical industry to the countries where USAID supported mass drug administration campaigns."

Current Focus Countries of USAID's NTD Control Initiative

- Bangladesh
- Burkina Faso
- DR Congo
- Southern Sudan
- Tanzania
- Uganda
- Nepal
- Niger
- Sierra Leone
- Ghana
- Haiti
- Mali

USAID's NTD Control Initiative focuses on seven diseases that can be targeted with mass drug administration:

- Lymphatic filariasis
- Three soil-transmitted helminths (hookworm, roundworm, and whipworm)
- Schistosomiasis
- Trachoma
- Onchocerciasis (river blindness)

USAID's focus on integrated NTD control began in 2006 and was one of the first global efforts to support country programs to integrate and scale up delivery of preventive chemotherapy for the seven targeted NTDs. As a result, there has been a significant decline in the transmission of these diseases and the morbidity they cause. Based on its early success, USAID's NTD Initiative expanded in 2008 to an additional four countries – Bangladesh, DR Congo, Nepal, and Tanzania – bringing the number of NTD focus countries to 12 (see box).

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

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

With a congressional earmark of $15 million, the USAID program delivered more than 57 million NTD drug treatments in FY 2008 to more than 30 million people, 50 percent of them women, in four countries, bringing the number of treatments delivered since the program began to more than 90 million. Country programs supported by USAID achieved coverage rates of more than 80 percent of the populations eligible for treatment. Four of the drugs needed to control NTDs were donated by the pharmaceutical industry. USAID coordinated closely with these pharmaceutical partners, leveraging their drug donations to countries for USAID-supported mass drug administration campaigns and extending the reach of the donation programs. In 2008, more than $591 million worth of drugs for NTD control were donated by the pharmaceutical industry to the countries where USAID supported mass drug administration campaigns. USAID programs also trained more than 211,000 health staff, school teachers, supervisors, and community drug distributors in mass drug administration at central, regional, and district levels.

Specific country accomplishments included the following:

- **Mali:** Mali achieved national scale-up of its integrated NTD control program in 2008, reaching 10 million at-risk people with mass drug administrations. In the last year, coverage expanded from 24 to 58 districts, and more than 25,000 community drug distributors received training. More than 18 million treatments were provided, including 5.1 million treatments for lymphatic filariasis and soil-transmitted helminthiasis, 2.3 million treatments for schistosomiasis, and 4.6 million treatments for trachoma.

- **Uganda:** In a targeted effort to prevent blindness, Uganda added mass drug administration for trachoma as part of its integrated NTD control program, delivering preventive chemotherapy in seven districts. In total, approximately 8 million people in 47 health districts received treatment for endemic NTDs. Uganda also conducted focalized mapping for onchocerciasis, lymphatic filariasis, and schistosomiasis in northern regions previously affected by the insurgency, as well as mapping for trachoma in four additional districts.

- **Niger:** In May and June, Niger's NTD control program conducted its second integrated mass treatment campaign to combat lymphatic filariasis, schistosomiasis, onchocerciasis, soil-transmitted helminthiasis, and trachoma. The campaign took place in four priority regions and targeted approximately 8 million people. Several pharmaceutical companies and other partners donated millions of NTD treatments worth more

than $62 million. With USAID support, the number of treatments for lymphatic filariasis increased from zero in 2006 to more than 2 million in 2008.

- **Sierra Leone:** During its first year of implementation, Sierra Leone's program undertook mapping for trachoma, schistosomiasis, and soil-transmitted helminthiasis on a national scale, and for lymphatic filariasis in seven districts.

- **Southern Sudan:** After decades of civil war, Southern Sudan is rebuilding itself and improving basic services for its citizens. The Ministry of Health is developing its health systems and infrastructure and working toward disease control and prevention. In 2008, with USAID support, the Government finalized its National Strategic Plan for Integrated NTD Control, 2008–2011, and in May launched a program to control lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiasis, and trachoma through an integrated approach.

A woman's height is measured on a "dosing pole" during a mass drug distribution campaign in Uganda. The poles provide height measurements to enable community drug distributors to quickly and accurately determine the appropriate doses of praziquantel and ivermectin, two drugs used to treat several of the NTDs.

Photo: Henrietta Allen, WHO

New Ceremony Stops One Avenue of HIV Transmission

In a new version of a long-standing cultural practice, a woman symbolically cleanses herself in the wake of her husband's death by eating a meal of traditional foods.

Photo: USAID Mozambique

In sub-Saharan Africa, addressing gender issues is essential to reducing the vulnerability of women and men to HIV infection. As in other nations, this is true in Mozambique, where national HIV prevalence is now 16 percent.

In support of the U.S. President's Emergency Plan for AIDS Relief, USAID is working with local communities in Mozambique to address cultural norms and behaviors that can lead to greater risk of HIV transmission. In Zambézia province, for instance, tradition has long dictated that a widowed woman must cleanse herself of her deceased husband by engaging in sexual relations with another man – either a relative of her husband or, if no relative is available, a man in the local community. In exchange for his participation, the man receives payment.

With support from USAID, Zambézia's local leaders, elders, and pastors came together to address the need for a new and safer tradition that would lessen the risk of HIV transmission. Their deliberations led to a creative solution they believed would not be perceived as degrading to their customs. In the new practice, a widow still engages in a cleansing ceremony, but the ceremony itself is much different. Now, a widow consumes traditional foods of local vegetables, fruits, and plants. The new ceremony recognizes the husband's death as a turning point for the woman – but does so without posing an unnecessary risk of HIV transmission. ■

HIV/AIDS

KEY RESULTS

In FY 2008, USAID managed $3.06 billion, or more than 65 percent, of the funds of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). With USAID support, key PEPFAR results included:

- 58.3 million people reached with support for preventing sexual transmission of HIV using the ABC (Abstain, Be Faithful, correct and consistent use of Condoms) approach
- Nearly 2.2 billion condoms supplied worldwide between 2004 and 2008
- More than 750,000 patients provided antiretroviral treatment annually through USAID-supported commodities and systems

According to the Joint United Nations Program on HIV/AIDS (UNAIDS), 33 million people across the globe were living with HIV at the end of 2007, about half of them women. Children under age 15 account for one in six AIDS-related deaths worldwide and one in seven new HIV infections – the vast majority through mother-to-child transmission. And while HIV epidemics in many sub-Saharan Africa countries are stabilizing, HIV infections outside of Africa are increasing.

In this climate of a changing global epidemic, the U.S. Government renewed its commitment to fighting HIV/AIDS in 2008 with the reauthorization of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) under the Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008 (Public Law 110-293). Administered by the Office of the U.S. Global AIDS Coordinator in the State Department, PEPFAR is a collaborative effort of the Departments of State (including USAID), Defense, Commerce, Labor, and Health and Human Services, and the Peace Corps.

In 2008, USAID, with an HIV/AIDS budget of $3.06 billion, supported programs in more than 50 countries and managed more than 65 percent of PEPFAR funds. The key components of its program included:

- Prevention
- Care and support

- Treatment
- Sustainability and systems strengthening
- Strategic information
- Research

Village families in Nigeria wait in line for HIV/AIDS voluntary counseling and testing.

Photo: © 2003 Shehu Danlami Salihu, courtesy of Photoshare

Prevention

Prevention of HIV transmission remains a key challenge in the fight against AIDS. In support of the need for more evidence-based prevention programming, USAID is ensuring that its programs effectively target sexual transmission, the transmission of HIV through unsafe blood and medical injections, and male circumcision. In support of PEPFAR, USAID contributed to the prevention of sexual transmission of HIV by reaching 58.3 million people in 2008 with critical messages on the ABC approach: Abstinence, Be faithful, and correct and consistent use of Condoms. Between 2004 and 2008, the U.S. Government supplied nearly 2.2 billion condoms worldwide. USAID also contributed to PEPFAR's expanded services for the prevention of mother-to-child HIV transmission (PMTCT). To date, PEPFAR has supported PMTCT services for women during 16 million pregnancies, providing antiretroviral (ARV) prophylaxis for more than 1.2 million HIV-positive pregnancies and preventing an estimated 237,600 newborn infections.

Behavior change communication for prevention was tailored to different audiences and groups. In **South Africa**, USAID supported a television serial drama, *Tsha Tsha*, to reach youth ages 18 to 24 with HIV prevention messages. An evaluation of the Tsha Tsha campaign found that 61 percent of youth ages 15 to 24 had seen the show and that sexually active youth who had seen it were more likely to use a condom than youth who had not seen it. In **Honduras**, a national televised mass media campaign was launched in 2008 with airtime donated by one of the country's largest television stations. Although the initial commitment of the TV station was to air the series one time, due to the show's popularity it was shown three times for a total donation of airtime valued at nearly $200,000. The increased airtime, combined with an unanticipated opportunity to show the miniseries to youth in local movie theaters in six major cities, resulted in more than 825,000 youth being reached with abstinence and be faithful messages, more than seven times the original target.

Mother-to-child HIV transmission can occur via breastfeeding as well as during pregnancy. To reduce this risk in **Haiti**, a USAID project coordinated a workshop with the Government, WHO, and UNICEF at which public and private stakeholders incorporated the *WHO Consensus Statement on HIV and Infant Feeding* into national policies. Haiti now has a clear policy and is validating standards of care and developing job aids for health workers on infant feeding, with an emphasis on reducing HIV transmission through exclusive breastfeeding and the appropriate transition to complementary foods.

Male circumcision is another promising strategy to prevent HIV infection. USAID, through PEPFAR, is identifying populations for which male circumcision is especially promising and, by partner-country request, prioritizing service delivery in these populations within a comprehensive prevention package. Between FY 2007 and FY 2008, the number of countries requesting assistance for male circumcision activities increased from 9 to 13. Of the $26 million requested in 2008, $11 million supported direct circumcision service delivery, while other resources were allocated for clinic and community assessments, training and policy work, and stakeholder meetings. USAID's Health Policy Initiative collaborated with UNAIDS to develop the "MC Decision-Makers' Program Planning Tool" to help countries develop policies for scaling up

male circumcision services. The tool helps analysts and decisionmakers understand the costs and impacts of different policy options.

USAID also supported prevention interventions for populations at the highest risk of contracting HIV, including commercial sex workers, men who have sex with men (MSM), and intravenous drug users. In Rangoon, **Burma**, USAID implemented comprehensive prevention services targeting female sex workers (FSWs) and MSM in key "hot spot" areas. More than 80 percent of FSWs received prevention services, resulting in an increase of consistent condom use by clients from 69 percent in 2004 to 78 percent in 2006 and to 85 percent in 2007. In Rangoon, nearly 90 percent of MSM received information about the services. Results indicated that MSM who received two outreach contacts or participated in the drop-in center were more likely to consistently use condoms than MSM who did not participate (58 versus 28 percent).

Care and Support

In 2008, USAID played a key role in providing basic care and support services to 5.7 million people living with HIV. USAID's care and support programs encompass a range of services. They often serve as a critical link between HIV counseling and testing and antiretroviral treatment (ART) programs. In **Haiti**, for example, 95,000 individuals were provided with HIV-related care and support, nearly 18,000 of whom were also receiving ARV drugs by September 2008.

Care and support also encompasses palliative care, services for orphans and vulnerable children (OVC), and nutrition support. In 2008, USAID continued its partnership with the African Palliative Care Association (APCA), which has worked with governments, caregivers, and palliative care supporters in 18 countries to promote palliative care services and ensure their sustainability. In **Namibia**, APCA worked closely with the Ministry of Health and Social Services and other stakeholders to integrate palliative care into home-based care programs. In **Tanzania**, APCA partnered with a hospice foundation and a faith-based

USAID Research Demonstrates That Male Circumcision Is a Cost-Effective Intervention to Prevent HIV

Based on evidence presented at a WHO and UNAIDS consultation that showed a 48 to 53 percent reduction in HIV acquisition among circumcised men compared with uncircumcised men, USAID studied the costs of implementing safe male circumcision for HIV/AIDS prevention in Lesotho, Swaziland, and Zambia in 2007. Relative to other prevention interventions, the study demonstrated that male circumcision is a potentially cost-effective intervention. If male circumcision targets are met for 2015, the number of infections averted could be as high as 58,900 in Lesotho, 36,500 in Swaziland, and 270,900 in Zambia. Several factors influence the potential benefits, including the pace of scale-up and the impact of those who are circumcised adopting riskier behavior because they feel they are protected. Therefore, the surgical procedure should be implemented within comprehensive prevention services, including behavior change communication to prevent HIV transmission.

Four young boys orphaned by HIV/AIDS help their grandmother prepare manioc to sell in Ngaoundere, Cameroon.

Photo: © 2007 Ted Alcorn, courtesy of Photoshare

organization (FBO) to scale up existing programs for OVC and home-based care by introducing palliative care as a new program component. USAID also expanded palliative care services in **Ethiopia** to more than 2,000 sites, reaching more than 436,000 people.

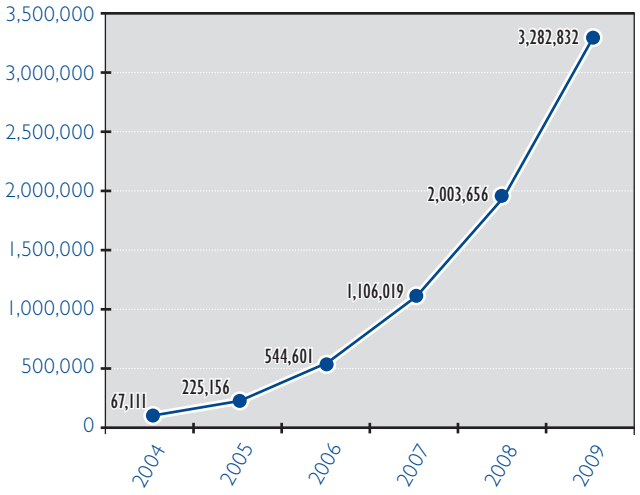
By September 2008, 4 million OVC – up from 2.7 million a year earlier – had received support from the U.S. Government. Achievements in 2008 included education and psychosocial support for 533,700 children in **Kenya**. USAID works with its partners and the Government of Kenya to ensure that these children and their households are able to access age-appropriate prevention services to reduce their vulnerability to HIV. For example, PEPFAR will identify strategies to integrate gender program goals into OVC program goals, such as addressing cross-generational sex and enhancing legal rights and protection for OVC. In **Haiti**, more than 52,000 OVC received supplemental food, health care, immunizations, legal and social support, and school scholarships. PEPFAR funding in **Tanzania** has made considerable progress in the scale-up of direct support for OVC from 104,670 in FY 2006 to 290,300 in FY 2008. In order to achieve scale and sustainability of OVC programs in Tanzania, the United States is supporting the Implementing Partners Group (IPG), a partnership between government and civil society organizations at the local and national levels. The IPG is convened by the Government and facilitates a systemic response to meeting the needs of OVC. IPG membership has grown from 53 to 100 organizations, including stakeholders from FBOs, local and international NGOs, and donors. The IPG builds consensus on priority activities and means for tracking and reporting results.

In **Burkina Faso**, USAID included nutrition assistance as part of care and support. HIV/AIDS educators and more than 420 households of people living with HIV/AIDS received food rations. A survey of the people living with HIV/AIDS found that 91 percent felt better and were able to perform normal activities after participating in the program.

USAID, through PEPFAR, has scaled up its support for national efforts to provide high-quality care for opportunistic infections. HIV-TB co-infection is especially important because it is the leading cause of death among HIV-positive people in the developing world. From FY 2005 to FY 2008, bilateral funding for HIV-TB increased from $26 million to $140 million, supporting TB treatment for more than 395,400 HIV-infected patients through September 2008.

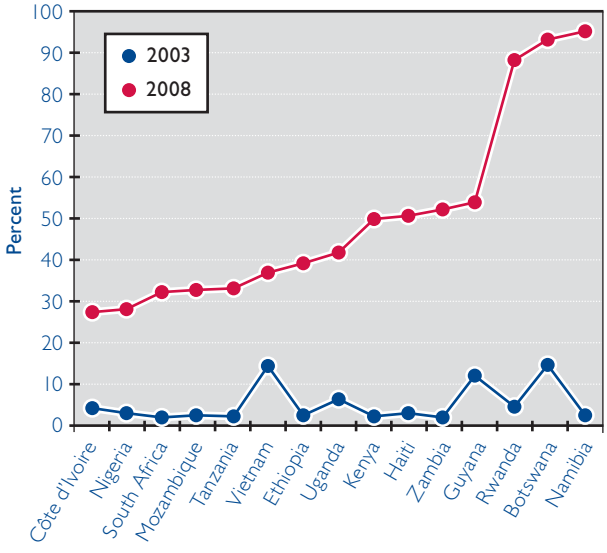
Through PEPFAR and in collaboration with WHO, USAID implemented a program in **Rwanda** through which 88 percent of TB patients are now tested for HIV, 61 percent of co-infected patients receive cotrimoxa-

Figure 6: Estimated Cumulative Years of Life Gained Due to PEPFAR Support for ART, PEPFAR Focus Countries, 2004–2009



Source: Celebrating Life: The U.S. President's Emergency Plan for AIDS Relief, 2009

Figure 7: Increases in National Treatment Coverage, 2003–2008



Source: Celebrating Life: The U.S. President's Emergency Plan for AIDS Relief, 2009

zole preventive therapy, and 36 percent of HIV-TB patients have accessed ART. USAID's Eastern Caribbean program promoted in-country collaboration between HIV and TB programs in all nine of its countries: **Antigua and Barbuda**, **Barbados**, **Dominica**, **Grenada**, **St. Lucia**, **St. Kitts and Nevis**, **St. Vincent and the Grenadines**, **Suriname**, and **Trinidad and Tobago**. Eight countries developed HIV-TB collaborative plans. The Caribbean Regional Guidelines for Prevention, Treatment, and Control of Tuberculosis were updated to highlight areas where TB and HIV/AIDS program collaboration could improve patient diagnosis, treatment, and clinical management.

Treatment

USAID supported PEPFAR in providing treatment for 2.1 million men, women, and children through September 2008. In PEPFAR focus countries, treatment is estimated to have saved more than 2 million adult years of life (figure 6). Pediatric treatment expanded rapidly, from 85,900 children treated in 2007 to 130,100 children in 2008. Since 2003, national coverage rates in the focus countries have increased significantly (figure 7).

USAID also implemented the Supply Chain Management System (SCMS) project, which helps partner nations increase their capacity to deliver lifesaving medications and supplies to people in need of treatment and care. SCMS works to strengthen supply chains in 25 countries and has delivered ART to more than 850,000 patients. To date, SCMS has delivered $208 million worth of HIV-related commodities. In **Ethiopia**, SCMS helped eliminate stock-outs of laboratory supplies. A new laboratory commodities distribution system served 380 sites nationwide and more than 155,000 patients.

Ready for integration with other HIV/AIDS commodities such as ARVs, the SCMS project ensures a comprehensive package of services to patients. SCMS expanded access to ART in **Namibia** by almost 500 percent in the last three years by helping to upgrade the Central Medical Stores. The upgrade more than doubled storage capacity and also improved inventory control and distribution. Since the upgrade, Namibia has had no stock-outs, expiry, loss, or theft of ARVs.

In **Zambia**, which has an estimated 1.2 million people living with HIV/AIDS, the Government has a policy to provide free ART, but the lack of qualified staff to ensure adherence to treatment regimens is a serious obstacle. In 2008, the USAID-supported Zambia Prevention, Care, and Treatment (ZPCT) Partnership program trained community volunteers to strengthen adherence support and counseling at the health facility and community levels; supported ART outreach services, including outreach to rural health centers; and strengthened referral networks for laboratory samples.

Between October 2004 and September 2008, the ZPCT program grew from 10 sites serving fewer than 1,700 clients to 96 sites serving more than 62,000. New research found that the program's strategy is an effective, low-cost way to achieve high-quality results while bridging the human resources gap.

Sustainability and 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, institutional capacity, human resources, monitoring and evaluation, health information systems, pharmaceutical management, procurement, health governance, and public-private partnerships.

Since 2007, USAID has collaborated with the Ministry of Health in **Nicaragua** on the successful decentralization of its HIV program. More than 4,000 people are

PEPFAR New Partners Initiative Expands to Fight Epidemic

USAID continued to support the PEPFAR New Partners Initiative (NPI), which expands the ability of faith-based and community-based organizations (FBOs/CBOs) to partner with the U.S. Government in fighting the HIV/AIDS epidemic. In some countries, these organizations provide as much as 40 to 50 percent of all care for persons living with HIV/AIDS. FBOs and CBOs can often reach vulnerable populations who are not reached by traditional service delivery networks. However, they sometimes lack the experience of working with the U.S. Government and its processes. To ensure the sustainability of the response, NPI offers assistance to successful applicants, focusing on quality implementation, needs analysis, and organizational growth and strengthening. Building the capacity of organizations at the community level helps to build local ownership in the long term. The number of NPI grants increased from 36 in 2007 to 45 in 2008.

now tested each month, including 60 percent of all pregnant women. At the health district level, USAID is improving the overall continuum of care across different levels of health services and different stages of disease in 14 of the 17 health districts (up from 11 in 2007). Multidisciplinary teams have developed and implemented plans for integrated HIV/AIDS services, including PMTCT activities and ART.

USAID is also helping developing countries build and sustain their health workforces so they can respond systematically to the challenges of implementing and sustaining quality HIV/AIDS programs. In **Kenya**, for example, USAID-supported activities were instrumental in conceptualizing, developing, and implementing an Emergency Hiring Plan (EHP) for the public health sector. EHP helped the Ministry of Health rapidly hire, train, and deploy 830 health workers to critically underserved health facilities in rural areas. The Ministry expanded the Plan, and a two-week training course updated the new hires' skills in HIV/AIDS treatment, care, support, and patient relations. The Ministry also implemented a sustainability plan to ensure that workers hired under EHP are absorbed into the regular workforce. The Clinton Foundation and the Danish International Development Agency also supported EHP.

Expanding programs for HIV/AIDS requires strong and supportive laboratory services. Laboratory capacity depends on the availability of equipment, reagents, and consumables required to perform these tests, which, in turn, hinge on effective supply chains for laboratory commodities. Working with partner-country counterparts in **Kenya**, **Uganda**, **Nigeria**, **Malawi**, and **Ghana**, USAID completed comprehensive assessments of laboratory services for the national programs. In Uganda, 530 clinical laboratories used the preliminary assessment developed by USAID's partner and the Central Public Health Laboratories to review and improve laboratory policies, guidelines, supply chain functions, infrastructure, and availability of reagents.

Strategic Information

As the cornerstone of evidence-based planning and decisionmaking, strategic information is integral to national health systems strengthening. Good data are fundamental for PEPFAR programs and serve as the basis for identifying the epidemic and the appropriate response to it, as well as documenting needs, activities, and results.

USAID, a leader in strategic information, supports PEPFAR programs through three types of strategic information activities: health management information systems, monitoring and evaluation, and surveys and surveillance. In order to improve program monitoring and evaluation and policy decisionmaking, USAID supports nationally representative surveys that institutionalize data collection and provide the data needed for informed decisions. Since 2003, Demographic and Health Surveys (DHS) have collected HIV prevalence data in more than 30 countries, and in seven countries, Service Provision Assessments have obtained data on HIV/AIDS health care services. In January 2007, analysis of HIV prevalence data from eight DHS in sub-Saharan Africa demonstrated – contrary to evidence for other infectious diseases and theoretical expectations – that HIV prevalence is not disproportionately higher among adults living in poorer households. In all eight countries, wealthier men and women tended to have higher

A health worker in Thailand shows a patient living with AIDS the watch that will remind her to take her ARV medicine.

Photo: © 2004 Melissa May, courtesy of Photoshare

prevalence of HIV than poorer ones. The study findings question the basis of poverty-driven HIV/AIDS prevention programs in developing countries and have guided efforts to target programs at all socioeconomic levels.

Research

Through PEPFAR, USAID develops products to prevent HIV transmission, including a vaccine and microbicides to prevent HIV infections in women. USAID also conducts research in such areas as HIV prevention among youth, PMTCT, and treatment of pediatric HIV infections.

Since 2001, USAID has funded the International AIDS Vaccine Initiative (IAVI), a nonprofit organization that acts as a virtual pharmaceutical company to accelerate the development and clinical testing of HIV vaccine candidates. This support is an important part of U.S. Government efforts to address the pandemic from every conceivable direction. IAVI facilitates collaboration among universities, governments, and private sector groups to ensure that the appropriate resources are available for each phase of product development.

IAVI also analyzes important issues affecting the HIV vaccine field, such as regulatory and licensing issues, normative laboratory values in African populations, new strategies to engage biopharmaceutical companies in HIV vaccine development, and preparation for the manufacture and distribution of vaccines once they are proven effective. Under a five-year cooperative agreement initiated in 2006, USAID is supporting IAVI to strengthen clinical trial capacity in developing countries, advance the development and testing of novel vaccine candidates, enrich the pipeline of next-generation HIV vaccine candidates, and analyze policy and future access-related issues in the HIV vaccine field.

USAID also collaborates with the National Institutes of Health, CDC, and the U.S. Military HIV Research Program through the Partnership for AIDS Vaccine Evaluation (PAVE). PAVE is a voluntary consortium of U.S. Government agencies and key U.S. Government-funded organizations involved in the development and evaluation of HIV/AIDS preventive vaccines and the conduct of HIV vaccine clinical trials. USAID is represented on the PAVE Executive Steering Group. IAVI is also an affiliate of PAVE.

USAID Leads Support for Fistula Repair

A dress ceremony on board the hospital ship *Africa Mercy* off the coast of Benin. During the ceremony, women who have had fistula surgery receive a new dress before they return home.

Photo: USAID

With USAID support, 10,000 women have received surgery for fistula since 2005. Fistula is a devastating vaginal injury affecting millions of women in developing countries. While it can be surgically repaired in 90 percent of cases, most women with fistula lack access to skilled treatment and care.

Caused by tissue damage from prolonged, obstructed labor, fistula – an abnormal opening between a woman's vagina and her bladder and/or rectum – can occur when the infant's head is unable to pass through the birth canal. Untreated, fistula can lead to skin infections, skin ulcers, kidney disease, and even death. Many women who suffer from fistula also suffer social isolation.

USAID spearheaded a global effort to prevent and treat fistula four years ago. Through collaboration with governments, international health organizations, and faith-based organizations, teams at 25 health facilities in 12 African and Asian countries have been trained in surgical fistula repair.

"The United States has achieved a major milestone in improving global maternal health – giving 10,000 women hope for a better life. None of this would have been possible without the dedication of the local medical teams, government officials, international partners, and the support of the American people," said Gloria Steele, Acting Assistant Administrator in USAID's Bureau for Global Health. "But our work is just beginning."

Fistula is also almost entirely preventable. It could be made as rare in developing countries as it is in the industrialized world by making family planning available to all; by ensuring skilled attendance at all births; and by improving access to emergency obstetric care and cesarean section. USAID supports efforts to raise awareness of fistula and its underlying causes, including early pregnancy, poverty, and a lack of girls' education and women's empowerment. USAID also supports counseling and support to help women reintegrate into communities that may have shunned them. ■

CHILD SURVIVAL & MATERNAL HEALTH

KEY RESULTS

- More than 18,000 women and newborns in Nigeria received delivery care and postpartum/postnatal care in 34 USAID-supported hospitals.
- USAID was part of the global immunization effort that prevented more than 2.5 million deaths in all age groups from diphtheria, tetanus, pertussis (whooping cough), and measles.
- In 241 supplementary immunization activities in 36 countries, 340 million children under age 5 received 2.46 billion doses of oral polio vaccine.
- More than 20 million children benefited from USAID infant and young child nutrition programs around the world.
- In DR Congo, treatment of child pneumonia with antibiotics increased from 13.5 percent of cases in FY 2007 to 51 percent in FY 2008, and proper diarrhea treatment tripled from about 15 to 44 percent.
- In 14 countries, more than 8 billion liters of drinking water were disinfected by households to prevent diarrhea.

Protecting the health of infants, children, and their mothers has been a strong and successful mission of USAID over the years, as lifesaving interventions in pregnancy, childbirth, and child health have been, and are being, delivered on an unprecedented scale across the globe. Still, nearly 9 million children under age 5 die each year – 40 percent of them in the first few weeks of life – and more than half a million women die annually from preventable complications during pregnancy and delivery.

USAID approaches these challenges by developing, introducing, implementing, and evaluating new high-impact interventions and programs. Key tools to protect child health include:

- Immunization
- Diarrhea treatment with oral rehydration and zinc
- Vitamin A supplementation and other nutrition interventions
- Community-level treatment of pneumonia with antibiotics
- Breastfeeding promotion
- "Essential newborn care"
- Improvements in water supply, sanitation, and hygiene
- Innovative crosscutting approaches such as community case management

Increasing numbers of mothers now benefit from assistance by skilled birth attendants, from adequately equipped health care facilities, and from the

provision of drugs and practices to prevent life-threatening complications such as preeclampsia, obstructed labor, and postpartum hemorrhage.

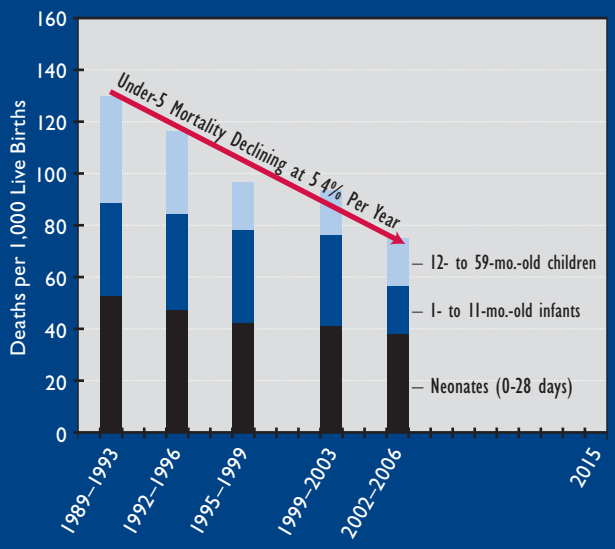
During FY 2008, USAID launched its "Strategic Approach to Maternal and Child Health" in 30 priority countries to bring about reductions in under-5 mortality rates, maternal mortality ratios, and child malnutrition, and increase the number of functional community health workers and volunteers serving at the primary care and community levels. This initiative focuses on introducing and expanding high-impact interventions to continue the fight against the common preventable and treatable killers of children and mothers.

Bangladesh: On Track to Reach Child Mortality Goal

Twenty years ago, many experts claimed that Bangladesh's conservative culture and low standard of living would be insurmountable obstacles to child survival programs. These claims have been refuted, however, by recent data showing a decline in under-5 mortality from 133 deaths per 1,000 live births in 1989–93 to 65 in 2002–2006. This decline shows that high-impact child health interventions are working. As a result, Bangladesh is on track to surpass the Millennium Development Goal (MDG) of a two-thirds mortality reduction from 1990 to 2015 (figure 8).[8]

USAID is contributing to this success by providing clinic- and community-based fee-for-service family care through the Smiling Sun Franchise Program (SSFP), a network of 318 franchise clinics, more than 8,000 community clinics, and community volunteers covering almost 20 million people. SSFP delivers essential maternal/child health services, including safe delivery and ante- and postnatal care for mothers and newborns, and immunizations, vitamin A supplements, and diagnosis and treatment of respiratory and diarrheal diseases for young children.

Figure 8: Trends in Under-5 Mortality in Bangladesh



Source: Bangladesh Demographic and Health Surveys

Bangladesh's latest Demographic and Health Survey found that the percentage of 12- to 23-month-old children who received all vaccines increased to 82 percent in 2007 from 73 percent in 2004, surpassing the goal of 80 percent. Vitamin A coverage among children ages 9 to 59 months was sustained at 88 percent. USAID-supported clinics contributed to these results by participating in national immunization and vitamin A campaigns. In 2007, 85 percent of children with diarrhea were given increased fluids or oral rehydration therapy (originally developed with the support of USAID-funded research in Bangladesh in the 1970s), and USAID's longstanding social marketing program contributed as well. In 2008, the program sold 200 million sachets of oral rehydration salts, a 9 percent increase from 2007.

With this success in reducing child mortality, the challenges have shifted to infant survival. Almost 60 percent of under-5 deaths in Bangladesh occur during the first month of life, with the majority occurring in the first 48 hours after birth. Access to essential obstetric and newborn care services is still inadequate – more than 85 percent of women delivered at home in 2007, and only 18 percent had a skilled birth attendant. USAID's Safe Motherhood and Newborn Care project supports improved obstetric and newborn care, and in 2008, 53 percent of 36,000 mothers who notified project workers of a birth received postnatal care within 24 hours. More than 80 percent received care within seven days, resulting in a significant increase in essential newborn care.

8. The decline represents a 5.4 percent annual rate of reduction of the under-5 mortality rate, which exceeds the required reduction of 4.3 percent per year needed to achieve the MDG target for 2015. Currently, one in every 15 Bangladeshi children dies before reaching age 5, down from one in 11 in 2004.

Maternal and Neonatal Health

Maternal and neonatal illness, disability, and death remain persistent challenges in low-income countries. As a result, the reduction of child mortality and the improvement of maternal health are two of the Millennium Development Goals (MDGs) to be achieved by 2015. An estimated 536,000 maternal deaths occur worldwide each year, 99 percent of them in developing countries, primarily in sub-Saharan Africa and Asia. The 1-in-22 lifetime risk that a woman in sub-Saharan Africa has of dying as a result of pregnancy is more than 200 times greater than the 1-in-4,800 risk of a woman in the United States. For every woman who dies, 20 will suffer from serious complications such as infection and obstetric fistula – an estimated 10.7 million women per year. Each year, 4 million newborns die in the first four weeks of life, accounting for 40 percent of all deaths among children under age 5.

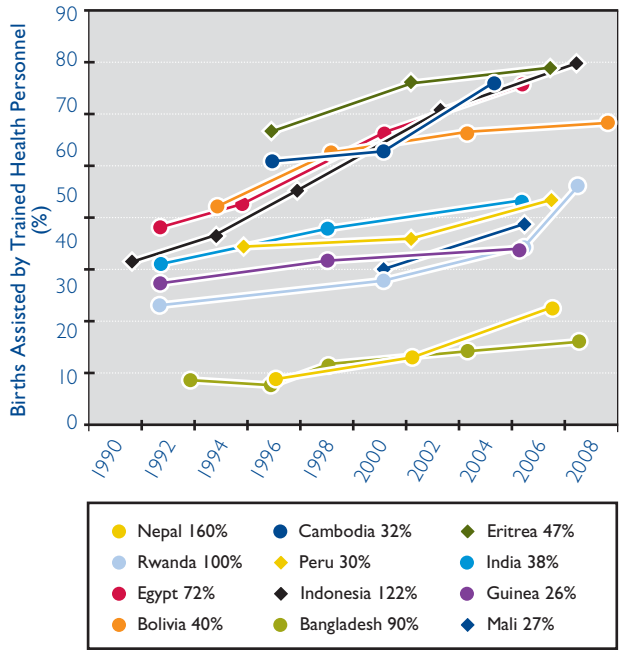
Maternal and neonatal mortality are not insurmountable problems. In 2008, USAID announced that it was intensifying efforts in 30 maternal/child health "priority" countries to reduce maternal and child mortality by 25 percent by 2013. Since the late 1980s, USAID maternal health programs have helped reduce maternal mortality in 15 countries[9] by 9 to 48 percent, and in 11 of these countries newborn mortality also decreased by 16 to 42 percent. The use of skilled birth attendants has increased substantially, more than doubling in Nepal, Indonesia, Bangladesh, and Rwanda (figure 9). Across all 30 priority countries, it increased from an average of 34 percent in 1990 to 47 percent in 2008.

Most serious maternal and neonatal complications occur in the home, and most deaths occur during labor and delivery or within one week of birth, with only one-quarter of mothers and newborns receiving any postnatal

"In Bangladesh, trained counselors visited more than 38,000 women and newborns within three days of birth. This resulted in more than 80 percent of newborns receiving essential newborn care (clean cord care, immediate breastfeeding, and warmth)."

9. Bangladesh, Benin, Bolivia, Egypt, Ethiopia, Guatemala, Indonesia, Kenya, Mali, Malawi, Nepal (48%), Rwanda, Senegal, Uganda, Zambia (9%).

Figure 9: USAID-Assisted Countries with Greatest Increases in Skilled Assistance at Birth, 1991–2008



Source: Demographic and Health Surveys, 1991–2008

Note: Data are for the three-year period preceding the survey. Only countries with an increase of more than 25 percent are presented.

care. Many USAID programs thus focus on labor, delivery, and the postpartum period through interventions that address specific high-mortality complications of pregnancy and birth. These include hemorrhage, hypertension, infections, prolonged labor, and complications of unsafe abortion for the mother, and infections, asphyxia, and complications of prematurity and low birthweight for the newborn. USAID support augments standard facility-based services with behavior change to ensure compassionate, dignified care and service delivery outreach to families and communities.

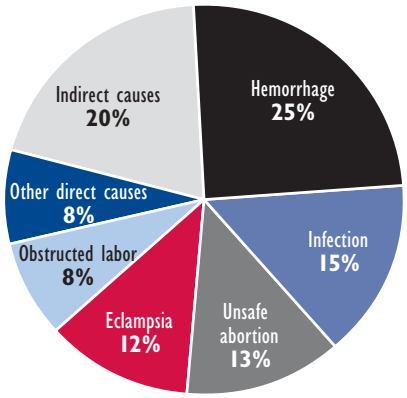
USAID's maternal/neonatal health strategy emphasizes proven low-cost approaches to essential care and to care for complications that can be scaled up. Interventions are carried out through:

- Family planning to prevent unintended pregnancy
- Community preparation for birth and home-based essential care
- Care during pregnancy, birth, and the postnatal period
- Care for complications and emergencies

USAID focuses on expanding high-impact interventions to prevent and treat the major causes of maternal mortality. Postpartum hemorrhage (PPH) is the major cause of all maternal deaths (figure 10), and in 2008 USAID continued to lead a global PPH prevention effort. At USAID-supported facilities in **Nigeria**, more than 22,000 women delivered with a skilled birth attendant, and nearly 18,500 of them received "active management of the third stage of labor" (AMTSL), which can prevent 60 percent of PPH. The facilities also assisted women with prolonged or obstructed labor, using the partograph (a tool for assessing the progress of labor and identifying when intervention is necessary) in 10,400 births. In addition, 1,284 women with eclampsia received treatment according to protocol. In all, more than 18,000 mothers and newborns received delivery care and postpartum/postnatal care within three days at 34 USAID-supported hospitals.

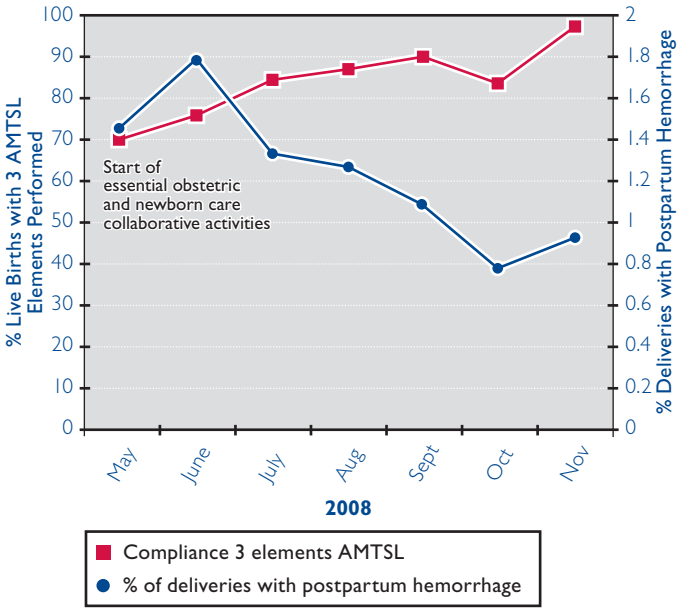
Abortion is another leading cause of maternal death, and reducing abortions and improving postabortion care can also reduce maternal mortality. In **Armenia**, USAID introduced interventions in five regions that resulted in an increase in modern contraceptive use and a 27 percent reduction in the abortion rate at project sites in 2008. The model focused on integrating family planning counseling and services into reproductive/maternal/child health care and improving communications among all types and levels of care to reach men and women with information when they most need it. Family planning counseling and postpartum

Figure 10: Global Maternal Mortality Causes



Source: WHO, The World Health Report 2005

Figure 11: Improved Compliance with AMTSL and Reduction in Postpartum Hemorrhage, 17 Facilities in Zou/Collines Region, Benin, 2008



Source: Benin Integrated Family Health Project

Note: Based on self-assessment of approximately 850 live birth records per month at the 17 sites. Self-assessment refers to reporting by staff at health facilities based on their own review of records.

and postabortion services are now integrated at five hospitals and offered at another 52 primary care facilities.

USAID also continued to support quality improvement collaboratives that are improving and expanding maternal/neonatal health care coverage in **Afghanistan**, **Benin**, **Niger**, **Russia**, **Guatemala**, **Honduras**, and **Nicaragua**. In Benin, a quality improvement collaborative has worked to improve maternal and newborn care since 2005 with the goal of scaling up the program. Activities have included updating national standards, coaching in quality improvement and self-monitoring activities, and competency-based training in essential newborn care and active management of the third stage of labor to prevent PPH. By September 2008, seven health zones were complying with AMTSL standards in more than 95 percent of deliveries, up from 71 percent in January 2007. Other regions also improved their compliance – 17 sites in six health zones in another region raised their compliance from 73 to 97 percent in just six months and saw a decrease in PPH frequency (figure 11).

USAID also supported community- and household-based essential care activities that empower women to assess their health needs, prepare for birth, recognize complications, and prepare for emergencies. Research in rural **India**, where most births take place in the home and where high-risk newborn care practices are common, found that community-based newborn care interventions can lead to positive changes in care practices and substantial decreases in neonatal mortality. Community health workers held village meetings and made two antenatal and two postnatal household visits. Neonatal mortality decreased by more than 50 percent, and improvements occurred in birth preparedness, hygiene, and immediate newborn care, including umbilical cord and skin care, thermal care (including skin-to-skin care), and breastfeeding. In **Bangladesh**, trained counselors visited more than 38,000 women and newborns within three days of birth. This resulted in more than 80 percent of newborns receiving essential newborn care (clean cord care, immediate breastfeeding, and warmth).

Hypothermia in newborns was a focus of USAID programs in **Nepal**, **Rwanda**, **Nigeria**, **Bangladesh**, **Tanzania**, and **Ethiopia** that introduced or expanded the use of kangaroo mother care (KMC) for low-birthweight infants. This skin-to-skin contact helps prevent hypothermia, facilitates breastfeeding, and stabilizes the infant's heartbeat and breathing. In combination with other newborn care behaviors, it can reduce neonatal mortality by 50 percent. In 2008, 10 facilities in **Malawi** (including hospitals and health centers) adopted KMC and reached about 100 patients. Over the next two years, KMC will be scaled up to reach more districts, and follow-up care will be strengthened to better monitor mothers and infants. In **Nepal**, the Government received USAID support to develop and pilot-test a community-based newborn care program to reduce neonatal mortality by improving birth preparedness, newborn care practices, and access to management of hypothermia, neonatal sepsis, and birth asphyxia, especially in rural and other remote areas. More than 26,000 newborns were visited within three days of birth, and more than 1,600 were treated for infections with antibiotics. In FY 2009, this package of interventions will be rolled out to eight districts and then expanded to other districts.

USAID programs also made further progress toward integrating PMTCT services and maternal/neonatal care. In **Malawi**, USAID helped facilities integrate PMTCT standards into their existing reproductive health standards and strengthen the PMTCT content in basic

emergency obstetric/neonatal and community maternal/neonatal health training packages. In **Swaziland**, USAID worked to integrate quality postnatal care (PNC) into the country's PMTCT program. Nearly 60 percent of staff in seven health facilities were trained in promoting and providing PNC, and a final evaluation showed a twentyfold increase in the number of early (within three days after birth) PNC visits. The percentage of women breastfeeding within one hour of delivery also increased by 41 percent among HIV-negative mothers and 52 percent among HIV-positive mothers, and prophylaxis for HIV-exposed infants increased by 24 percent.

Skills lab at a USAID-supported midwifery training school in Herat, Afghanistan.

Photo: Jaime Mungia

USAID programs also addressed the urgent need for a well-trained workforce in maternal and newborn care. In the past year in **Afghanistan**, USAID supported midwifery education programs that deployed 139 graduates from accredited schools to rural and remote areas. Since the program's inception in 2002, more than 1,150 community and hospital midwives have graduated. In addition, USAID helped launch Afghanistan's first competency-based clinical skills course in basic newborn care. In **Ghana**, close collaboration with the Ghana Health Services and other partners supported efforts toward achieving the MDGs of reduced maternal and child mortality. To improve quality of care, more than 1,000 health workers received training in clinical guidelines for infection prevention, treatment of ill children, lifesaving skills, and treatment of obstetric complications, including PPH prevention. More than 11,000 people, including community health volunteers and community health extension workers, received training in child health and nutrition as well as maternal/newborn health. In **India's** Jharkhand state, USAID supported a competency-based auxiliary nurse-midwife (ANM) training curriculum, with trained ANMs delivering almost 50 percent of all births reported between March and October 2008. Prior to the intervention, ANMs were not attending deliveries at all.

USAID also supported global and regional alliances in 2008 to advocate for maternal/newborn health and raise awareness about its importance in attaining the MDGs. One such alliance is the Latin America and Caribbean Newborn Health Alliance, which in 2008 developed a strategic consensus and regional plan of action to address all major causes of neonatal mortality across the continuum of care. The Alliance targeted issues such as improving access to health systems and promoting community-based interventions and developed an interactive Web site in appropriate languages on evidence-based newborn health practices. The global White Ribbon Alliance (WRA) for Safe Motherhood has had unprecedented success in the past year in promoting the cause of maternal survival. Support to WRA national alliances has galvanized action for "social watch" programs to support civil society engagement with policymakers to provide promised maternal and newborn services and hire and properly compensate midwives.

Immunization

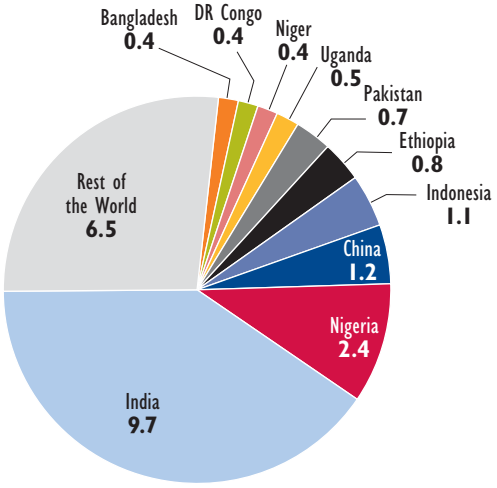
Immunization has saved the lives of millions of children since the launch of the Expanded Program on Immunization in 1974. Routine immunization services now reach more than 80 percent of the world's children, providing protection against diseases such as diphtheria, pertussis (whooping cough), measles, polio, tetanus, TB, hepatitis B, and *Haemophilus influenzae* type b (Hib), which causes a certain type of pneumonia or meningitis. Each year, immunization prevents more than 2.5 million deaths in all age groups from diphtheria, tetanus, pertussis (whooping cough), and measles, remaining one of the most cost-effective health interventions for saving lives and preventing illness and disability.

Despite immunization's successes, opportunities to vaccinate children under age 1 are still missed by routine immunization services. In 2008, WHO estimated that 24.1 million children were unimmunized worldwide (figure 12). Vaccine-preventable diseases are estimated to cause more than 2 million child deaths every year as a result of this lack of coverage.

It is estimated that 25 percent of the nearly 9 million annual deaths in children under age 5 can be prevented with vaccines. Increasing routine immunization coverage could have a significant impact on reducing under-5 mortality. However, constraints on immunization programs, including inadequate financial and human resources and competing health priorities, render some public health programs unable to fully protect children through routine immunization services.

"Assistance to both [Indian] government and nongovernmental partners helped improve routine immunizations, and more than 15.3 million doses of DTP vaccine were delivered to children in FY 2008 through USAID programs."

Figure 12: Number of Unvaccinated Children (millions), DTP3, 2007



Source: WHO/UNICEF coverage estimates 1980–2007, August 2008

Note: DTP3 = full series of three DTP immunizations

USAID invests in immunization primarily through the GAVI Alliance,[10] which was established in 2000 to increase access to immunization in 72 poor countries with annual gross national per capita incomes of less than $1,000. From 2001 to 2008 USAID contributed $500 million to the Alliance. Over the same period, all donors made global commitments of nearly $4 billion.

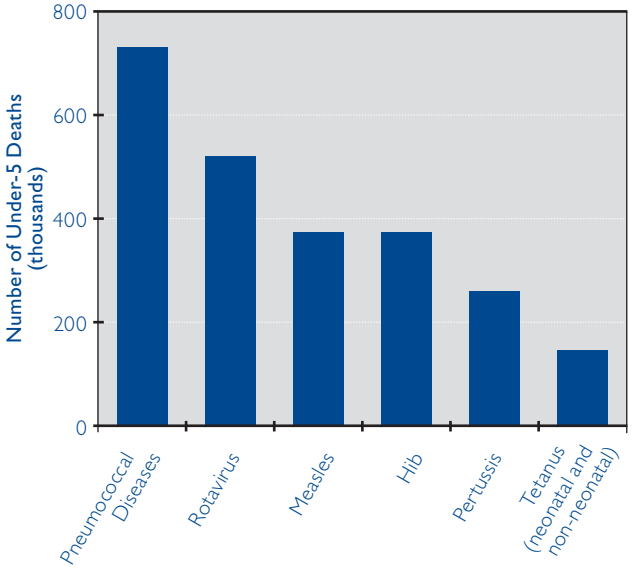
Outside of its larger investment in GAVI, USAID's immunization program provides technical assistance to ensure that investments in GAVI are as effective and efficient as possible through (1) global- and regional-level policy and technical leadership, (2) technical assistance at the country level, and (3) an expanded supply of high-quality vaccines affordable for use in developing countries.

USAID's immunization strategy has three critical elements:

- Targeting high-burden countries with large populations of underimmunized and unimmunized children who are not fully protected from basic vaccine-preventable diseases
- Targeting children who are routinely missed due to fragile or ineffective routine immunization systems, including children in underserved areas
- Providing technical assistance to maternal/child health priority countries that are facing declining immunization coverage to better understand and address the decline

Significant achievements in 2008 included the introduction of a new pneumonia vaccine for children under age 2 in **Rwanda** and **Gambia**, two very poor pilot countries. Each year, more than 2 million children under 5 die from pneumonia. Together, vaccine-preventable pneumococcal diseases and rotavirus (diarrhea) account for more than 1 million deaths each year (figure 13). Vaccines to protect against pneumonia have long been available for adults, but a vaccine for children less than 2 years old – the pneumococcal conjugate vaccine (PCV) – was developed only about eight years ago and has only been available in wealthy countries. In collaboration with GAVI, USAID is working to introduce and expand the use of PCV. In 2008, USAID provided technical assistance to Rwanda to introduce PCV into its routine immunization program, making it the first African country to do so. USAID-funded programs provided technical assistance to the Ministry of Health in applying to GAVI to introduce the vaccine and in assessing the readiness of Rwanda's immunization system. USAID also provided cold chain equipment to ensure proper vaccine storage.

Figure 13: Leading Causes of Vaccine-Preventable Deaths in Children Under 5 Years Old



Source: WHO, The Global Burden of Diseases (GBD): 2004 update, 2008

Note: Rotavirus: WHO/IVB estimates based on GBD estimates, deaths for 2000; Pneumococcal diseases and Hib: WHO/IVB estimates based on GBD, 2004 update.

10. Originally the Global Alliance for Vaccines and Immunization

USAID AND THE GAVI ALLIANCE

USAID continues its successful participation in the GAVI Alliance. There has been notable progress in the introduction of new and underused vaccines in GAVI-eligible countries. GAVI support is projected to have averted a cumulative 3.4 million future deaths caused by hepatitis B, *Haemophilus influenzae* type b (Hib), and pertussis. Additional GAVI achievements include the following:

- Nearly 51 million children have been protected with basic vaccines against diphtheria, tetanus, and pertussis (whooping cough).
- A cumulative total of 192.2 million children had received hepatitis B vaccine by the end of 2008.
- The number of children supported with three doses of Hib vaccine rose to 41.8 million, up from an estimated 28.2 million at the end of 2007.
- A cumulative total of 213 million children have been reached with GAVI-supported vaccines.

As part of GAVI's strategic goal to accelerate uptake and use of underused and new vaccines, there is a major push to introduce vaccines for pneumonia and diarrhea. Together, pneumococcal diseases and rotavirus (diarrhea) account for more than 1 million child deaths each year. The majority of these deaths can be prevented with new vaccines, and GAVI and its partners are working on a number of fronts to ensure these vaccines reach the most children as quickly as possible. Through its participation in GAVI, USAID will support the introduction of new vaccines and, at the global, regional, and Mission levels, will help countries strengthen their routine immunization systems and increase the number of children immunized with lifesaving vaccines.

USAID also supported the introduction in **Liberia** of new pentavalent vaccine that adds hepatitis B and Hib vaccines to the diphtheria-tetanus-pertussis (DTP) formulation. USAID assistance to WHO enabled the Ministry of Health and Social Welfare to conduct special outreaches on expanded immunization coverage.

WHO recently estimated that 2.41 million of the world's unimmunized children were in **Nigeria**. USAID provided technical support to strengthen routine immunization in Bauchi and Sokoto states, where approximately 1 million unimmunized children reside. Through a targeted systems strengthening process using low-cost sustainable approaches, the number of facilities providing routine immunizations increased in Bauchi from 247 in 2006 to 531 in 2008 and from 241 to 317 in Sokoto over the same period. In a country with a weak primary health care system, the program has served as a model for rebuilding routine immunization in northern Nigeria.

In **Indonesia**, the financial crisis accompanied by limited decentralization of authority for government services are key factors responsible for a decline in coverage rates in recent years. Since 2007, the USAID-administered Millennium Challenge Corporation (MCC) Indonesia/Immunization Project has provided technical assistance to build the capacity of the immunization system and increase community awareness about the importance of immunization. The Project helped improve access to services (as measured by coverage with the first DTP immunization, which increased from 81 percent in 2006 to 93 percent in 2008) and increase program utilization (as measured by coverage with the full series of three DTP immunizations, which increased from 66 to 85 percent over the same period). These improvements allowed Indonesia to achieve the goal of increasing immunization coverage rates to 80 percent so the country could receive MCC funding.

India has 9.7 million of the world's unimmunized children, more than any other country. To support efforts to improve routine immunization, USAID provided technical assistance to enhance the policies, systems, and skills required to raise and sustain coverage in Uttar Pradesh and Jharkhand states. Assistance to both government and nongovernmental partners helped improve routine immunizations, and more than 15.3 million doses of DTP vaccine were delivered to children in FY 2008 through USAID programs.

Polio Eradication

The international effort to eradicate polio has made tremendous progress since its inception in 1988. Reported cases in 2008 numbered 1,655, compared with 350,000 in 1988 (figure 14). Only four countries – Nigeria, India, Pakistan, and Afghanistan – remain endemic, the fewest ever. These four countries accounted for 91 percent of reported cases worldwide, with Nigeria (798 cases) and India (557 cases) accounting for 82 percent. Even in these endemic countries, cases were limited geographically.

In 2008, newly infected countries and those with prolonged outbreaks included Angola, Benin, Burkina Faso, Central African Republic, DR Congo, Ghana, Mali, Nepal, Niger, Southern Sudan, and Togo (figure 15).

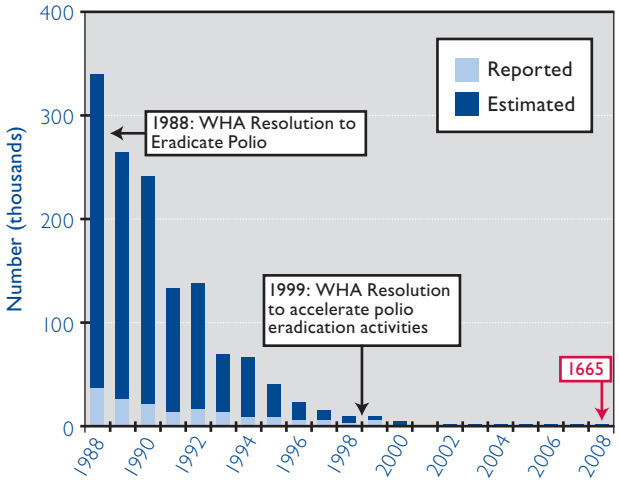
The four endemic countries and many of the re-infected countries continue to face operational challenges to reaching every child, including security issues, population movements, vaccine refusals, and funding, but the prospects for polio eradication remain bright. The tools to eradicate polio, including more effective vaccines and diagnostic tools and innovative approaches to improving polio education, communications, and immunization campaigns, are available to those countries that make a sufficient national commitment to overcome these challenges.

USAID has supported the global Polio Eradication Initiative (PEI) since 1996 and has been a major partner in the global effort to achieve a polio-free world. Since PEI began in 1988, WHO estimates that supplemental immunization campaigns have averted more than 6 million cases of polio.

CURT CARNEMARK/WORLD BANK

"Polio vaccination campaigns mobilized more than 20 million workers worldwide."

Figure 14: Polio Cases, 1988–2008



Source: WHO as of April 2009

USAID-supported activities have included planning, community mapping, training, supervision, communications, transportation, provision of vaccine and other supplies, and monitoring and evaluation. The United States is providing 28 percent of global funding for polio through USAID and CDC, and in 2008 contributed more than $130 million to the eradication effort.

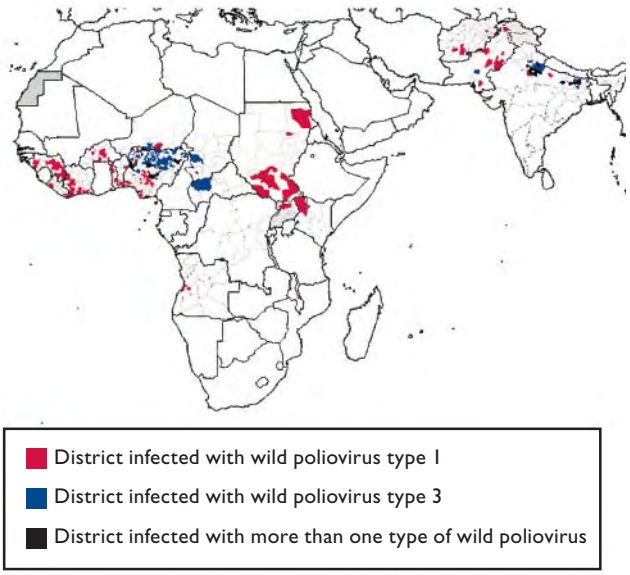
USAID's strategy, developed with PEI partners such as WHO, UNICEF, Rotary International, and the Child Survival Collaborations and Resources (CORE) Group Polio Project, focuses on:

- Building collaborative and cooperative partnerships at the global, national, and local levels
- Strengthening and improving national and regional immunization systems
- Supporting polio immunization campaigns and supplemental immunizations
- Developing integrated surveillance approaches and establishing surveillance networks
- Improving and expanding data collection and dissemination

In FY 2008, USAID continued to support effective partnerships and foster collaboration and cooperation in polio eradication through diplomacy, assistance to national polio eradication programs, and support for local community organizations. Polio vaccination campaigns mobilized more than 20 million workers worldwide. In four countries, the CORE Group, which links U.S.-based private voluntary organizations with local community-based organizations to conduct polio eradication activities, helped coordinate partner activities, including representing partners and communities at national and international meetings and communicating changes in national or global strategies to partners for action. A 2008 evaluation of CORE concluded that its efforts to eradicate polio through community-based strategies have helped the eradication program achieve broad outreach. CORE has also helped managers improve the analysis of data from polio campaigns and routine immunizations to improve polio vaccination coverage.

USAID supported a wide variety of activities to assist national and regional immunization systems. In West and Central Africa, USAID provided technical assistance through the regional UNICEF office and the Africa regional office of WHO to help countries intensify their polio and routine immunization communications. As a result, **Nigeria**, **Niger**, **DR Congo**, and **Chad** achieved increased dissemination of polio communications. In **Afghanistan**, USAID supported UNICEF in implementing an innovative community-based approach called the Women's Courtyard Strategy, through which female community health workers discuss the importance of vaccination with mothers. **Nepal** used trained female community health volunteers in an existing local out-

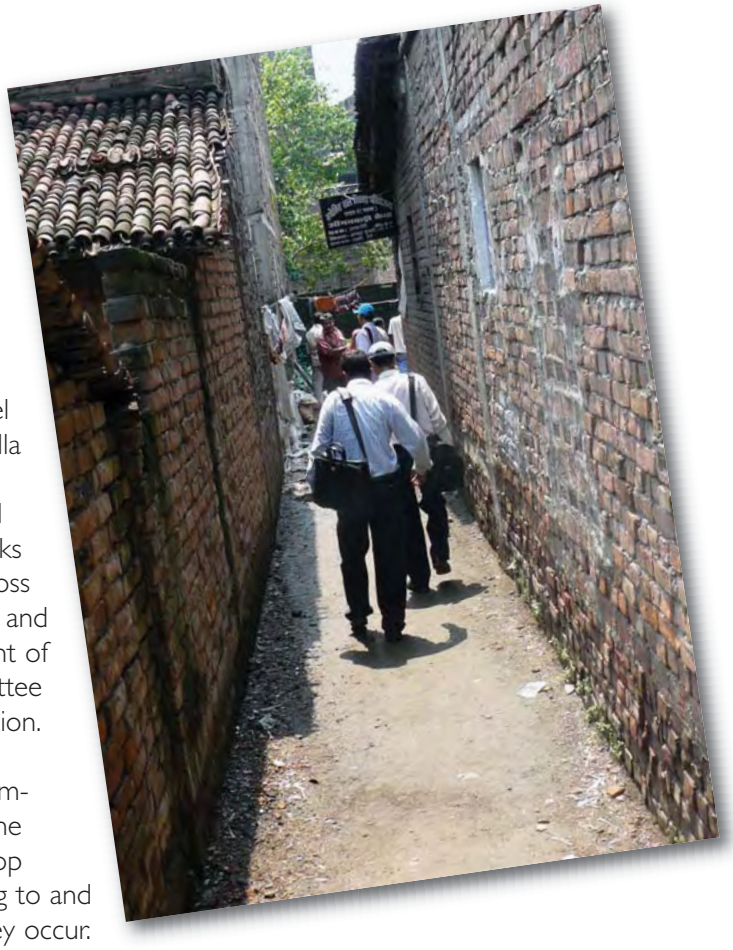
Figure 15: Wild Poliovirus-Infected Districts,* July 28, 2008–January 27, 2009



* Excludes vaccine-derived poliovirus and virus detected from environmental surveillance.

Source: WHO 2009

reach system to promote routine immunization and polio eradication. In **Angola**, CORE implemented a child tracking system to improve coverage and ensure 100 percent participation in immunization campaigns and, eventually, routine immunization. The CORE Secretariat in **Ethiopia** conducted a high-level advocacy workshop in Gambella region at which stakeholders from all government levels and religious leaders established links with partner organizations across the border in **Southern Sudan** and committed to the establishment of a regional coordinating committee to coordinate program expansion.



Members of SMNet and the review team go to a public education meeting in Patna, India.

Photo: The Communication Initiative

Supplemental immunization campaigns are critical to creating the "herd immunity" needed to stop transmission and to responding to and containing outbreaks when they occur. In 2008, 340 million children under age 5 in 36 countries received 2.46 billion doses of oral polio vaccine in 241 supplementary immunization activities. In **Pakistan**, 11 campaigns were conducted in polio transmission zones, and eight campaigns took place in other areas. More than 264 million doses of oral polio vaccine were given to eligible children all over the country.

With USAID support, **India** made important improvements in its polio program in 2008. Cases of type 1 polio fell to 73, down from 648 in 2006. In October, India confirmed that type 1 polio had not been detected in Uttar Pradesh state for 12 consecutive months, confirming the technical feasibility of polio eradication. Overall, 559 cases occurred in 2008, compared with 874 in 2007. **Nepal**, which remains at very high risk of virus transmission due to its long border with endemic parts of India, reported six cases and conducted six rounds of supplementary immunizations.

In Africa, after eight new cases were detected in **Angola**, the CORE Group supported critical actions to map communities and ensure complete immunization of children to stop further spread of the virus. In **DR Congo**, which saw a resurgence of wild poliovirus in 2006, USAID supported UNICEF in conducting immunization campaigns and four rounds of national immunization days. More than 6.1 million children under 5 (95 percent of the target population) in Equateur, Orientale, and North and South Kivu provinces were vaccinated, and the number of wild poliovirus cases fell from 41 in 2007 to five.[11]

In **India**, CORE has trained almost 250,000 community mobilizer coordinators (CMCs) to provide essential culturally relevant information about polio to mothers and caregivers, track unimmunized children, mobilize communities, and correct false information about immunizations. In 2008, CORE and UNICEF supported the Social Mobilization Network (SMNet) of nearly 4,300 CMCs in 41 districts of Uttar Pradesh state. More than 1,000 new CMCs received training. SMNet targeted the state's large Muslim population and worked with Muslim religious and community leaders to increase polio awareness. An evaluation of the program found that 50 percent of mothers in program areas knew to

11. Number of cases reported as of December 31, 2008

get their child immunized at birth, compared with 26 percent of mothers in nonprogram areas. SMNet reached 1.7 million people, and the state's share of polio cases reported nationally fell from 70 to 37 percent.

USAID also continued to support the global polio laboratory network and facility- and community-based polio surveillance in more than 25 countries. Despite a twofold increase in the number of samples being tested, the global network of 145 laboratories continued to meet performance indicators for identifying cases. Most USAID-assisted countries met their targets for surveillance, and the system was successful in detecting cases. The laboratory network continued to meet annual accreditation requirements, and laboratories that needed extra assistance received it. With USAID support for logistics and supervision, **Liberia** surpassed the WHO target for timeliness of sample collection for cases of acute flaccid paralysis (AFP), while community-based surveillance activities in **Ethiopia** and **Nepal** continued to identify AFP cases, especially among nomadic and pastoral groups.

In addition to its support for national-level activities, USAID provided grants to WHO's regional Eastern Mediterranean, European, and African polio eradication programs, which provide expert teams to advise national and provincial programs on strategic directions, surveillance, and strengthening laboratory capacity. The Eastern Mediterranean program supported coordinated polio eradication activities between neighboring countries such as **Pakistan** and **Afghanistan** and worked with the WHO Africa regional office in countries in the Horn of Africa. In polio-free countries with low routine coverage, USAID supported supplementary immunization activities to guard against the spread of polio in case the virus is imported.

Nutrition

Every year, malnutrition contributes to 3.5 million deaths of children under 5. Micronutrient deficiencies affect 2 billion people. In the past two years, the problem of global malnutrition has worsened due to the drastic rise in food prices from 2006 to 2008, with the number of undernourished people in the world increasing by 75 million in 2007 and 40 million in 2008. Today, more than 1 billion people are hungry or malnourished. USAID nutrition programs have helped mitigate some of the effects of this crisis on the most vulnerable women and children.

Eradicating extreme poverty and hunger is the first MDG, and nutrition is a central component in three other goals of reducing child mortality, improving maternal health, and combating infectious diseases. Improving nutrition will enhance the world's ability to meet these goals, and – as one of the most cost-effective strategies for development – it can also make enormous contributions to poverty reduction and economic growth.

The window of opportunity for improving nutrition is from conception through the first two years of life. Targeting nutrition interventions during this time window provides the maximum possible benefit for children. The major damage caused by malnutrition takes place during this period, and this damage is irreversible. Adequate nutrition during this period improves intelligence and physical capacity, and these in turn increase productivity later in life and reduce poverty. USAID invests in early childhood nutrition programs that focus on this critical window to improve child development and drive long-term economic growth, and in 2008, its infant and young child nutrition programs benefited more than 20 million children around the world.

EDWIN HUFFMAN/WORLD BANK

"In 2008, USAID-supported vitamin A programs reached more than 54 million children. These programs continued USAID's legacy of global leadership in scaling up and sustaining national vitamin A programs for children under 5."

As part of its maternal and child health strategy, USAID is pursuing the objective of a 15 percent reduction in child malnutrition in 10 focus countries by 2013. The Agency expands evidence-based approaches to nutrition and supports innovative new approaches for improving program implementation and for targeting the most vulnerable populations. USAID's approach focuses on:

- Preventing malnutrition through a strategic package of maternal, infant, and young child nutrition programs
- Reducing micronutrient deficiencies through targeted supplementation for vulnerable groups and food fortification
- Strengthening community-level programs to manage acute malnutrition
- Improving nutritional outcomes in food security, humanitarian assistance, and HIV/AIDS programs

USAID supports an evidence-based package of essential nutrition actions, including maternal nutrition, exclusive breastfeeding through 6 months of age, high-quality complementary foods in adequate quantities, appropriate complementary feeding practices, safe and active feeding during and after illness, vitamin A supplementation, and anemia reduction packages. To introduce, strengthen, and scale up this approach, USAID trained 500,000 health workers in 40 countries in 2008.

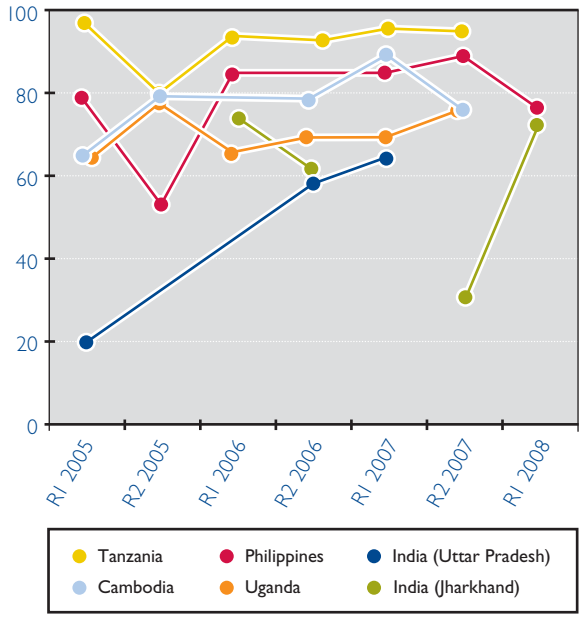
USAID provides global leadership on improving policies and measurement tools for the prevention of malnutrition. USAID technical assistance in **Zambia**, **Ghana**, **Lesotho**, **Southern Sudan**, **Uganda**, and **Côte d'Ivoire** increased coverage of the essential nutrition actions by supporting an enabling policy environment and community-based platforms such as growth promotion and antenatal care. In **Lesotho**, USAID supported a 2008 revision of the National Infant and Young Child Feeding Policy and national guidelines for preventing mother-to-child HIV transmission to incorporate the 2006 WHO guidelines on HIV and infant feeding. The new guidelines will be disseminated countrywide, forming the basis for care and treatment. Training on the essential nutrition actions in **Côte d'Ivoire** included provision of comprehensive counseling cards and increased the capacity of partners to provide nutrition support for orphans and vulnerable children.

In **India's** Jharkhand and Uttar Pradesh states, where 70 percent of pregnant women are anemic, USAID strengthened micronutrient supply systems and advocated for the importance of reducing maternal anemia with the state ministries of health. As a result, the number of women in these two states who received lifesaving iron-folic acid supplements procured with state government resources increased from 32 to 70 percent.

Through a regional approach to combat anemia in East and Southern Africa, USAID supported the Girl Guides Anemia Prevention Badge Project, a program to reach adolescent girls with information and activities on anemia prevention and control. Under the program, Girl Guides ages 7 to 18 can earn a badge in anemia prevention through educational programs and community involvement in anemia control. In 2008, more than 4,000 Girl Guides earned badges and reached nearly 8,000 community members in **Swaziland**, **Rwanda**, and **Uganda**.

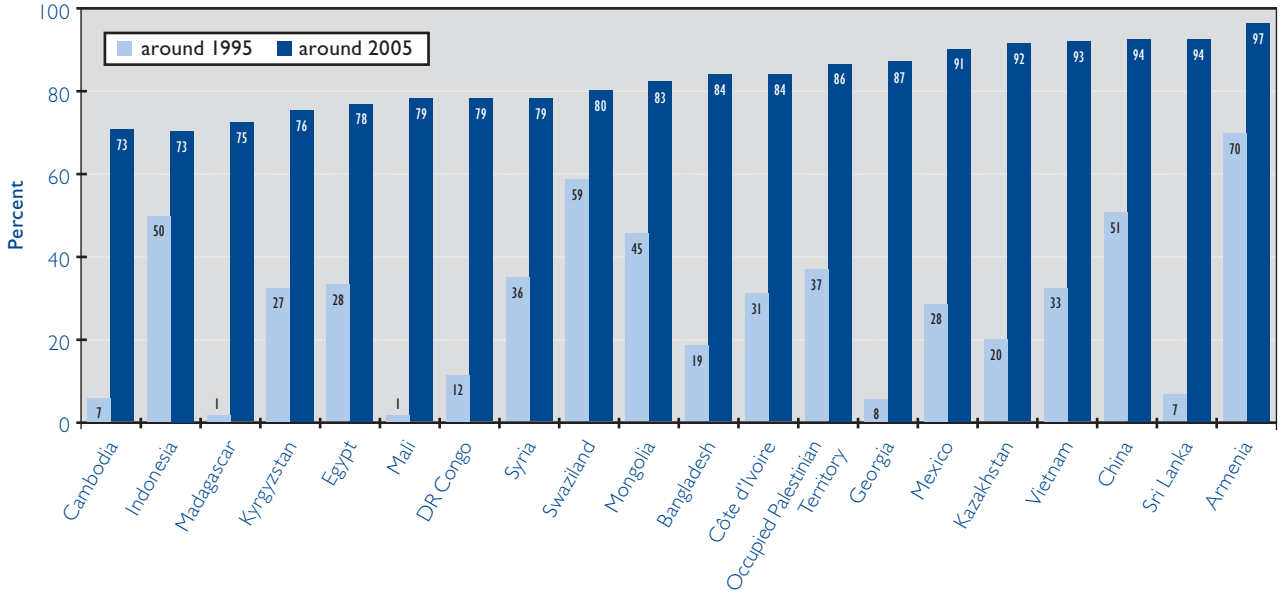
In 2008, USAID-supported vitamin A programs reached more than 54 million children. These programs continued USAID's legacy of global leadership in scaling up and sustaining national vitamin A programs for children under 5. This legacy dates to the 1980s, when USAID first supported research that showed a 23 percent reduction in child mortality when a child receives a

Figure 16: Percentage of Children Ages 6 to 59 Months Who Received Vitamin A Supplementation by Round (R) in Selected USAID-Supported Countries, 2005–2008



Source: Country health information systems

Figure 17: Trends in Percentage of Households Consuming Adequately Iodized Salt, Selected Countries



Source: UNICEF

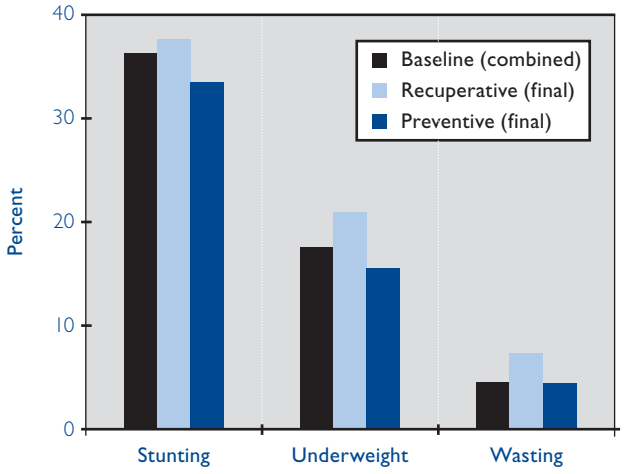
high-dose vitamin A supplement twice a year. Vitamin A campaigns regularly reach coverage levels of 70 to 95 percent of target populations (figure 16).

In **Uganda**, USAID's micronutrient program increased its reach by collaborating with the Neglected Tropical Diseases Control Program on training for, planning, and implementing Child Health Days in five districts. As a result, vitamin A and deworming coverage increased by 30 percent in these districts, and costs for both programs were reduced. To complement these targeted supplementation programs, USAID continued its support for fortification of salt with iodine and of oil with vitamin A. In 2008, 95 percent of salt consumed in Ugandan households was iodized, and 85 percent of oil was fortified with vitamin A.

In addition to Uganda, USAID supported food fortification programs in more than 20 other countries. In partnerships with the private sector and national governments, these programs helped reduce micronutrient deficiencies through the sustainable delivery of multiple micronutrients using staple foods like wheat flour, oil, maize flour, and salt. USAID continued to support UNICEF in strengthening universal salt iodization programs to eliminate iodine deficiency disorders (IDDs) (figure 17). Current USAID support for salt iodization helps protect more then 1.2 billion people, including 31 million infants, against the lifelong brain damage associated with iodine deficiency. In 2008, **Vietnam** achieved and sustained national elimination of IDDs through universal salt iodization, and today it is estimated that 93 percent of households have access to iodized salt. Also, despite the fragile business environment, iodized salt production continued to expand in **Afghanistan**, where, with USAID assistance, the iodized salt industry grew from four plants in 2003 to 13 in 2005 and 18 in 2008.

Until recently, the management of acute malnutrition was primarily based in health centers, with limited coverage. An approach called "community-based management of acute malnutrition" (CMAM), pioneered by USAID and NGO partners, brings services for managing acute malnutrition closer to those who need them, thanks to the availability of ready-to-use therapeutic foods (RUTFs). USAID supports the integration of CMAM into national health systems and facilitates the introduction and expansion of CMAM through training and planning tools. In **Ghana**, USAID helped establish seven outpatient and two inpatient CMAM centers that will provide the platform for scaling up CMAM through the Ghana Health Service. USAID also trained ministries of health and UNICEF personnel from 15 countries, including **Malawi**, **Ethiopia**, **Sudan**, and **Pakistan**, on integrating CMAM. In 2008, USAID also provided leadership in research and development and the local production and introduction of innovative nutrition products such as RUTFs, ready-to-use supplementary foods, and micronutrient powders in **Cambodia**, **Ghana**, **Malawi**, and **Zambia** – all focus

Figure 18: Effectiveness of Preventive Food-Assisted Nutrition Programs on Reducing Malnutrition in Children Under 5 in Haiti's Central Plateau, 2002 (Baseline)–2004



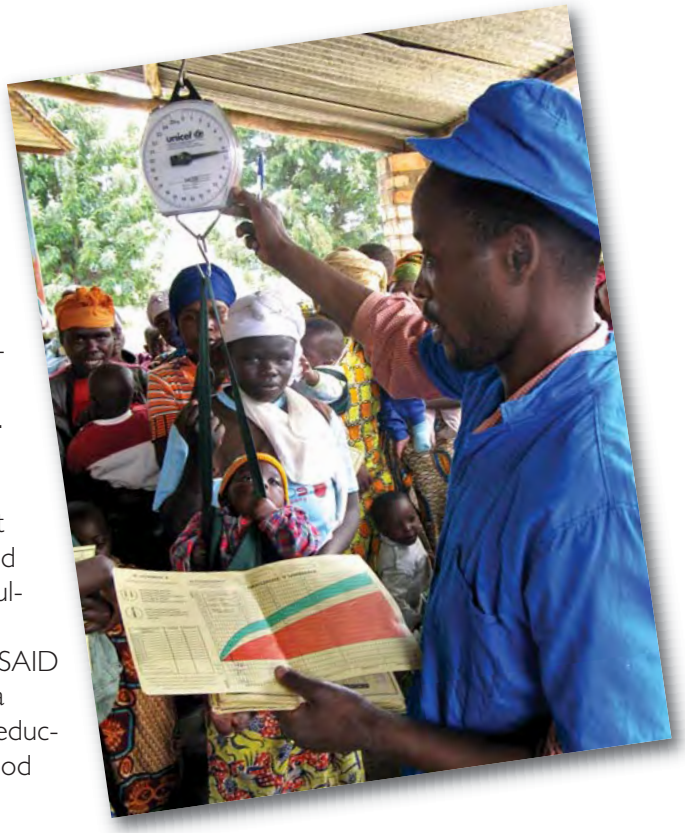
Source: International Food Policy Research Institute, 2008

Note: The preventive model targeted all children ages 6 to 23 months; the recuperative model targeted underweight (weight for age Z score <-2) children ages 6 to 59 months. Both models also targeted pregnant and lactating women. The results are based on two cross-sectional surveys at baseline and three years later.

countries of the new USAID child and maternal health initiative. Innovative new program approaches and interventions such as these are critical to the fight against global hunger and malnutrition.

Due to the rise in food prices from 2006 to 2008, food insecurity and malnutrition are on the rise in many developing countries. USAID's global health programs work with the U.S. Government's Title II food aid program to target improved nutrition and food-based assistance to food-insecure and vulnerable regions of every country receiving U.S. food aid. In 2008, USAID and research partners published a study from **Haiti** demonstrating reductions in child malnutrition using food supplementation for all pregnant women and children under age 2 (figure 18). This new approach, which focuses on prevention rather than recuperation, was adopted as the recommended approach for all Title II maternal, child health, and nutrition programming.

The United States has also issued policy guidance in recent years to improve the approach to addressing the food and nutrition needs of people living with HIV/AIDS. USAID's Global Health Bureau works with the U.S. President's Emergency Plan for AIDS Relief to make these policies a reality by facilitating the integration of food and nutrition into HIV responses at the clinic and individual levels. These efforts have helped design the Food by Prescription program, which supports the delivery of counseling services and food to clinically malnourished HIV-positive individuals based on nutrition assessments and established criteria. They have also ensured safe and optimal infant feeding practices to increase HIV-free survival. National guidelines for nutritional care and support for people living with HIV/AIDS and for preventing mother-to-child HIV transmission are now in place in **Ethiopia**, **Haiti**, **Côte d'Ivoire**, and **Zambia**.



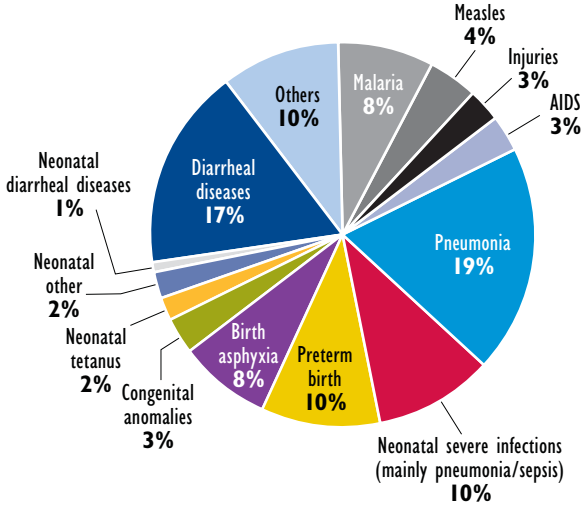
A health worker weighs an infant at a health center in Rwanda.

Photo: Virginia Lamprecht

Pneumonia and Diarrhea

Pneumonia kills more children than any other illness – more than AIDS, malaria, and measles combined (figure 19). More than 2 million children die from pneumonia each year, accounting for almost one in five under-5 deaths worldwide, and three-quarters of all childhood pneumonia cases occur in just 15 countries (see table next page). Although effective interventions to reduce child pneumonia deaths are available, they reach far too few children. Scaling up treatment coverage at relatively low cost is possible, with estimates suggesting that if antibiotic treatment were universally delivered to children with pneumonia, around 600,000 lives could be saved each year. Furthermore, the number of lives saved could more than double to 1.3 million if both prevention and treatment interventions for pneumonia were universally delivered.

Figure 19: Global Distribution of Cause-Specific Mortality Among Children Under Age 5



Source: WHO and UNICEF

"Overall, USAID-assisted programs in Uganda treated more than 525,000 children with diarrhea using ORT and, in some cases, zinc supplementation."

PHOTO CREDIT

TOP 15 COUNTRIES, CHILD PNEUMONIA (number of cases)	
India	44 million
China	18 million
Nigeria	7 million
Pakistan	7 million
Bangladesh	6 million
Indonesia	6 million
Brazil	4 million
Ethiopia	4 million
DR Congo	3 million
Philippines	3 million
Afghanistan	2 million
Egypt	2 million
Mexico	2 million
Sudan	2 million
Vietnam	2 million
Total	113 million

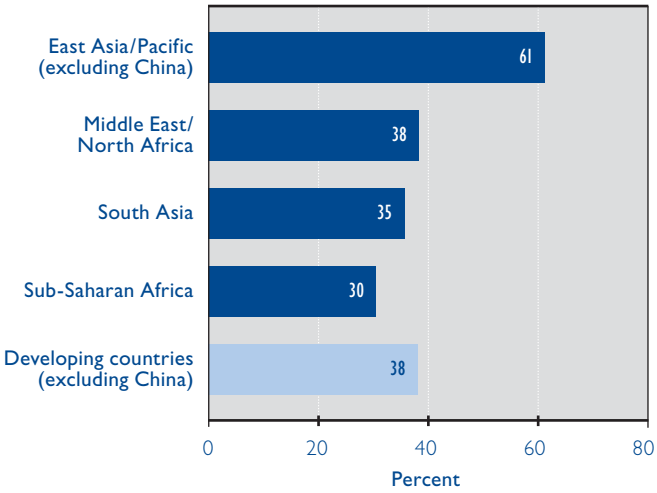
Sources: UNICEF & WHO, *Pneumonia: The Forgotten Killer of Children*, New York, 2006.

Note: Country-level estimates do not add up to the total due to rounding.

Diarrheal diseases account for about 1.5 million deaths a year of children under 5, making them the second most common cause of child deaths worldwide. For more than two decades, oral rehydration therapy (ORT) has been the cornerstone of treatment programs for childhood diarrhea. Coverage of treatment for children under 5 appears to have improved significantly across the developing world (excluding China) over the past decade; nonetheless, only one-third of children with diarrheal disease in the developing world receive the recommended treatment (figure 20). Measures to prevent childhood diarrhea episodes include promoting exclusive breastfeeding, raising vitamin A supplementation rates, improving hygiene, increasing the use of improved sources of drinking water and sanitation, promoting zinc intake, and immunizing against rotavirus.

USAID has provided leading-edge technical support to governments and other partners to demonstrate effective and feasible programs for community-based

Figure 20: Percentage of Children Under Age 5 with Diarrhea Who Received Oral Rehydration or Increased Fluids with Continued Feeding by Region, 2000–2006



Source: UNICEF Progress for Children, New York, 2007

treatment of pneumonia and for use of oral rehydration solution (ORS) and effective home treatment for diarrhea. In expanding community-based programs, overcoming the remaining barriers to use of antibiotics by community health workers will require additional efforts by local partners and the international community to ensure that flexible policies, plans, and resources are in place. USAID will also continue to support existing diarrheal disease control strategies while incorporating the revised strategy for clinical management of diarrhea developed by WHO and UNICEF. At the same time, renewed commitment and support will focus on countries now experiencing significant declines in ORT to help them expand and integrate its use with hygiene improvement activities.

Specific elements of USAID's strategy for pneumonia and diarrhea include:

- Research and analysis in the areas of:
  - Community-based pneumonia treatment using community health workers
  - Home oral antibiotic treatment of severe pneumonia
  - Zinc supplementation in treating pneumonia
  - Causes of declining ORT/ORS use in affected countries

USAID-SUPPORTED CHILD PNEUMONIA & DIARRHEA INTERVENTIONS, FY 2008	
Community-Based Treatment of Child Pneumonia	
Technical exchange/advocacy	Burundi, Chad, Liberia, Malawi
Introduction	Benin, Rwanda
Implementation/ expansion/scale-up	DR Congo, Madagascar, Senegal, Afghanistan, Nicaragua, Cambodia
Revitalization of ORS/ORT Through Community-Based Treatment of Diarrhea	
Technical exchange/advocacy	Malawi, Indonesia, East Timor
Implementation/ expansion/scale-up	Nicaragua, DR Congo, Madagascar, Rwanda, Senegal

  - Development of alternative strategies to revitalize ORT/ORS use, especially in high-burden maternal/child health priority countries

- The development of appropriate models for expansion, as programs progress to larger scale, in such areas as:

  - Combined treatment strategies for malaria and pneumonia in malaria-endemic areas
  - Community case management (CCM) of pneumonia, malaria, and diarrhea as an integrated platform
  - Advocacy and planning to mobilize and coordinate ministry of health and partner resources in diarrhea case management
  - Behavior change communication to reinforce appropriate behaviors and practices
  - Improvements to facility- and community-based platforms for expanding access to and use of ORT
  - Revitalized ORT programming, twinned with the introduction of zinc, as national policies adopt new diarrhea control guidelines

In 2008, USAID supported the introduction and expansion of CCM of pneumonia in 12 countries (see table) to improve case detection and treatment of pneumonia in children under 5. USAID's support enabled countries to refine CCM materials and compile program guidelines. USAID worked closely with ministries of health and their child heath partners, especially UNICEF, to provide technical assistance and leverage funds to expand CCM beyond USAID-funded areas. In **Nepal**, for example, the Child Health Division of the Ministry of Health and Population was able to accelerate the expansion of community-based integrated management of childhood illness to 44 highly populated districts, resulting in nearly 540,000 children receiving appropriate pneumonia treatment by a trained facility or community health worker. National coverage by 2010 is the program goal.

In **DR Congo,** USAID supported training for more than 1,000 volunteer community health workers to diagnose and treat or refer cases of childhood pneumonia, malaria, and diarrheal disease. In project areas, treatment of child pneumonia with antibiotics increased from 13.5 percent of cases in FY 2007 to 51 percent in FY 2008, and proper diarrhea treatment tripled from about 15 to 44 percent. Since 2006, CCM workers have treated more than 25,000 children in communities with difficult access to health facilities. An estimated 18 percent of these cases involved treating pneumonia with an antibiotic. The quality of the CCM services in DR Congo is well recognized – after two of five planned follow-up sessions, more than 90 percent of volunteers could correctly measure breathing rates, identify danger signs, and check for malnutrition, vaccination, and vitamin A status. They consistently provided appropriate doses of antibiotics, and more than 90 percent of the children in USAID-supported health zones who had a fever were also given an antimalarial drug, as recommended. Programs in other malaria-endemic countries (especially focus countries of the President's Malaria Initiative) also integrated pneumonia and malaria CCM.

USAID's diarrheal disease management activities promoted ORT within CCM and Integrated Management of Child Illness programs. As a proven intervention to reduce the frequency and severity of diarrhea episodes, USAID supported the introduction of zinc for diarrhea case management through public and private approaches, in facilities, and through community-based programs in eight countries (see table). All efforts to revitalize diarrhea case management capitalized on the momentum to implement zinc therapy to also introduce low-osmolarity oral rehydration salts (L-ORS).

In **Indonesia**, USAID-assisted programs promoted effective diarrhea treatment by expanding access to zinc therapy through the public sector and by helping private pharmaceutical companies register and market

zinc products. Diarrheal disease incidence among children under age 3 decreased from 26 percent in FY 2007 to 21 percent in FY 2008. USAID's programs also significantly increased care coverage in FY 2008, treating more than 1.2 million cases of child diarrhea. A USAID-funded program in **Nepal** contributed to an increase in zinc use for diarrhea treatment from 0.4 percent in 2005 to 15.4 percent in 2008, and a USAID collaboration with three pharmaceutical companies for developing and launching zinc treatment added 27 districts. The three manufacturers produced, distributed, and marketed five high-quality, affordable sulphate-based zinc products, which became available in private sector shops in more than 30 districts, covering all major urban and peri-urban areas and providing easy access to 67 percent of Nepal's population.

A woman provides zinc supplementation to an infant with diarrhea at a hospital in Bangladesh.

Photo: © 2007 Lubna Yeasmin, courtesy of Photoshare

Following WHO and UNICEF recommendations, a new zinc product (OraselZinc) was also registered and introduced in **Benin**. USAID helped to finalize marketing strategies and training materials for facility-based health workers and community mobilization agents to order and receive products and design and produce packaging and promotional materials. In collaboration with UNICEF, an OraselZinc diarrhea treatment kit was launched in Zou and Collines departments and is now available in all public sector health centers at a subsidized price. To address the needs of people who access health care through the private sector, an unsubsidized OraselZinc kit was launched for distribution through the national pharmaceutical and commercial distribution networks. In FY 2008, USAID-assisted programs treated more than 300,000 cases of diarrhea, and social marketing programs sold more than 201,000 ORS sachets.

In **Tanzania**, USAID served as the secretariat of the National Zinc Task Force, which provides a forum for public and private stakeholders to advance policies and strategies to adopt zinc and L-ORS for managing child diarrhea. By partnering with local L-ORS and zinc producers to provide information to health professionals, USAID supported training in L-ORS and zinc use for nearly 11,200 providers – more than four times the targeted number of 2,565. These efforts resulted in sales of nearly 61,500 zinc doses and 857,000 L-ORS sachets. USAID also provided support to local zinc manufacturers to achieve the WHO-recommended "Good Manufacturing Practices" prequalification. In a USAID-supported pilot activity in **Uganda**, village health teams in Lira district supplied households with information, L-ORS, and zinc, along with items such as mosquito nets and malaria and TB drugs. Of caretakers interviewed, 93 percent reported seeing and using L-ORS, making the activity a model for a regional training curriculum. Overall, USAID-assisted programs in Uganda treated more than 525,000 children with diarrhea using ORT and, in some cases, zinc supplementation.

Water, Sanitation, and Hygiene

Globally, diarrheal disease accounts for the deaths of about 1.5 million children under 5 annually, and approximately 90 percent of these deaths are caused by poor water supply, sanitation, and hygiene. Fifteen countries in Africa and Asia account for nearly 75 percent of these deaths (figure 21). Sub-Saharan Africa loses $28 billion, or about 5 percent of its gross domestic product, to poor water supply, sanitation, and hygiene conditions, a figure that exceeded total aid flows and debt relief to the region in 2003.[12]

USAID health programs are directly addressing the leading risk factors for death due to diarrhea and gastrointestinal diseases. USAID's health-oriented water, sanitation, and hygiene (WASH) interventions have been demonstrated to be effective – and cost-effective – in terms of public health impact. USAID's approach focuses on:

- Improvement in drinking water quality at the point of use
- Increased use of sanitary facilities for human excreta disposal
- Increased and improved handwashing with soap
- Increase in water quantity available for domestic uses

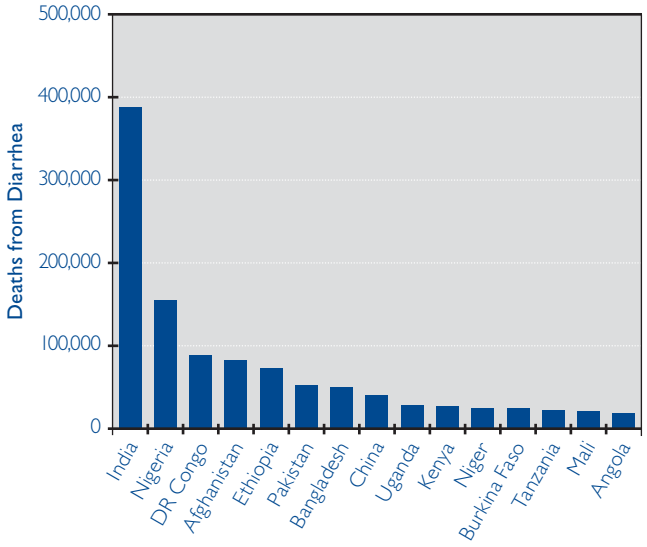
BURDEN OF WATER- AND SANITATION-RELATED DISEASES

- 4 billion cases of diarrhea each year, contributing to the burden on health systems, time and money spent on care and treatment, and days lost at school and work
- Approximately 1.5 million under-5 child deaths from diarrhea every year

"USAID's health programs especially focus on low-cost interventions – such as household water treatment, promotion of handwashing with soap, and community-led approaches to end open defecation – that have proved effective at reducing diarrheal disease through modest investments."

12. UNDP-Human Development Report, 2006

Figure 21: Top 15 Countries, Diarrhea-Related Under-5 Deaths, 2008



Source: WHO, Global Burden of Disease estimates, 2004 update, 2008

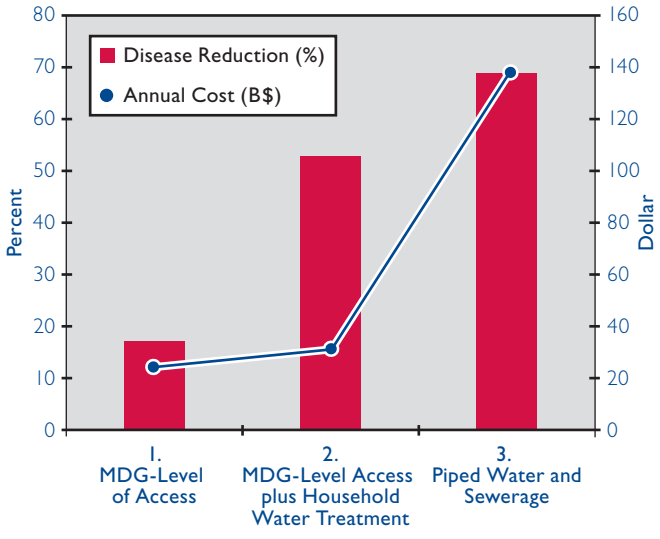
Note: The totals were calculated by applying the WHO cause of death estimates to the most recent estimates for the total number of under-5 deaths (2007).

Hygiene promotion interventions are among the most cost-effective in averting the overall global burden of disease.[13] As shown in figure 22, when combined with improved access to hardware that meets MDG standards, improvements in hygiene, such as proper treatment and storage of drinking water, can attain much of the health gain associated with higher levels of water supply and sanitation service, notably household piped water and sewerage. USAID's health programs especially focus on low-cost interventions – such as household water treatment, promotion of handwashing with soap, and community-led approaches to end open defecation – that have proved effective at reducing diarrheal disease through modest investments. Effective program approaches have included the integration of WASH interventions into other programmatic areas such as education and antenatal care; the development of public-private partnerships to combine generic and branded promotion of key products for improved hygiene, such as soap or water disinfection solution; and the integration of safe water, hygiene, and sanitation activities into HIV/AIDS programs.

In FY 2008, USAID Missions carried out household drinking water disinfection programs in 14 countries,[14] and more than 8 billion liters of drinking water were disinfected. USAID-supported programs used social marketing through commercial and NGO distribution channels and public-private partnerships (e.g., with Unilever in **India**) to produce and promote water treatment products. In India's Uttar Pradesh state, demonstration activities increased point-of-use (POU) water disinfection in self-help target groups from 4.25 percent at baseline to 90 percent in the urban group and 70 percent in the rural group. USAID also collaborated closely with CDC, UNICEF, and WHO to develop tools, share best practices, and disseminate information on household water treatment and safe storage.

USAID's WASH activities reached approximately 2.4 million people in **Ethiopia** and **Madagascar**. In both countries, USAID trained and supported community health workers as frontline behavior change negotiators who teach families to adopt small "doable" actions to improve hygiene. USAID's Bureau for Global Health worked with USAID Missions to introduce new

Figure 22: Cost of Water Supply and Sanitation Program Option versus Reduction in Diarrheal Disease



Source: WHO, Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level, 2004

Note: Three water supply and sanitation program options:
1. An improved source of water and basic sanitation (MDG level of access)
2. MDG level of access and household water treatment
3. Piped water and sewerage

13. Jamison et al, Disease Control Priorities in Developing Countries. 2006, chapter 2, p. 41

14. Afghanistan, Angola, Benin, DR Congo, Haiti, India, Kenya, Madagascar, Malawi, Mozambique, Nepal, Rwanda, Uganda, Zambia

approaches and take them to scale. One approach – "community-led total sanitation" – is an innovative methodology for mobilizing communities to completely eliminate open defecation. In Madagascar, estimates from FY 2008 survey data suggest that open defecation decreased from 38 to 20 percent in targeted communities and that 10,700 households adopted improved sanitation. Programs integrating WASH in school activities trained more than 8,000 teachers and administrators, reaching 244,000 students and their families. To respond to the resulting increased demand for sanitation and hygiene facilities, USAID is introducing new approaches involving consumer and market research to develop replicable business models for low-cost sanitation options for urban and rural areas.

Because diarrheal disease is one of the most common opportunistic infections in people with HIV/AIDS, especially in resource-limited settings, USAID's Bureau for Global Health worked with the Care and Support Technical Working Group of the U.S. President's Emergency Plan for AIDS Relief to develop new guidance on how to integrate water, sanitation, and hygiene improvement into HIV/AIDS programs. The guidelines include 1) promoting drinking water treatment and safe storage as part of HIV/AIDS programs; 2) promoting handwashing with soap at critical times; 3) developing and promoting patient-friendly sanitary options for defecation; and 4) increasing water access through the application of appropriate technologies (e.g., rainwater catchment systems and water-saving devices). Through this effort, cadres of trainers in **Uganda** and **Ethiopia** are strengthening home care worker capacity to teach these practices to people with HIV/AIDS and their families.

In **Rwanda**, USAID explored ways to use community-based health insurance (CBHI) schemes, called *mutuelles*, as another mechanism to promote hygiene improvement. The number of participating *mutuelles* – and number of people covered – has been growing rapidly. Since CBHI initiatives are more focused on prevention, these grassroots groups provide an effective means for conducting health and hygiene promotion activities. USAID integrated *mutuelles* to demonstrate POU water products, and sales through *mutuelles* were launched in February 2008.

Women attend a hygiene promotion workshop run by a USAID health program in a rural village in Senegal.

Photo: Jay Graham

USAID participated in the Global Public-Private Partnership for Handwashing with Soap (PPPHW), which is implementing national handwashing programs in 15 countries. One USAID-supported innovation adopted by PPPHW is the use of low-cost products and technologies, such as "tippy taps" – water-filled hanging plastic bottles with holes in the cap, which serves as a faucet when the bottle is tipped – that facilitate handwashing behavior. The PPPHW organized the first Global Handwashing Day on October 15, 2008, with events in more than 80 countries and participation from high-level political leaders and sports figures.

USAID's Bureau for Global Health also collaborated with the Bureau for Economic Growth, Agriculture and Trade to develop a new Global Development Alliance on water supply, sanitation, and hygiene with Rotary International (RI). A joint RI/USAID steering committee for the Alliance first met in late September 2008 and, working with USAID Missions, identified **Ghana**, the **Philippines**, and the **Dominican Republic** as initial countries for joint activities.

CURT CARNEMARK

Analysis Highlights Health, Nutrition Benefits of Birth Spacing

A couple and their two children in Nigeria. When families can space their children more than two years apart, they are better able to provide them with basic needs, such as food, clothing, and education.

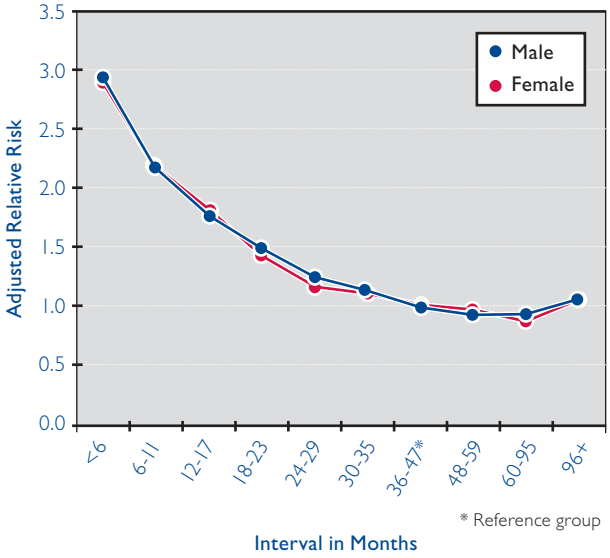
Photo: © 2000 Liz Gilbert/David and Lucile Packard Foundation, courtesy of Photoshare

Findings from the USAID-supported Demographic and Health Surveys (DHS) are part of the evidence base that supports the benefits of birth spacing. A detailed analysis of DHS data, representing more than 1.1 million respondents in 48 countries, recently examined the relationships between birth-to-pregnancy intervals and perinatal outcomes; nutrition outcomes; and newborn, infant, child, and under-5 mortality. The study adjusted for 18 confounding factors. Key findings included:

- Birth-to-pregnancy intervals of fewer than 36 months present an elevated risk of child and under-5 mortality.
- The risks of child stunting and underweight decrease with increasingly longer birth-to-pregnancy intervals.
- If all women were to wait at least 24 months to conceive again, under-5 deaths would fall by 13 percent. The effect of waiting 36 months to conceive again would avert 25 percent of under-5 deaths. The impact of avoiding intervals of fewer than 36 months would be 1.8 million deaths averted annually in less-developed countries, excluding China.

The study recommends that couples wait at least 30 months after a birth before conceiving a new pregnancy. This will help their children both survive as infants and thrive through early childhood.

Figure 23: Relative Risk of Under-5 Mortality for Male and Female Children by Preceding Birth-to-Conception Interval



Source: Rutstein, Shea. 2008. "Further Evidence of the Effects of Preceding Birth Intervals on Neonatal, Infant, and Under-Five-Years Mortality and Nutritional Status in Developing Countries: Evidence from the Demographic and Health Surveys." Demographic and Health Research Working Paper No. 41, Calverton, MD: Macro International

FAMILY PLANNING & REPRODUCTIVE HEALTH

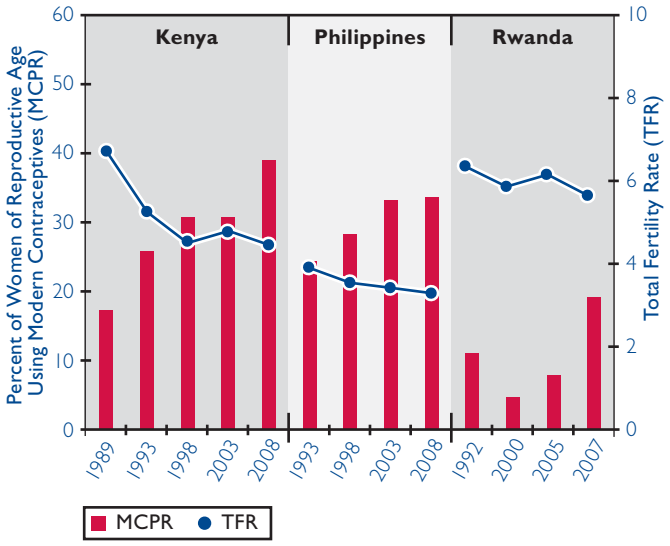
KEY RESULTS

- Between 2000 and 2008, USAID family planning assistance in developing countries contributed to:
  - An increase in the number of married women of reproductive age using a modern method of contraception from 82 million to 110 million, leading to an increase in the modern contraceptive prevalence rate from 28 to 34 percent in 32 countries.
  - An increase in the percentage of births spaced 36 months or more apart from 43 to 49 percent in 33 countries.
  - A decrease in the percentage of women ages 18 to 24 who gave birth before age 18 from 25 to 23 percent in 32 countries.
- The United Nations Population Fund used USAID's procurement planning and monitoring tool to provide priority shipments of oral pills, injections, and implants to Kenya and avert a stock-out of contraceptive supplies.
- In Guatemala, the national family planning NGO APROFAM transitioned from donor dependency to a self-sustaining enterprise, with family planning, reproductive health, and other consultations increasing from 755,000 to 1.2 million, and financial sustainability increasing from 68 to 97 percent.

The widespread voluntary adoption of family planning was one of the most dramatic changes of the 20th century, enabling women and couples throughout the world to choose the size and spacing of their families. For more than 40 years, the United States, primarily through USAID, has been in the vanguard of programs that have increased the use of modern contraceptives in the developing world. Between 1965 and 2008, the percentage of women of reproductive age in the developing world (excluding China) using modern family planning rose from less than 10 percent to 43 percent or, in actual numbers, from 30 million users to 363 million in 2008. The result has been a significant decline in the number of births per woman from, on average, more than six to just over three. Figure 24 gives country examples showing the significant achievements in increasing contraceptive prevalence rates and reducing the average number of children in major USAID recipient countries with recent survey data.

Much work remains, however. Today, some 1.4 billion women of reproductive age (15 to 49 years old) live in developing countries where USAID has programs. An estimated 201 million have an unmet need for modern methods of contraception in the developing world. More than half of these

Figure 24: Modern Contraceptive Use and Total Fertility Rate in Major Recipient Countries



women with unmet need live in Asia, particularly on the Indian subcontinent and in parts of Southeast Asia. The share of women in Africa expressing an unmet need is even higher. Only 18 percent of women in sub-Saharan Africa are using modern contraception, compared with 56 percent of women in the rest of the developing world. If current population growth trends continue, there will be more than 280 million women of reproductive age in sub-Saharan Africa in 2025, the vast majority of whom will have a need for family planning.

The U.S. Government's family planning/reproductive health (FP/RH) objective is to expand sustainable access to quality voluntary FP/RH services and information. 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 the adverse effects of population dynamics on natural resources, economic growth, and state stability.

To achieve these objectives, USAID support focuses on the following essential elements of successful family planning programs:

- Supportive government policies
- Evidence-based programming
- Strong leadership and good management
- Effective communication and outreach strategies
- Contraceptive supply and logistics system
- Well-trained, supervised, and motivated staff
- Client-centered care for all groups
- Mix of service delivery points
- Free or inexpensive services for the poor
- Integration with related health services
- Voluntarism
- Informed choice and consent

USAID monitors the following indicators through regular Demographic and Health Surveys in all its programs:

- Percent of in-union women of reproductive age (ages 15 to 49) using, or whose partner is using, a modern method of contraception (modern contraceptive prevalence rate)
- The proportion of all closed birth intervals that are 36 months or longer (birth-to-birth intervals)
- Percent of in-union women ages 15 to 49 who say that they either do not want any more children or want to postpone two or more years before having another child, and who are using modern contraceptive methods (met need for family planning)
- The proportion of women who had a first birth before age 18 among women ages 18 to 24 at the time of the survey (adolescent pregnancy)
- The proportion of births that are fifth order or higher among all women (high-parity pregnancies)
- The average number of children that would be born per woman if all women were to pass through their childbearing years bearing children according to the prevailing age-specific fertility rates (total fertility rate)

In 2008, USAID realized a number of concrete, tangible policy and program successes across a diverse range of countries. In eight countries – **Bangladesh**, **Honduras**, **Tanzania**, **Ghana**, **Guinea**, **Ethiopia**, **Uganda**, and **Kenya** – long-acting and permanent family planning use increased significantly from approximately 100,000 in 2003 to 700,000 in 2008 as a result of increased knowledge, awareness, and use of family planning services, achieved in large part through the Integrated Demand Approach. This approach closely links communications and community engagement activities to reach out to potential family planning users with consistent and mutually reinforcing messages.

USAID Contributes to Family Planning Success in Rwanda

Rwanda's family planning program achieved impressive results between 2000 and 2008. Most family planning programs are considered a success if they achieve a 1 to 2 percentage point increase in contraceptive prevalence per year. In Rwanda, modern contraceptive prevalence among married women increased from 4 to 27 percent and the total fertility rate declined from an average 5.8 births per woman to 5.5. USAID-supported programs contributed to these striking successes.

Supportive government policies. High-level political support was very important. In 2005, a projection of the social and economic consequences of high fertility and rapid population growth was prepared for Rwanda using the USAID-supported "Resources for the Awareness of Population Impacts on Development" (RAPID) model. The projection influenced and shaped the Cabinet's views on the need to address population growth. These views subsequently translated into high-level support, including the Minister of Health's statement that "Family planning is a tool of development," and this support translated into action on the ground through a national family planning policy and five-year strategy.

Effective communication and outreach. With USAID support, the Ministry of Health launched an information, education, and communication campaign on family planning and responsible parenthood. By 2005, 41 percent of women had heard a family planning message on the radio, and the Minister of Health had spoken out against religious leaders who opposed family planning and condom use. Couples began to realize they could not afford large families and became increasingly aware of the importance and benefits of family planning. These efforts reduced some of the barriers to increased contraceptive use.

A mix of service delivery approaches and well-trained, motivated staff. USAID has supported a range of activities that have contributed to improved service delivery, including in-service and preservice training, performance-based financing, and community-provider partnerships. Performance-based financing has had a real impact on motivating providers to offer high-quality services. Results have included nearly threefold increases in the numbers of new and existing family planning users.

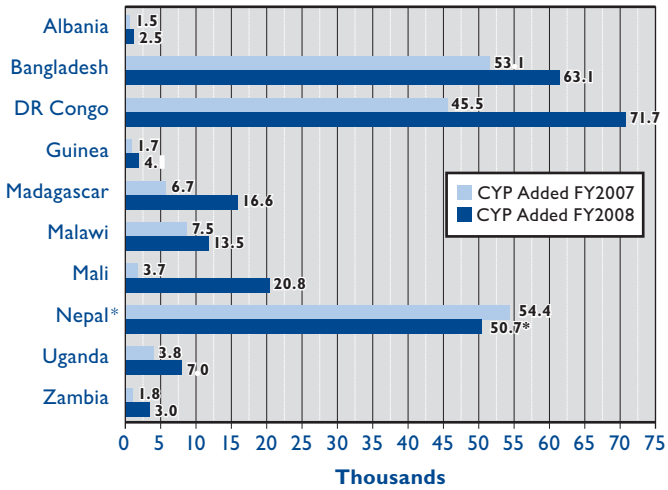
More reliable contraceptive supply and better logistics. USAID has also helped improve logistics, resulting in reduced stock-outs and improved reporting. The reporting rate from districts to the national level has increased to 100 percent from a baseline of just 8 percent. Improved logistics provide women with a range of methods, and the increased choice of reliably available products has contributed to increased contraceptive prevalence.

The combination of hard work, commitment, coordination, and partnership has brought great achievements to Rwanda's family planning program. With USAID support, the program has generated increased demand for and helped improve the supply and quality of family planning services.

To help the ministries of health in **Bangladesh**, **Ethiopia**, and **Uganda** forecast contraceptive use, a USAID partner developed and used the "Reality √" planning tool with significant policy and program results. In Bangladesh, the Ministry determined that to meet current family planning demand, more staff, not just doctors, should be allowed to provide services in rural areas. The Government is now exploring a national policy change to allow paramedics and community health nurses at lower-level facilities to provide clinical methods. In Uganda, a district official reported that he was able to cite specific supplies he needed, and for the first time he succeeded in obtaining an increased allotment of family planning funds from the national government.

FP/RH programs provide an appropriate venue to reach women and girls of reproductive age with programs that address gender-based violence (GBV). In **Bolivia**, eight USAID-supported implementing partners, in collaboration with the police, judiciary, schools, and social services, have implemented a participatory diagnostic and planning methodology to engage municipal governments to better respond to GBV within the context of FP/RH services. Noting that women who experience GBV are less likely to use FP/RH services, Bolivian policymakers and health professionals have advocated for greater attention to the provision of reproductive health services for women who are victims of GBV. The activity has generated interest among

Figure 25: USAID/Office of Population and Reproductive Health Community-Based Family Planning Projects, FYs 2007–2008, Actual CYP Added by Country



*The decrease in CYP in Nepal is due, in part, to a decrease in the number of functioning primary health care/outreach clinics due to conflict and the inadquate numbers of service providers.

Source: Flexible Fund Family Planning and Reproductive Health Project Database

other bilateral and multilateral partners, including UNICEF, the United Nations Population Fund, and the German development organization GTZ, to replicate the methodology in other regions of Bolivia.

In **Ghana** and **Uganda**, USAID supported activities to develop and implement integrated family planning-HIV services. An integration model was piloted in Ghana and then replicated and scaled up nationally in Uganda. In Ghana, a holistic family planning-HIV antiretroviral treatment (ART) integration model was developed to help health officers design integrated services. The model's tool package includes a program framework, training curriculum, provider job aids, and client brochure. In Uganda, the AIDS Support Organization (TASO), a leading local NGO providing HIV counseling, prevention, care, treatment, and support services to people living with HIV, implemented the model in the eastern part of the country. After the model was introduced, the number of ART clients accessing family planning through TASO clinics increased from virtually none to 30 per month. TASO is now rolling the model out to all its centers throughout Uganda.

Family planning use is rapidly increasing in areas where USAID is partnering with U.S.-based private voluntary organizations and local NGOs to increase and expand family planning services. The increase in family planning use is largely attributable to training of community health workers, community mobilization, quality improvement of family planning services, introduction of new family planning methods, and integration of family planning into child health programs. For example, NGOs working in **Guinea** increased couple-years of protection (CYP, a proxy for contraceptive prevalence based on methods distributed) by 250 percent from FY 2006 to FY 2008 by forming village health committees, providing access to family planning, and engaging religious leaders who changed community attitudes and knowledge. **DR Congo** increased CYP from 45,500 to nearly 72,000 in two years (figure 25) by using an array of communication channels, including a cell phone hotline, to spread accurate information about family planning and contraceptive methods. Programs in **Uganda**, **Malawi**, and **Madagascar** are training and providing services that will expand family planning through the community-based distribution of Depo-Provera.

USAID has worked with NGOs and governments to bring FP/RH information and services to traditionally underserved areas in **Ethiopia**. Providing the backbone of these services has been a network of more than 10,000 community-based reproductive health agents (CBRHAs), who reach clients in their communities through home visits and by disseminating information at social and religious gatherings. The addition of some 30,000 health extension workers deployed by the government to health posts in these areas, working in tandem with the CBRHAs, has led to additional uptake of family planning, as women are now able to get injectables without having to travel long distances to health centers. Project records estimate that since 2002, activities have reached about 3.7 million new family planning clients and generated 3.3 million CYP.

USAID also supported program efforts to encourage delayed childbearing. In **Nepal**, where 56 percent of girls marry before age 18, a USAID program helped initiate dramatic changes in community norms, resulting in an increase in the median age at marriage from 14 to 16 years. The percentage of married adolescents visiting government health facilities for services also increased, from 36 to 42 percent, between 2005 and 2007. The program was so successful that the Ministry of Health is replicating it with support from USAID, with 21 health sites developing action plans, and 330 Ministry staff and service providers undergoing training to better meet the needs of young married couples.

A Rwandan couple stand outside a family planning clinic where they received HIV testing and family planning counseling.

Photo: Virginia Lamprecht

Private sector support for family planning was another USAID focus in 2008. In the **Philippines**, **Romania**, **Nicaragua**, **Peru**, **Uganda**, and **Nigeria**, USAID helped leverage more than $90 million in loans from local financial institutions to private providers of FP/RH and other health services and products. Among other things, these loans were used to purchase drugs and equipment and renovate clinics. Funds were also leveraged from other donors and local governments for technical leadership and field implementation.

Reuniting a Family in Sri Lanka

Mathulan's mother and sister prepare food at home to sell to nearby shops.

Photo: Save the Children, Sri Lanka

Sanmugeswararaja Valarmathi, a Hindu woman in Sri Lanka's conflict-ridden North, has three children. When Mathulan, the youngest, was 11 days old, the father left the family. Valarmathi had no income, so her mother and brothers helped her raise her children, but poverty still forced her to send them to a home run by a Christian church. The care was free – if the family converted to Christianity.

"I could not afford to send my children to school, and this was the only option available. Mathulan was in the home for two years, but it was not good for him," Valarmathi says. "The children fought, and older children appointed as wardens didn't look after the younger children. I was allowed to see him only once a month. They thought that if children saw the family frequently, they would want to go home, so they discouraged us from seeing them or bringing them home-cooked food."

With help from USAID's New Beginnings for Children Affected by Conflict and Violence program, Valarmathi and her children now face a brighter future together. Mathulan was referred to the program, which is supported by USAID's Displaced Children and Orphans Fund, with a request for help to allow the family to stay together. After an assessment determined that Valarmathi had no income, the program provided her with a food allowance of 2,500 rupees ($22) per month for six months. As a single mother, she also received 15,000 rupees that she used to make food for nearby shops. Valarmathi made steady progress and received 15,000 more rupees to expand her business. She now makes a monthly profit of 2,000 to 4,000 rupees. For functions such as weddings, she accepts orders to make food. With her new income, she was able to pay for school and bring Mathulan home.

In Mathulan's words, "When I first stepped into the children's home, I felt very sad because I already missed my family. I am so happy to be back with my mother and my sister." ■

VULNERABLE CHILDREN

KEY RESULTS

- More than 200 children in post-election Kenya were reunited with their families; family mediation began for another 350; and more than 600 people received training on child protection and preventing separation.
- More than 3,800 Afro-Colombian children were protected from recruitment by illegal armed groups and received education and vocational training; 48 family welfare institutions were strengthened; and more than 1,400 community leaders, mostly Afro-Colombian mothers, received prevention training.
- To capture the incidence of gender-based violence and create an evidence base for policies and program interventions, an innovative "neighborhood" methodology was piloted in Sri Lanka and Ethiopia.
- In DR Congo, more than 1,700 children were reunited with their families; nearly 270 people were brought to trial for child abuse and maltreatment, particularly in cases involving accusations of witchcraft; and more than 550 abused and imprisoned children were released.
- USAID's Child Blindness Program screened more than 1 million children, distributed more than 11,000 pairs of glasses, provided therapy and education to 2,400 blind children, conducted 921 sight-restoring surgeries, and trained more than 5,000 people on eye health.

Since its inception in 1989, USAID's Displaced Children and Orphans Fund (DCOF) has worked to improve the lives of children at risk, including orphans, unaccompanied minors, children affected by armed conflict, and children with disabilities.[15] Other USAID programs help local and international NGOs reduce child blindness in countries where eye care sources are either inadequate or nonexistent. Through the Agency's Special Advisor for Orphans and Vulnerable Children, USAID also coordinates with other U.S. Government agencies, international organizations, and NGOs on programs to assist vulnerable children.

Displaced Children and Orphans Fund

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

- Tracing and reunifying children into families or family-like situations and ensuring community inclusion

15. http://www.usaid.gov/our_work/humanitarian_assistance/the_funds/dcof/index.html

DISPLACED CHILDREN AND ORPHANS FUND RESULTS, FY 2008					
Countries	# People Served		# People Trained		# Organizations Strengthened
	M	F	M	F	
Angola	2,120	1,770	164	65	14
Azerbaijan	3,423	3,575	282	281	3
Belarus	1,470	1,040	52	738	105
Colombia	1,472	1,870	496	669	38
DR Congo	36,124		1,030		48
Georgia (Disabilities)	800	1,900	10	188	28
Georgia (Rebuilding Lives Project)	451	884	25	198	12
Kenya	5,636		333	280	36
Sri Lanka	155	372	176	228	9
Thailand	4,050	3,480	115	235	–
Ukraine	185	184	244	862	25
Zambia	2,370	1,583	128		20
Worldwide					
CARE/Right to Play (Mozambique, Rwanda, Sierra Leone)	29,194	25,393	540	384	51
Columbia University (Ethiopia, Liberia, Uganda)			33	22	5
TOTAL	129,471		7,778		358
GRAND TOTAL*	137,249				358

Source: USAID

- Strengthening support systems such as social service networks, community resources, and national policies and laws
- Economic strengthening for families, adolescents, and communities
- Social reintegration of children separated during armed conflict, including child soldiers

The majority of DCOF funds support programs and activities that provide direct assistance to children, their families, and their communities. DCOF gives priority to funding the design, implementation, and monitoring of programs that demonstrate innovative techniques, utilize and contribute to the latest evidence-based guidance, and are replicable on a wider scale. In 2008, DCOF projects operated in 17 countries with a budget of $13 million, benefiting 358 organizations and more than 137,000 children and adults through services or training (see table).

In addition, DCOF helps develop and support collaborative initiatives to increase effectiveness and advance the "state of the art" in programming and policies to benefit vulnerable children. It has provided funding and serves on the steering committee of the Better Care Network, which through its Web site and listserv provides information and guidance on interventions for children without adequate family care. Jointly with Search for Common Ground, DCOF convenes the Washington Network on Children and Armed Conflict,

a forum for technical presentations and information exchange involving practitioners and scholars in the U.S. Government, NGOs, universities, and think tanks. Recognizing the pervasiveness of agencies engaging with communities to benefit children and the variable effectiveness and sustainability of those efforts, DCOF mobilized the Interagency Learning Initiative: Engaging with Communities for Child Wellbeing. The group oversaw a review of key documents and interviews with practitioners to identify key issues relevant to good practice and preparation of a report regarding communities and child well-being.[16]

These Ukrainian children receive assistance from a relief nursery program that intervenes with families to prevent child abuse, neglect, and abandonment.

Photo: Holt International

In **Zambia**, DCOF supports the Africa KidSAFE (AKS) network, which helps at-risk and street children by developing community-based solutions for them and their families. The network comprises key government agencies and 16 Zambian nonprofit organizations. In 2008, nearly 7,000 children and 1,000 households benefited from economic strengthening activities, such as microfinance services, that enabled children to avoid the streets. More than 200 children received assistance to leave the streets and move into a residential care facility, while another 240 children received assistance to reintegrate into their families. Nearly 4,000 children received counseling, medical care, and assistance with family reunification, either on the streets or in one of the centers of AKS members. AKS also carried out 59 advocacy and awareness-raising events and helped the Department of Social Welfare support 10 district street children committees.

The DCOF-funded Right to Play (RTP) refugee project used sport and play programs to enhance child development, provide health education, promote healthy behavior change, and build local capacity by training community leaders as coaches in **Rwanda**, **Ghana**, and **Sierra Leone**. RTP was also implemented in five refugee camps along the **Thailand-Burma** border. An early child play module for nursery teachers was introduced in several camps, and local project coordinators and training officers were employed to ensure sustainability of the project. In 2008, 7,500 children in the border region and 350 volunteer and paid staff received training.

In **Georgia**, the first National Strategy and Action Plan for Special Needs Education was endorsed by the Minister of Education and Science. An important benchmark of the DCOF-funded Supporting Equal Opportunities for People With Disabilities project, the strategy is a step toward allocating funding and including special education practices and methodologies in schools nationwide. Also in Georgia, the Rebuilding Lives Project (RLP) works to reorganize family support services so that families themselves are empowered to make decisions and take the leading role in supporting their children. In 2008, RLP increased delivery of its services through the development and implementation of individual service plans for beneficiary children and their families. Social support units regularly contacted children's families, completed quality assessments of the family environment, and provided families with individual and group guidance. Four social workers received master training, and two completed a training-of-trainers course. An annual family satisfaction survey showed substantial improvements in families' perceptions of being able to make decisions, represent themselves, and have access to information and referrals to social support.

16. This report is available at ww.usaid.gov/our_work/humanitarian_assistance/the_funds/ pubs/comaction.html.

In **Sri Lanka**, DCOF's New Beginnings for Children Affected by Violence and Conflict program focuses on 1) family reunification for institutionalized children at risk or affected by armed conflict and violence, and on 2) community empowerment activities that will enable families and communities to better protect and care for children (see story on page 64). In 2008, an analysis of the program's first three years in Western province was completed and found that 259 of 571 children had been reunified as of May 2008 – 82 percent of them with their immediate families. Poverty was the primary reason for the children living in institutions. New Beginnings also strengthened community-based child protection systems in Southern province by creating seven child protection committees of elected community members who are responsible for reducing violence through home visits, mediation, and referrals to service providers.

DCOF-supported projects in **Belarus** focus on developing alternatives to state institutions to increase the number of children living with their biological or adopted families or in a family-like environment. A public awareness campaign was launched in several communities to raise awareness of adoption and foster care. In Chausey, one of the targeted communities, the number of adoption inquiries increased six times since the start of the campaign, and 37 parents completed an adoption training program, with 15 becoming adoptive or foster parents. Additionally, the number of children in alternative care increased by 75 percent. In Chausey and neighboring Zhodino, placement in state institutions ceased, with children immediately taken to foster care or adopted. A public awareness campaign on child abuse and neglect was also launched, and the number of reports about child maltreatment increased three times from the previous year. About 90 percent of cases were substantiated, and protective measures for children were provided and rehabilitative services for parents suggested.

Child Blindness Program

USAID programs for vulnerable children also include the Child Blindness Program, which helps reduce child blindness in countries where basic eye care services are inadequate or nonexistent. The Program provides a variety of interventions, including vision screening and eyeglass distribution, education and rehabilitation for blind children, sight-restoring surgery, and training to increase access to quality eye care services. In 2008, USAID-supported NGOs in 25 countries screened more than 1 million children, distributed more than 11,000 pairs of glasses, provided therapy and education to 2,400 blind children, conducted 921 sight-restoring surgeries, and trained more than 5,000 people on eye health.

CURT CARNEMARK

Afghanistan: Achieving Results through a Strengthened Health System

A young Afghan mother and her child receive immunizations. Immunization coverage, skilled attendance at birth, and TB detection are among the health indicators that have improved in Afghanistan as a result of health systems strengthening.

Photo: © 2005 Emily J. Phillips, courtesy of Photoshare

Afghanistan has some of the worst health indicators in the world. Since 2002, USAID and other donors have helped the Afghan government build a health system, beginning with facilities construction and equipment provision through development of the National Health Policy and the Health and Nutrition Chapter of the Afghanistan National Development Strategy. Improvements have been made in the health system despite political instability and widespread insecurity. The Ministry of Public Health, for example, revised its essential drug list to include zinc for diarrhea treatment and prevention. USAID also helped the Ministry rehabilitate and reinforce key information systems – including financial management and procurement systems – and decentralize the health system and improve the capacity for management at provincial and local levels. Thousands of community health workers and community midwives have been trained. Throughout this period, USAID and other donors assisted the Ministry of Health to provide oversight to the non-governmental agencies delivering the vast majority of direct services, strengthening the Ministry's capacity to manage grants and improve quality of care.

USAID's current strategy focuses on scaling up direct service delivery, improving capacity and technical leadership for health sector governance, and developing the medical workforce. USAID supported the development of Afghanistan's Basic Package of Health Services and Essential Package of Hospital Services. These standards, used throughout the country, define the minimum expected services, equipment, and required staff for each level of the health system in order to improve and rationalize health care delivery and facilitate referral systems. USAID continues to provide technical assistance at all administrative levels to strengthen the implementation and governance of these standards.

Afghanistan has made remarkable improvements, including significant advances in population health. The percentage of the population with access to basic health services went from 9 percent in 2000–2003 to 84 percent in 2006–2008. During the same period, the percentage of women in rural areas delivering with a skilled birth attendant went from 6 to 19 percent. Measles immunization coverage increased from 44 percent in 2002 to 70 percent in 2007, and TB case detection rates increased dramatically, from 4 percent of cases in 1997 to 64 percent of cases in 2007. ■

HEALTH SYSTEMS STRENGTHENING

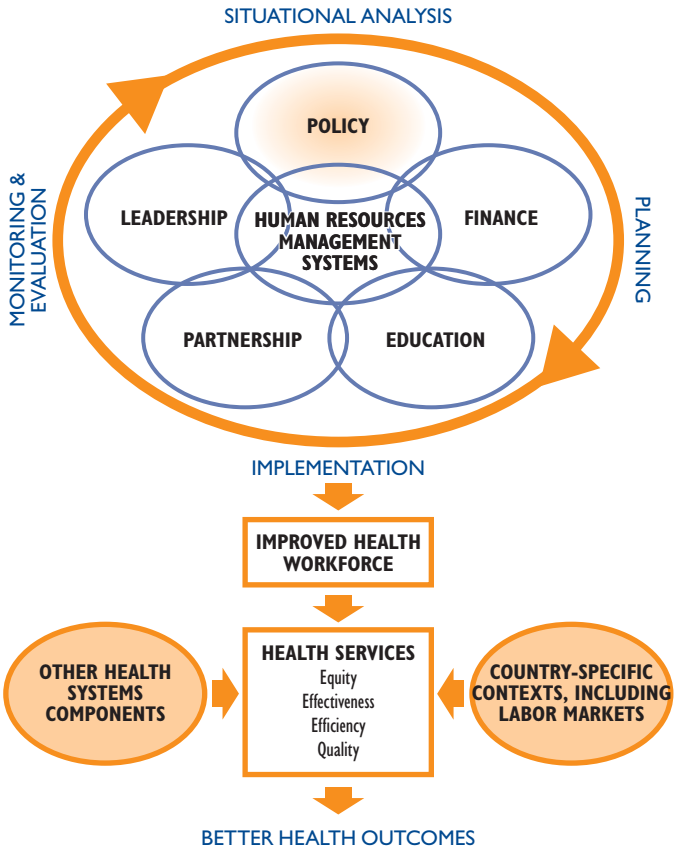
KEY RESULTS

- Improved procurement, supply management, and work plans facilitated accelerated disbursement of malaria grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria in 10 countries.
- More than 5,000 program managers, policymakers, supervisors, and health workers received training in managing pharmaceuticals and other key public health commodities.
- In Senegal, USAID assisted 14 new mutual health organizations (MHOs). The number of USAID-assisted MHOs reached 44, with more than 76,000 people benefiting from health financing.
- UNAIDS adjusted its HIV prevalence estimates in many countries in response to HIV testing conducted during Demographic and Health Survey data collection. In India, HIV estimates were halved from 1 percent to less than 0.5 percent.

Strengthening the health systems of developing countries is a central goal of USAID health programming. Achieving this goal is critical to sustaining improvements in health outcomes in health- or disease-specific areas and is a significant element in supporting development in partner countries. Current efforts to strengthen health systems fall along a spectrum ranging from health system improvements that mainly address a disease or health-specific area (better quality laboratories for TB diagnosis, for example) to health system improvements that benefit the whole system (such as improvements in tracking a country's health expenditures). In both specific and broad systems improvements, USAID's aim is to build the capacity of countries to achieve long-term improvements in the health of their people.

Health systems strengthening and progress in disease- and health-specific areas are mutually reinforcing. The success of USAID programs in reducing under-5 mortality and maternal deaths, in increasing detection and treatment rates for TB, and in decreasing fertility rates, for example, could not have occurred if programs had not also strengthened national health systems. USAID support for surveillance systems to monitor the threat of infectious diseases or for logistics systems for stocking and distributing contraceptives as part of family planning programs has an impact beyond the specific disease or health area.

Figure 26: Health Action Framework



USAID health programs look at what prevents people from accessing, affording, and receiving quality care, and develop interventions to address these constraints. These interventions address one or more of the six core functions of the health system in a way that will enable countries to sustain gains in health outcomes beyond the period of donor assistance. Specifically, USAID's core functions in countries are:

- *Human resources,* to improve human resources management, ensuring they have the right number, mix, and distribution of competent, efficient, and responsive staff and volunteers.

- *Medical supplies, vaccines, and technology,* to ensure equitable, timely, and consistent 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,* to 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. This includes expanded health insurance, community-based insurance, performance-based financing, credit, and targeted subsidies.

- *Information,* to develop the capacity for production, analysis, dissemination, and use of relevant, reliable, and timely health information for evidence-based policy development, resource allocation, program planning and management, advocacy, and community participation.

- *Leadership and governance,* to increase the oversight and accountability of the governance of the health system and the participation of citizens, civil society, and the private sector as responsible actors in its performance. USAID works also to improve the leadership and management skills of health sector staff to better plan and use resources.

- *Service delivery,* to deliver proven health interventions efficiently to prevent and treat illness, promote healthy behaviors, improve the quality of service delivery, and measure impact.

USAID partners with international organizations and other bilateral donors to strengthen health systems and maximize the effectiveness of its efforts.

Human Resources

To help countries move their strategic workforce planning forward, USAID collaborated in 2008 with the Global Health Workforce Alliance, WHO, and other partners to develop the Human Resources for Health (HRH) Health Action Framework (HAF) (figure 26). The Framework sets forth a comprehensive, country-level approach to addressing HRH challenges. In **Uganda**, the Ministry of Health used HAF to assess gaps in its current HRH plan, prepare an improved plan, and support national- and district-level decisionmaking, while in **Mozambique**, **Kenya**, and **Zambia**, HAF supported country HRH needs assessments for the U.S. President's Emergency Plan for AIDS Relief and other programs. In Kenya's North Eastern province, it was used to determine priorities and recommend high-yield strategies to address HRH shortages. In Latin America and the Caribbean, the Pan American Health Organization

adopted HAF and, with USAID support, incorporated it into courses for health professionals.

Medical Supplies, Vaccines, and Technologies

In **DR Congo** and **Tanzania**, USAID assisted the drug regulatory authorities and health ministries with the registration and nationwide introduction of zinc and low-osmolarity oral rehydration salts for treating diarrhea. A locally manufactured zinc product was registered in Tanzania, and staff from 485 accredited drug-dispensing outlets received training on how to use it. USAID also supported the adoption of new treatment protocols for using uterotonics to prevent postpartum hemorrhage in **Benin**, **Ghana**, and **Mali**. In **Nicaragua**, contraceptive logistics systems are being expanded to all medical commodities.

Health Financing

USAID continued to support the scale-up of community-based insurance, strengthening national strategies for community-based financing in **Niger** and subnational networks in **Mali**. In **Rwanda**, where community-based insurance coverage is close to universal, USAID leveraged the reach of the program to distribute point-of-use water treatment to the country's largely rural population. USAID worked with 214 local government authorities in **Senegal** to develop annual health plans and supported 14 new mutual health organizations (MHOs), bringing the number of USAID-assisted MHOs to 44 and benefiting more than 76,000 people. Senegal also received assistance in developing and implementing national health accounts to allow for the monitoring of health system resource flows in a systematic, comprehensive, and consistent fashion. In **Armenia**, USAID assistance helped institutionalize more equitable and efficient health financing systems, including a "basic benefits package" providing free primary health care and maternity services benefiting 85 to 90 percent of the population. Government spending on primary health care also increased from 15 to 35 percent over the last 10 years. In **Georgia**, the Health Insurance Mediation Service, created to resolve disputes between insurance companies and clients out of court, has helped lower costs for both companies and clients and increased customer satisfaction.

Information

USAID also supported HRH planning through improved analysis and use of information. Introduced in nine

Health Information Systems in Latin America

National health information systems (HIS) in Latin America are highly fragmented. Health data and information are produced by multiple sectors and institutions that are poorly coordinated. As a result, information subsystems overburden health professionals so that they cannot deliver timely, accurate, and complete data. In some cases, national health authorities recognize that reliable and timely health information is the foundation of a population's improved health status. However, initial investments in information subsystems have suffered from the lack of an efficient overall health information system.

To address these problems, USAID's Latin America and Caribbean regional program works with partners to lead the implementation of an assessment and monitoring process to improve HIS performance. Efforts are based on three main elements:

1. Documentation and dissemination of successful experiences, key processes, and lessons learned
2. Establishment of an assessment and monitoring process as a "best practice" for strengthening and developing HIS
3. Improvement in the availability of core health indicators and standardized methods, models, and techniques to support health situation analysis and evidence-based decisionmaking in public health

National HIS technical teams in Mexico, Brazil, Paraguay, Honduras, Peru, and the Dominican Republic have used the Health Metrics Network's Situation Analysis and Monitoring Tool (SAMT), complemented by USAID's Performance of Routine Information System Management (PRISM) framework, as their main instruments for the HIS assessment phase. As a result of the assessments, each country carried out an HIS situational analysis and created an HIS strategic development plan and corresponding implementation plan. The strategic development plan was presented for discussion to the extended stakeholder group and then submitted to the Ministry of Health for approval.

These efforts have proven catalytic. Based on the strategic plan developed as a result of the assessment process, Mexico, Paraguay, and Peru were able to secure new funding from the central ministries to strengthen HIS. In Honduras, another donor provided significant funding toward the HIS improvement process.

countries,[17] the integrated Human Resource Information System (iHRIS) evolved in response to field needs to assess HRH problems and plan and evaluate interventions. The system proved to have many uses. Districts in **Tanzania** used iHRIS to manage scheduling, leave, and performance. In **Southern Sudan** and **Rwanda**, an offline desktop version supports decentralized information management. In **Swaziland**, the system helped regional health managers discover posts that had remained unfilled for years. All nine countries are planning to expand and refine their iHRIS in the future.

In Pakistan, a caregiver helps a client fill out an information sheet at a maternal and child health clinic supported by the Pakistan Initiative for Mothers and Newborns (PAIMAN).

Photo: © 2009 PAIMAN, courtesy of Photoshare

Leadership and Governance

Governance efforts focused on evidence-based decisionmaking, participatory decisionmaking, and improved financial management. Many countries benefited from the improved availability of information in USAID's Health System Database and Dashboard, which allows for evidence-based decisionmaking. USAID supported "quality assurance partnerships committees" in more than one-third of **Rwanda's** districts to foster joint accountability for quality services among local governments, health providers, civil society, and communities. In **Mozambique**, USAID strengthened the capacity of the National AIDS Council and the Country Coordinating Mechanism of the Global Fund to Fight AIDS, Tuberculosis and Malaria to be better stewards and managers of Global Fund financing. USAID worked with **Honduras'** Ministry of Health to implement a new program to strengthen health systems and decentralize health services, particularly family planning and maternal and child health services. Decentralization resulted in increases of 27 percent for prenatal care, 35 percent for attended births, 20 percent for growth monitoring, and 10 percent for postpartum care, compared with centralized services covering similar populations. In **Peru**, USAID has supported critical dialogue between key health sector actors, including political parties, to reach a consensus on the need to advance health insurance reform and the health decentralization process.

Service Delivery

USAID-supported training programs improved health service delivery in **Uzbekistan** and **Jordan**. Uzbekistan implemented a training-of-trainers structure of 46 master trainers, with three to four from each district, to reach 471 district trainers who then trained more than 10,000 nurses in the National Patronage Nurse Program. In Jordan, USAID trained quality unit heads and coordinators at the health directorate level to improve health system performance by monitoring quality indicators. USAID also supported competency-based training of essential obstetric and neonatal service providers.

17. Uganda, Rwanda, Swaziland, Tanzania (mainland and Zanzibar), Lesotho, Namibia, Kenya, Southern Sudan, Botswana

WORLD BANK

Newborn Care Research Shows Promise

A woman applies chlorhexidine to her baby's cord.

Photo: Abdullah Baqui

Of the 4 million deaths of newborns that occur each year, 99 percent are in low- and middle-income countries, and approximately one-third can be attributed to infections caused by unhygienic conditions. These infections often occur in the umbilical cord stump, and research has shown that cleaning the cord with chlorhexidine, an inexpensive and readily available antiseptic, may reduce the risk of death from these infections. From 2002 to 2005, USAID cosponsored a trial in Nepal that demonstrated a 34 percent decline in mortality resulting from using a 4% chlorhexidine solution for cord care within 24 hours of birth.

This intervention can potentially be administered by community health workers and birth attendants outside of clinics and hospitals. USAID is thus supporting research to replicate and validate the Nepal trial in Bangladesh, where more than 90 percent of rural women deliver at home and neonatal mortality exceeds 36 deaths per 1,000 live births. Cord care is part of an essential newborn care package delivered through home visits by community health workers before and after delivery. Households in a district in northeastern Bangladesh where 12,000 to 13,000 infants are born each year are participating. In the first week after birth, a community health worker visits to clean the cord or provide messages on dry cord care, and the study is testing whether a one-day or seven-day application of chlorhexidine is required to achieve the same mortality reduction as in Nepal.

While the study continues, a USAID project is working with a local manufacturer to develop an affordable chlorhexidine formulation. To facilitate scale-up, USAID is also supporting research on packaging of chlorhexidine, avenues of supply and delivery, and acceptability. ■

RESEARCH & TECHNICAL INNOVATION

KEY RESULTS

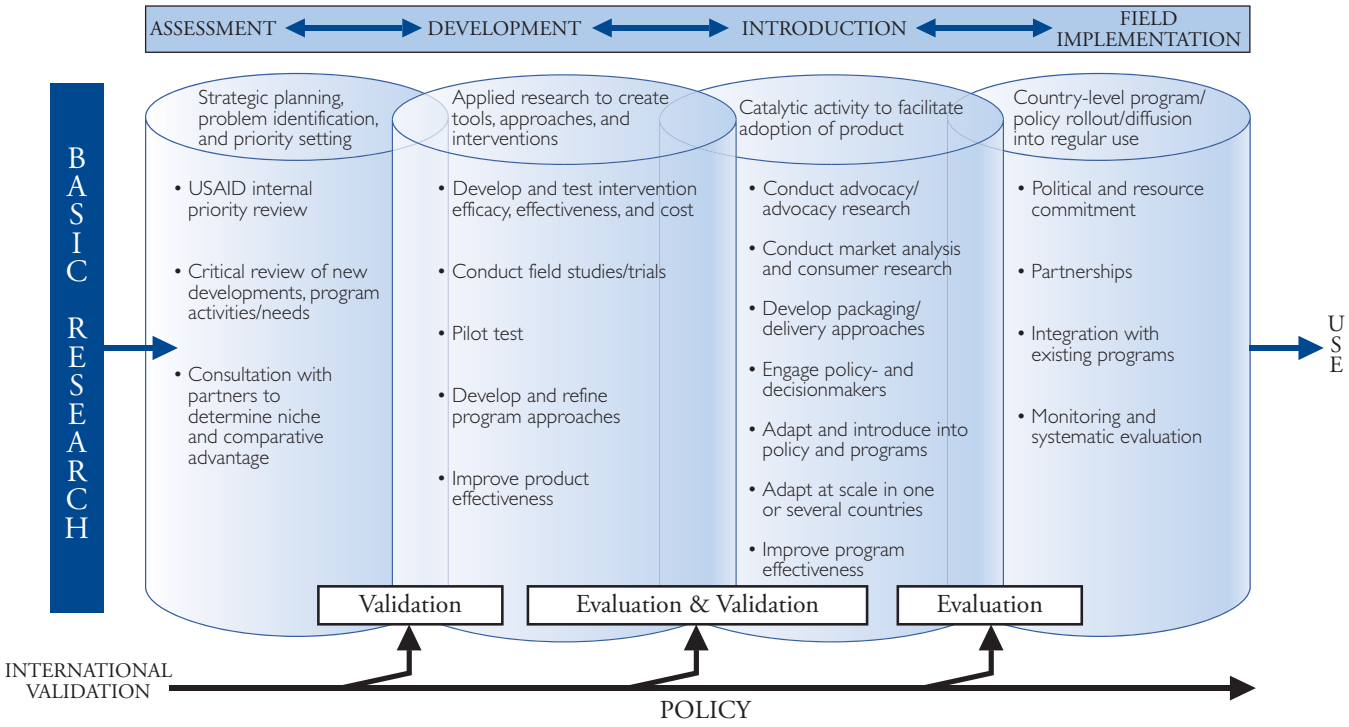
- USAID-supported studies in Pakistan on the effectiveness of community-based treatment of severe child pneumonia established the evidence base for new WHO home management guidelines released in 2008.
- A multicountry survey of facility-based deliveries found limited practice of active management of the third stage of labor. This served to inform and influence policies and strategies for scaling up postpartum hemorrhage prevention activities.
- The report of a USAID-supported study of a strategy that trained community health workers to promote a package of antenatal and postpartum interventions during home visits in rural Bangladesh received the *Lancet* Paper of the Year award.
- Ready-to-use supplementary foods were found to prevent stunting, improve linear growth, reduce iron deficiency anemia, and enhance motor development in infants.

USAID plays a key role in funding research and producing technical innovations to implement low-cost effective health programs in developing countries. Using a research-to-use model that maintains close connections between research, product development, and field implementation, the Agency pursues a proactive strategy for using funds to stimulate the development and introduction of key products in developing countries and countries in transition. The 2009 update of USAID's five-year health research strategy (2006–2010) was presented to Congress in September 2009 and is 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*).[18]

USAID's research-to-use model is an iterative process that includes ongoing validation and evaluation (figure 27). USAID participates in the process at various stages, depending on the nature of the health issue, the health policy, and the systems context. To achieve the greatest health impact, USAID engages the technical expertise of multiple partners, including CDC and the National Institutes of Health of the Department of Health and Human Services, the Department of Defense, WHO, UNICEF, partner-country governments, universities, NGOs, and commercial sector partners.

18. http://pdf.usaid. gov/pdf_docs/PDACH111.pdf

Figure 27: Pathway from Research to Field Implementation to Use



Maternal and Child Health

A multicountry survey of facility-based deliveries found that even though oxytocin is generally used to control bleeding after childbirth, correct use of active management of the third stage of labor (AMTSL) occurred in no more than one-third of observed deliveries (figure 28). The survey served as a strong advocacy tool to push ministries of health, international partners, and policymakers to ensure that safe motherhood guidelines and practices include AMTSL for the prevention of postpartum hemorrhage (PPH).

Research in **Mali** found that midwives could safely administer oxytocin using Uniject, a simple, single-dose, nonreusable injection device. Further studies are planned in **Guatemala**, **Honduras**, **Nepal**, and **South Africa**. A Bangladesh study showed that appropriate use in home deliveries of misoprostol, a low-cost alternative to oxytocin, is associated with an estimated 40 percent reduction of immediate PPH, and other studies in **Afghanistan** and **Nepal** also demonstrated the safe and effective use of misoprostol.

Studies in **Bangladesh**, **India**, and **Pakistan** demonstrated the feasibility of community-based essential newborn care practices in promoting neonatal health and survival. In Bangladesh, these practices, in combination with use of skilled birth attendants in uncomplicated deliveries and maternal knowledge of newborn complications, accounted for a 32 percent mortality rate differential across three districts. In India, essential newborn care reduced neonatal mortality in the first month by 54 percent. There was about a 15 percent reduction in Pakistan, along with a 20 percent reduction in stillbirths, and the Pakistani Government is working to expand the intervention beyond the study area.

In **Cambodia**, USAID-supported research on the biosand filter, a promising household water treatment technology, found that more than 87 percent of filters were still in use after eight years, with a 45 percent reduction in diarrheal disease. Research on water testing technologies identified two simple portable tests that consumers can perform to measure contamination of drinking water with fecal bacteria. These tests have the potential to support community and household water

management systems, provide entrepreneurial opportunities, and facilitate water quality assessments in disaster areas where equipment and skilled personnel are lacking.

Nutrition

A USAID-supported study in **Haiti** demonstrated that age-based preventive targeting of food assistance and behavior change communication are more effective in reducing childhood undernutrition than targeting only underweight children. Based on the study, USAID partners are adopting the "Preventing Malnutrition in Children Under 2" approach for maternal and child health and nutrition programming.

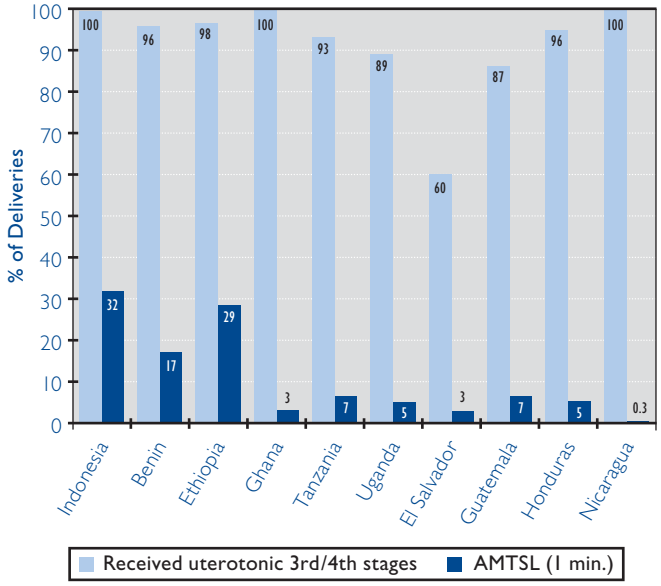
Two efficacy trials in **Ghana** and **Malawi** strengthened the evidence base of the impact of ready-to-use supplementary foods (RUSFs) on preventing chronic malnutrition. RUSFs were provided to children for six to 12 months starting at 6 months of age. The RUSFs prevented stunting, and the children showed improved linear growth, reduced iron deficiency anemia, and enhanced motor development. These new products will be a critical component of USAID's efforts to improve nutrition in light of growing food insecurity.

Recent USAID-funded research in **Bangladesh** contributed new evidence that a dose of vitamin A in the first 48 to 72 hours of life reduces infant mortality by 20 percent in vitamin A-deficient settings in South Asia. Further operations research on newborn vitamin A supplementation is ongoing in **Nepal** and **Bangladesh**. Implemented with global partners such as the Micronutrient Initiative, these studies will determine the feasibility of distributing vitamin A to newborns in the context of safe delivery and newborn care.

Family Planning and Reproductive Health

In an intervention to integrate maternal health, neonatal health, and family planning services in **Kenya**, more than 10,900 women received immediate postpartum visits that included postpartum family planning counseling. In the intervention group, 220 postpartum women started using family planning much earlier, and no pregnancies occurred at six months postpartum, compared with six pregnancies in 173 women in the pre-intervention group. At the six-week visit, significantly more women chose a contraceptive method after the intervention (63 percent) than before the intervention (35 percent). The success of this intervention is widely acknowledged in Kenya, which plans to scale up integrated postnatal care/family planning services nationally.

Figure 28: Percent of Observed Deliveries with Uterotonic Given During 3rd/4th Stages of Labor and Correct Use of AMTSL



Source: Kak, Lily, Spotlight on Preventing Postpartum Hemorrhage – USAID Support. Presented at the Prevention of Postpartum Hemorrhage Initiative Postpartum Hemorrhage Working Group meeting, April 6, 2009.

Research in **India** demonstrated a 150 percent increase over 18 months in the prevalence of modern birth spacing methods among new users in the area where the Standard Days Method (SDM) was introduced. Results from a similar study in **Peru** suggest that introducing SDM may have stopped a declining trend in contraceptive use in participating clinics. The results further suggest that SDM is most popular among women who are not currently using an effective method, thus providing a strategy to reach underserved women and men.

HIV/AIDS

Clinical trials evaluating the effectiveness of vaginal microbicides in preventing HIV infection in women continued in **South Africa**, **Kenya**, **Malawi**, and **Tanzania**. To maximize information and optimize future trial design, analysis of previous trial results for other products continued.

The International AIDS Vaccine Initiative, supported by USAID, CDC, and the U.S. Military HIV Research Program, provided key data to define laboratory values critical for designing and monitoring clinical trials among African populations, particularly trials of potentially life-saving technologies. The blood chemistry and

hematology parameters of more than 2,000 people in **Kenya**, **Uganda**, **Rwanda**, and **Zambia** were examined, as were more than 20 parameters to evaluate kidney and liver function, immunological health, and anemia.

Health Systems

USAID established or strengthened postmarketing surveillance to sample and test the quality of medicines in 12 countries in Latin America, Africa, and Southeast Asia, supporting the sampling of approximately 900 malaria, TB, and HIV/AIDS drugs and antibiotics. Postmarketing surveillance data were instrumental in the success of a regional anticounterfeit operation in Southeast Asia that removed $6.7 million worth of spurious medicines from the market.

Infectious Diseases

USAID's Malaria Vaccine Development Program, in collaboration with the U.S. military's Malaria Vaccine Program, completed two clinical malaria vaccine trials, began two trials (including a field trial in **Kenya**), and began preclinical research and development on a new investigational vaccine. A joint consultation with the National Institute of Allergy and Infectious Diseases on "rational design of malaria vaccines" engendered new directions for the federal vaccine effort and vaccine developers worldwide.

A USAID-supported trial determined that fixed-dose combination tablets of TB drugs do not contribute to drug resistance but found some operational constraints to their use. For example, patients taking these drugs often have to interrupt treatment because they must stop all drugs if they have a reaction to one. USAID also supported research to optimize the effectiveness of sputum smear microscopy and simplify the collection and processing of sputum samples. The results support future policy changes under consideration by WHO to facilitate more rapid detection of TB cases.

A health counselor uses a poster to demonstrate birth preparation and newborn care practices to women in Bangladesh.

Photo: Abdullah Baqui

FINANCIAL ANNEX

Funding Tables

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

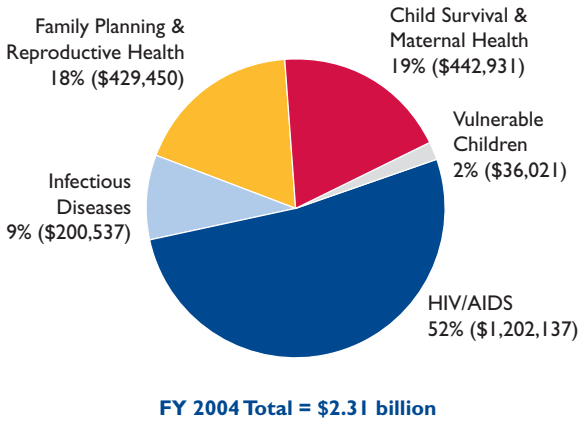
Table 1: FY 2008 USAID Total Health Budget by Program Category and Bureau

($ thousands)

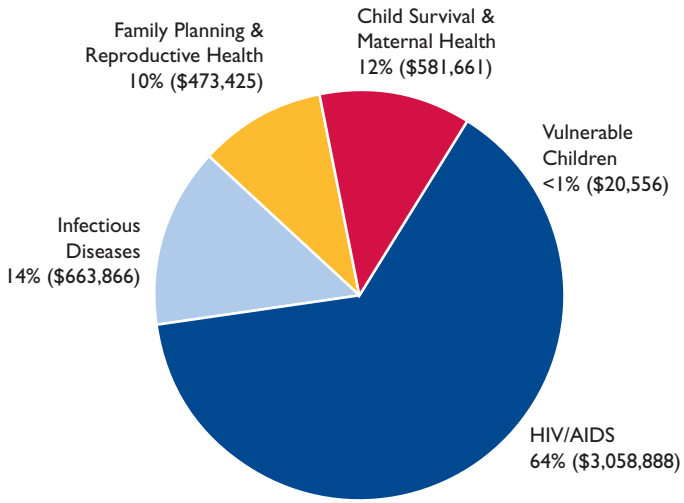
Program Category	AFR	AME	E&E	LAC	DCHA	GH	Int'l. Partners	Total
Child Survival & Maternal Health	151,342	231,696	15,745	42,961	-	66,021	73,896	581,661
Vulnerable Children	-	-	5,677	-	13,044	-	1,835	20,556
HIV/AIDS	1,963,546	122,950	17,183	79,427	-	232,396	643,386	3,058,888
Infectious Diseases	338,686	71,686	18,236	15,763	-	74,739	144,756	663,866
Family Planning & Reproductive Health	165,124	152,777	16,524	43,500	-	95,500	-	473,425
Total	**2,618,698**	**579,109**	**73,365**	**181,651**	**13,044**	**468,656**	**863,873**	**4,798,396**

FY 2004 and FY 2008 USAID Total Health Budget by Program Category

($ thousands)



FY 2004 Total = $2.31 billion



FY 2008 Total = $4.80 billion

Note: Percents may not total 100 due to rounding.

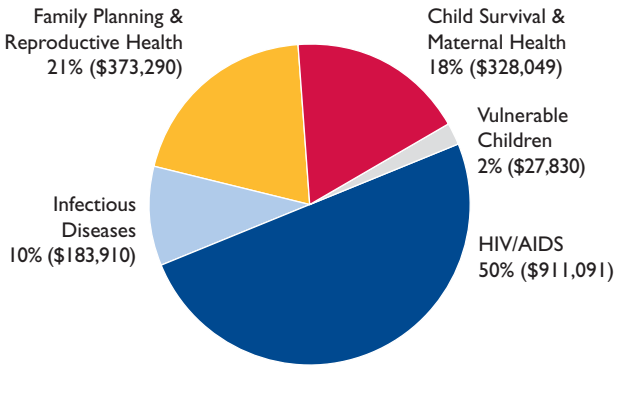
Table 2: FY 2008 Global Health and Child Survival/ USAID Budget by Program Category and Bureau

($ thousands)

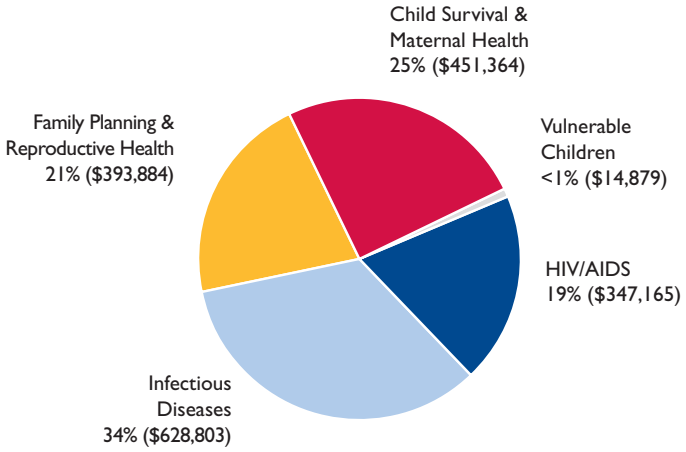
Program Category	AFR	AME	E&E	LAC	DCHA	GH	Int'l. Partners	Total
Child Survival & Maternal Health	149,642	118,100	744	42,961	-	66,021	73,896	451,364
Vulnerable Children	-	-	-	-	13,044	-	1,835	14,879
HIV/AIDS	99,101	66,817	446	33,577	-	53,740	93,484	347,165
Infectious Diseases	336,206	52,669	6,270	14,163	-	74,739	144,756	628,803
Family Planning & Reproductive Health	161,124	89,260	4,500	43,500	-	95,500	-	393,884
Total	**746,073**	**326,846**	**11,960**	**134,201**	**13,044**	**290,000**	**313,971**	**1,836,095**

FY 2004 and FY 2008 Global Health and Child Survival/USAID Budget by Program Category

($ thousands)



FY 2004 Total = $1.82 billion



FY 2008 Total = $1.84 billion

Note: Percents may not total 100 due to rounding.

Table 3: FY 2008 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	1,339	-	4,364	397	18,846	-	3,000	27,946
Benin	4,396	-	1,984	-	13,887	-	2,320	22,587
Botswana	-	-	22,542	-	-	-	-	22,542
Burundi	2,559	-	3,472	-	-	-	-	6,031
Cameroon	-	-	1,488	-	-	-	-	1,488
DR Congo	13,073	-	17,918	4,372	7,240	-	7,620	50,223
Cote d'Ivoire	-	-	53,501	-	-	-	-	53,501
Djibouti	248	-	-	248	-	-	-	496
Ethiopia	14,211	-	207,226	3,370	19,838	-	18,560	263,205
Ghana	4,462	-	7,016	595	16,862	-	7,700	36,635
Guinea	3,664	-	1,984	-	-	-	2,810	8,458
Kenya	3,470	-	332,073	2,876	19,838	-	13,200	371,457
Lesotho	-	-	18,624	-	-	-	-	18,624
Liberia	5,158	-	3,128	-	12,399	-	6,000	26,685
Madagascar	6,695	-	1,938	-	16,862	-	8,400	33,895
Malawi	4,955	-	26,867	1,389	17,854	-	6,500	57,565
Mali	6,583	-	2,976	-	14,879	-	6,760	31,198
Mozambique	6,938	-	127,841	2,973	19,838	-	6,600	164,190
Namibia	-	-	48,030	1,934	-	-	-	49,964
Niger	410	-	-	-	-	-	90	500
Nigeria	16,450	-	210,136	4,862	6,944	-	15,753	254,145
Rwanda	4,879	-	78,626	-	16,862	-	7,531	107,898
Sao Tome & Principe	-	-	-	-	496	-	-	496
Senegal	4,640	-	3,911	843	15,870	-	4,950	30,214
Sierra Leone	350	-	-	-	-	-	150	500
Somalia	1,248	-	-	-	-	-	-	1,248
South Africa	-	-	323,882	5,951	-	-	1,000	330,833
Sudan	13,399	-	6,506	595	3,968	-	3,500	27,968
Swaziland	-	-	16,469	-	-	-	-	16,469
Tanzania	5,693	-	139,351	2,478	33,725	-	10,900	192,147
Uganda	5,867	-	129,596	2,182	21,822	-	10,580	170,047
Zambia	7,435	-	143,771	3,075	14,879	-	7,400	176,560
Zimbabwe	-	-	19,596	1,587	-	-	1,200	22,383
Africa Regional	10,740	-	992	2,579	1,686	-	2,200	18,197
East Africa Regional	1,488	-	2,777	1,785	-	-	2,500	8,550
Southern Africa Regional	-	-	1,984	-	-	-	-	1,984
West Africa Regional	992	-	2,976	-	-	-	7,900	11,868
Total	**151,342**	**-**	**1,963,546**	**44,091**	**294,595**	**-**	**165,124**	**2,618,698**

Table 3 (cont'd): FY 2008 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 MIDDLE EAST (AME)								
Afghanistan	74,074	-	756	6,943	-	-	32,184	113,957
Bangladesh	13,473	-	2,678	3,670	-	-	17,560	37,381
Burma	-	-	2,083	-	-	-	-	2,083
Cambodia	8,555	-	13,924	3,868	-	-	3,500	29,847
China	-	-	5,960	-	-	-	-	5,960
Egypt	3,156	-	-	-	-	2,130	12,032	17,318
India	14,978	-	21,962	8,431	-	-	15,700	61,071
Indonesia	13,051	-	7,687	5,854	-	-	-	26,592
Jordan	20,864	-	-	-	-	-	24,000	44,864
Kazakhstan	250	-	800	1,493	-	500		3,043
Kyrgyz Republic	300	-	675	1,446	-	468	150	3,039
Laos	-	-	992	-	-	-	-	992
Nepal	7,431	-	4,960	-	-	-	7,500	19,891
Pakistan	60,906	-	1,984	7,767	-	-	21,206	91,863
Papua New Guinea	-	-	2,480	-	-	-	-	2,480
Philippines	3,989	-	992	5,455	-	-	14,800	25,236
Tajikistan	1,244	-	724	1,347	-	388	300	4,003
Thailand	-	-	1,242	-	-	-	-	1,242
Timor-Leste	1,070	-	-	-	-	-	1,000	2,070
Turkmenistan	200	-	275	781	-	185		1,441
Uzbekistan	290	-	865	1,732	-	220	145	3,252
Vietnam	-	-	48,011	-	-	-	-	48,011
West Bank Gaza	2,800	-	-	-	-	7,800	-	10,600
Yemen	2,883	-	-	-	-	-	1,500	4,383
Regional Development Mission	-	-	2,600	5,753	5,455	-	-	13,808
AME Regional	2,182	-	1,300	-	-	-	1,200	4,682.00
Total	**231,696**	**-**	**122,950**	**54,540**	**5,455**	**11,691**	**152,777**	**579,109**

Table 3 (cont'd.): FY 2008 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	524	-	-	-	-	685	1,976	3,185
Armenia	2,343	1,771	-	204	-	407	2,232	6,957
Azerbaijan	744	-	-	496	-	1,004	1,948	4,192
Belarus	-	330	-	-	-	-	-	330
Georgia	6,667	-	876	1,158	-	1,099	1,755	11,555
Kosovo	1,040	-	-	-	-	-	-	1,040
Russia	2,042	3,576	9,921	7,329	-	428	4,686	27,982
Ukraine	1,981	-	5,617	3,149	-	200	2,486	13,433
Eurasia Regional	382	-	639	1,734	-	197	914	3,866
Europe Regional	22	-	130	22	-	124	527	825
Total	**15,745**	**5,677**	**17,183**	**14,092**	**-**	**4,144**	**16,524**	**73,365**
LATIN AMERICA AND THE CARIBBEAN (LAC)								
Bolivia	6,510	-	-	1,326	-	-	9,100	16,936
Brazil	-	-	500	3,200	-	-	-	3,700
Dominican Republic	2,119	-	5,703	1,289	-	-	1,300	10,411
Ecuador	2,000	-	-	-	-	-	-	2,000
El Salvador	3,859	-	2,166	-	-	-	2,400	8,425
Guatemala	4,659	-	3,364	-	-	-	6,600	14,623
Guyana	-	-	12,433	-	-	-	-	12,433
Haiti	9,316	-	31,050	1,289	-	1,600	9,200	52,455
Honduras	3,535	-	5,530	-	-	-	3,500	12,565
Jamaica	-	-	1,190	-	-	-	-	1,190
Mexico	-	-	2,182	496	-	-	-	2,678
Nicaragua	2,976	-	2,257	-	-	-	2,700	7,933
Paraguay	-	-	-	-	-	-	2,100	2,100
Peru	5,760	-	1,230	595	-	-	5,200	12,785
Caribbean Regional	-	-	6,660	-	-	-	-	6,660
Central American Regional	-	-	3,574	-	-	-	-	3,574
LAC Regional	2,227	-	1,588	1,008	4,960	-	1,400	11,183
Total	42,961	-	79,427	9,203	4,960	1,600	43,500	181,651

Table 3 (cont'd.): FY 2008 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.	-	13,044	-	-	-	-	-	13,044
Global Health	66,021	-	232,396	30,104	44,635	-	95,500	468,656
Total	**66,021**	**13,044**	**232,396**	**30,104**	**44,635**	**-**	**95,500**	**481,700**
INTERNATIONAL PARTNERSHIPS								
Avian Influenza	-	-	-	-	-	115,000	-	115,000
Blind Children	-	1,835	-	-	-	-	-	1,835
Commodities	-	-	20,371	-	-	-	-	20,371
GAVI	71,913	-	-	-	-	-	-	71,913
Global Fund to Fight AIDS, TB & Malaria	-	-	515,185	-	-	-	-	515,185
IAVI	-	-	28,477	-	-	-	-	28,477
Iodine Deficiency	1,983	-	-	-	-	-	-	1,983
Microbicide Research	-	-	44,636	-	-	-	-	44,636
Neglected Tropical Diseases	-	-	-	-	-	14,878	-	14,878
TB Drug Facility	-	-	-	14,878	-	-	-	14,878
UNAIDS	-	-	34,717	-	-	-	-	34,717
Total	**73,896**	**1,835**	**643,386**	**14,878**	**-**	**129,878**	**-**	**863,873**
Total Health Budget	**581,661**	**20,556**	**3,058,888**	**166,908**	**349,645**	**147,313**	**473,425**	**4,798,396**

Table 4: FY 2008 Global Health and Child Survival/ USAID 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	1,339	-	4,364	397	18846	-	3,000	27,946
Benin	4,396	-	1,984	-	13,887	-	2,320	22,587
Burundi	2,559	-	3,472	-	-	-	-	6,031
Cameroon	-	-	1,488	-	-	-	-	1,488
DR Congo	13,073	-	10,613	4,372	7,240	-	7,620	42,918
Djibouti	248	-	-	248	-	-	-	496
Ethiopia	14,211	-	-	3,370	19,838	-	18,560	55,979
Ghana	4,462	-	5,455	595	16,862	-	7,700	35,074
Guinea	3,664	-	1,984	-	-	-	2,810	8,458
Kenya	3,470	-	-	2,876	19,838	-	13,200	39,384
Lesotho	-	-	8,828	-	-	-	-	8,828
Liberia	5,158	-	2,678	-	12,399	-	3,000	23,235
Madagascar	6,695	-	1,488	-	16,862	-	8,400	33,445
Malawi	4,955	-	16,862	1,389	17,854	-	6,500	47,560
Mali	6,583	-	2,976	-	14,879	-	6,760	31,198
Mozambique	6,938	-	-	2,973	19,838	-	6,600	36,349
Namibia	-	-	-	1,934	-	-	-	1,934
Niger	210	-	-	-	-	-	90	300
Nigeria	16,450	-	-	4,862	6,944	-	15,753	44,009
Rwanda	4,879	-	-	-	16,862	-	7,531	29,272
Sao Tome & Principe	-	-	-	-	496	-	-	496
Senegal	4,640	-	2,976	843	15,870	-	4,950	29,279
Sierra Leone	350	-	-	-	-	-	150	500
Somalia	748	-	-	-	-	-	-	748
South Africa	-	-	-	5,951	-	-	1,000	6,951
Sudan	12,399	-	506	595	1,488	-	2,500	17,488
Swaziland	-	-	8,332	-	-	-	-	8,332
Tanzania	5,693	-	-	2,478	33,725	-	10,900	52,796
Uganda	5,867	-	-	2,182	21,822	-	10,580	40,451
Zambia	7,435	-	-	3,075	14,879	-	7,400	32,789
Zimbabwe	-	-	16,366	1,587	-	-	1,200	19,153
Africa Regional	10,740	-	992	2,579	1,686	-	2,200	18,197
East Africa Regional	1,488	-	2,777	1,785	-	-	2,500	8,550
Southern Africa Regional	-	-	1,984	-	-	-	-	1,984
West Africa Regional	992	-	2,976	-	-	-	7,900	11,868
Total	**149,642**	**-**	**99,101**	**44,091**	**292,115**	**-**	**161,124**	**746,073**

Table 4: FY 2008 Global Health and Child Survival/ USAID Budget by Program Category and Country

($ thousands)

Bureau/Country	Child Survival & Maternal Health	Vulnerable Children	HIV/AIDS	Infectious Diseases			Family Planning & Reproductive Health	Total
				TB	Malaria	Antimicrobial, Surveillance & Other ID		
ASIA AND MIDDLE EAST (AME)								
Afghanistan	38,074	-	-	6,943	-	-	18,000	63,017
Bangladesh	13,473	-	2,678	3,670	-	-	17,560	37,381
Burma	-	-	2,083	-	-	-	-	2,083
Cambodia	8,555	-	12,399	3,868	-	-	3,500	28,322
China	-	-	4,960	-	-	-	-	4,960
India	14,978	-	20,830	8,431	-	-	15,700	59,939
Indonesia	12,196	-	7,687	5,854	-	-	-	25,737
Kazakhstan	-	-	-	893	-	-	-	893
Kyrgyz Republic	-	-	-	595	-	-	-	595
Laos	-	-	992	-	-	-	-	992
Nepal	7,431	-	4,960	-	-	-	7,500	19,891
Pakistan*	13,864	-	1,984	3,968	-	-	10,000	29,816
Papua New Guinea	-	-	2,480	-	-	-	-	2,480
Philippines	3,720	-	992	5,455	-	-	14,800	24,967
Tajikistan	744	-	-	495	-	-	-	1,239
Thailand	-	-	992	-	-	-	-	992
Timor-Leste	-	-	-	-	-	-	1,000	1,000
Turkmenistan	-	-	-	397	-	-	-	397
Uzbekistan	-	-	-	892	-	-	-	892
Yemen	2,883	-	-	-	-	-	-	2,883
Regional Development Mission	-	-	2,480	5,753	5,455	-	-	13,688
AME Regional	2,182	-	1,300	-	-	-	1,200	4,682
Total	**118,100**	**-**	**66,817**	**47,214**	**5,455**	**-**	**89,260**	**326,846**

* Pakistan programmed $8.737 million in FY08 GH&CS/USAID funds for health activities in earthquake-affected areas.

EUROPE AND EURASIA (E&E)								
Albania	-	-	-	-	-	-	500	500
Armenia	-	-	-	-	-	-	500	500
Azerbaijan	744	-	-	496	-	-	750	1,990
Georgia	-	-	-	-	-	-	750	750
Russia	-	-	-	3,096	-	-	1,200	4,296
Ukraine	-	-	-	1,091	-	-	800	1,891
Eurasia Regional	-	-	446	1,587	-	-	-	2,033
Europe Regional	-	-	-	-	-	-	-	-
Total	**744**	**-**	**446**	**6,270**	**-**	**-**	**4,500**	**11,960**

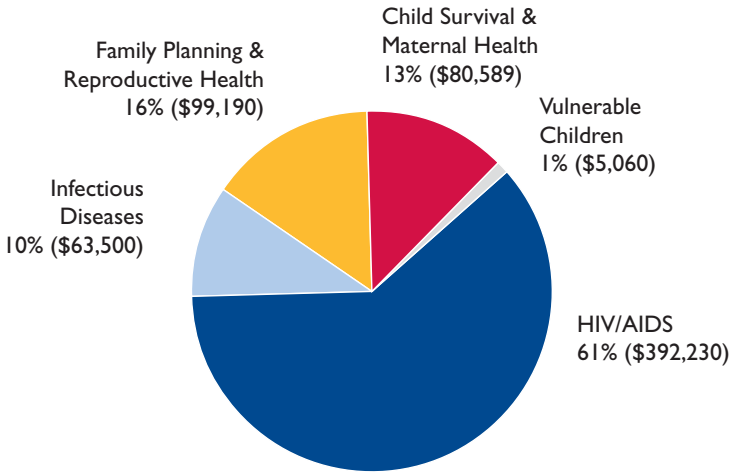
Table 4: FY 2008 Global Health and Child Survival/ USAID Budget by Program Category and Country

($ 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)								
Bolivia	6,510	-	-	1,326	-	-	9,100	16,936
Brazil	-	-	-	3,200	-	-	-	3,200
Dominican Republic	2,119	-	5,703	1,289	-	-	1,300	10,411
Ecuador	2,000	-	-	-	-	-	-	2,000
El Salvador	3,859	-	2,166	-	-	-	2,400	8,425
Guatemala	4,659	-	3,364	-	-	-	6,600	14,623
Haiti	9,316	-	-	1,289	-	-	9,200	19,805
Honduras	3,535	-	5,000	-	-	-	3,500	12,035
Jamaica	-	-	1,190	-	-	-	-	1,190
Mexico	-	-	2,182	496	-	-	-	2,678
Nicaragua	2,976	-	2,077	-	-	-	2,700	7,753
Paraguay	-	-	-	-	-	-	2,100	2,100
Peru	5,760	-	1,230	595	-	-	5,200	12,785
Caribbean Regional	-	-	5,703	-	-	-	-	5,703
Central American Regional	-	-	3,374	-	-	-	-	3,374
LAC Regional	2,227	-	1,588	1,008	4,960	-	1,400	11,183
Total	**42,961**	**-**	**33,577**	**9,203**	**4,960**	**-**	**43,500**	**134,201**
CENTRAL PROGRAMS								
Democracy, Conflict & Humanitarian Asst.	-	13,044	-	-	-	-	-	13,044
Global Health	66,021	-	53,740	30,104	44,635	-	95,500	290,000
Total	**66,021**	**13,044**	**53,740**	**30,104**	**44,635**	**-**	**95,500**	**303,044**
INTERNATIONAL PARTNERSHIPS								
Avian Influenzia	-	-	-	-	-	115,000	-	115,000
Blind Children	-	1,835	-	-	-	-	-	1,835
Commodities	-	-	20,371	-	-	-	-	20,371
GAVI	71,913	-	-	-	-	-	-	71,913
IAVI	-	-	28,477	-	-	-	-	28,477
Iodine Deficiency Disorder	1,983	-	-	-	-	-	-	1,983
Microbicide Research	-	-	44,636	-	-	-	-	44,636
Neglected Tropical Diseases	-	-	-	-	-	14,878	-	14,878
TB Drug Facility	-	-	-	14,878	-	-	-	14,878
Total	**73,896**	**1,835**	**93,484**	**14,878**	**-**	**129,878**	**-**	**313,971**
Total GH&CS	**451,364**	**14,879**	**347,165**	**151,760**	**347,165**	**129,878**	**393,884**	**1,836,095**

FY 2004 Total Health Budget by Program Category, Africa Region

($ thousands)

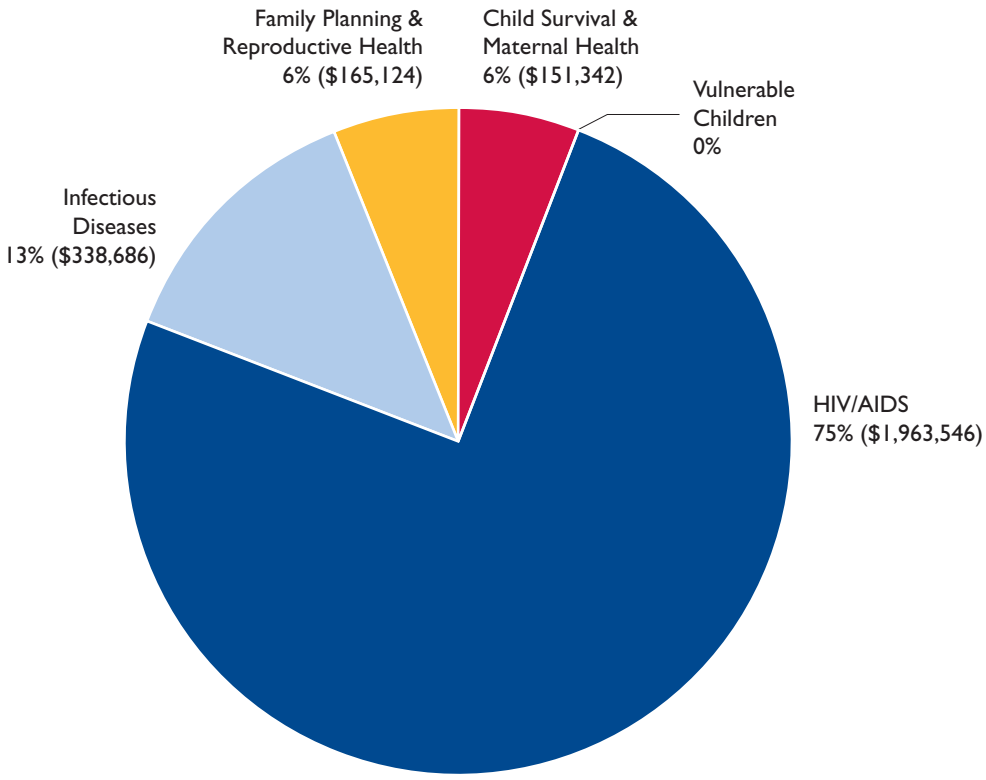


FY 2004 Total = $640.57 million

Note: Percents may not total 100 due to rounding.

FY 2008 Total Health Budget by Program Category, Africa Region

($ thousands)

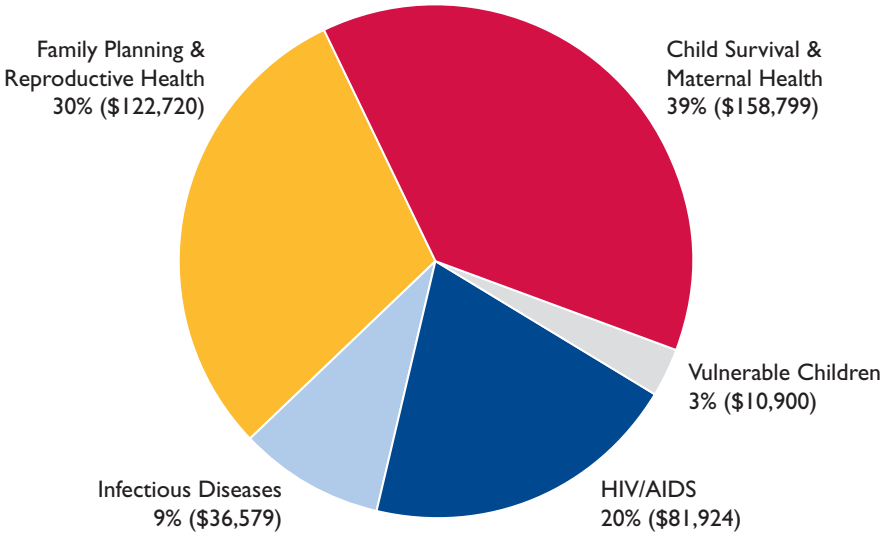


FY 2008 Total = $2.62 billion

Note: Percents may not total 100 due to rounding.

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

($ thousands)

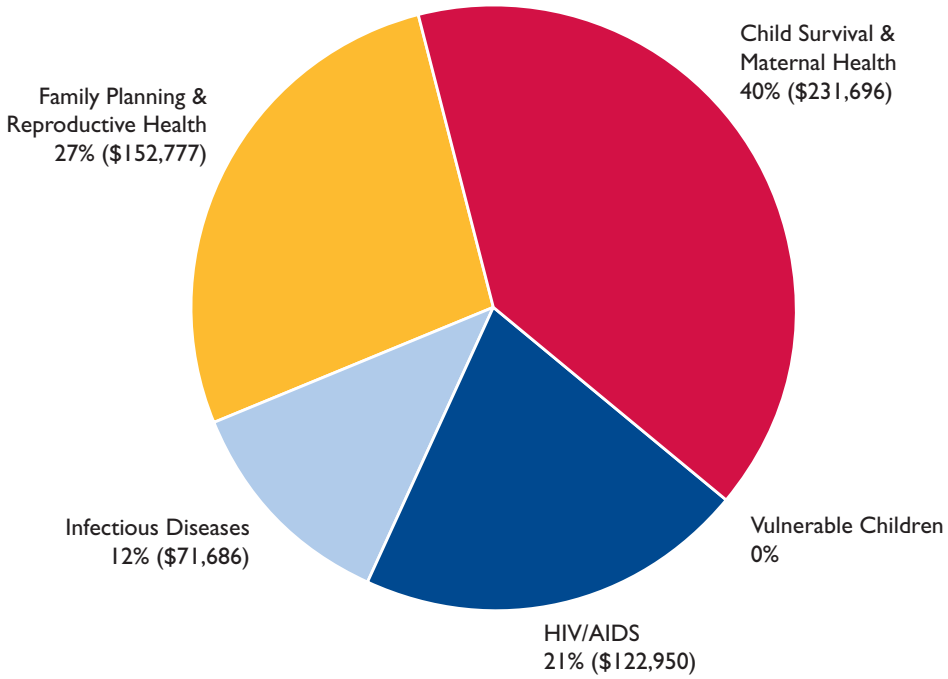


FY 2004 Total = $410.92 million

Note: Percents may not total 100 due to rounding.

FY 2008 Total Health Budget by Program Category, Asia and Middle East Region

($ thousands)



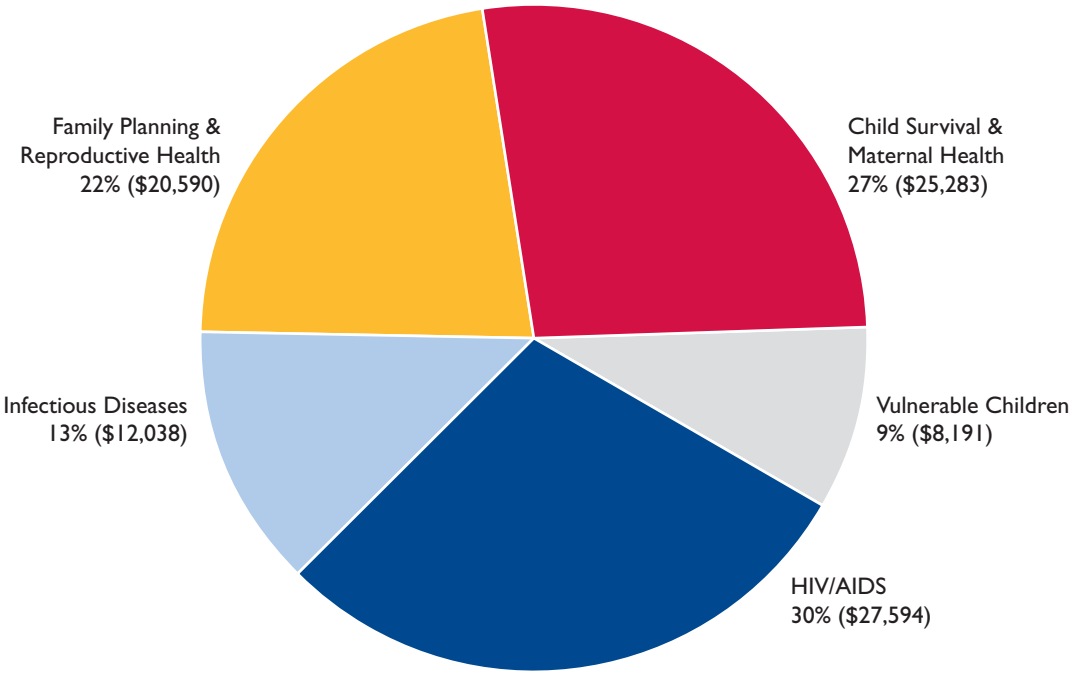
FY 2008 Total = $579.11 million

Note: Percents may not total 100 due to rounding.

In FY 2008, the total health budget for the Asia and Middle East region includes health funding for Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan, which were previously included in the Europe and Eurasia region.

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

($ thousands)

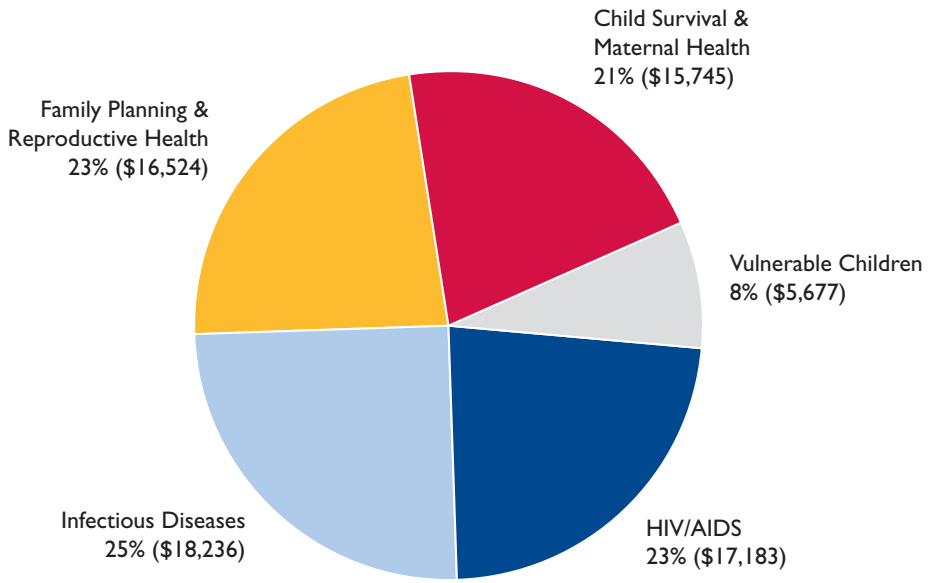


FY 2004 Total = $93.70 million

Note: Percents may not total 100 due to rounding.

FY 2008 Total Health Budget by Program Category, Europe and Eurasia Region

($ thousands)



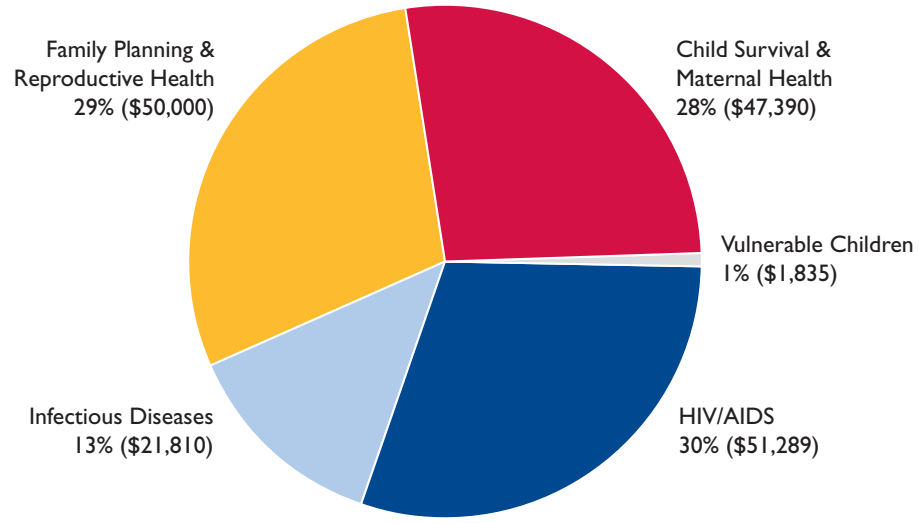
FY 2008 Total = $73.36 million

Note: Percents may not total 100 due to rounding.

In FY 2008, the total health budget for the Europe and Eurasia region does not include health funding for Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan, which have been moved to the Asia and Middle East region.

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

($ thousands)

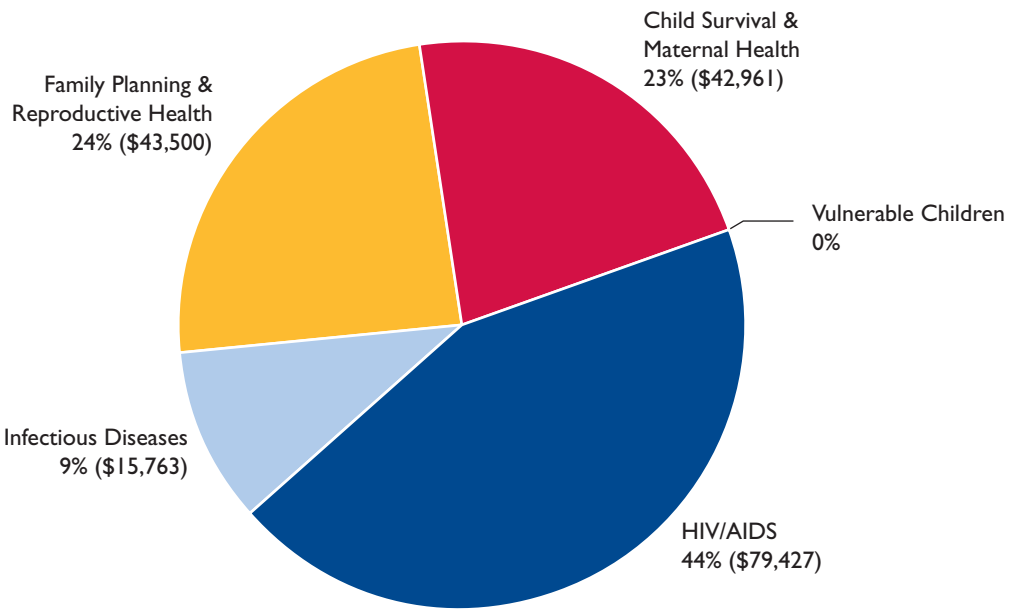


FY 2004 Total = $172.32 million

Note: Percents may not total 100 due to rounding.

FY 2008 Total Health Budget by Program Category, Latin America and Caribbean Region

($ thousands)



FY 2008 Total = $181.65 million

Note: Percents may not total 100 due to rounding.

ACRONYMS & ABBREVIATIONS

ABC	Abstain, Be faithful, correct and consistent use of Condoms
ACT	Artemisinin-based combination therapy
AFP	Acute flaccid paralysis
AFR	Africa Bureau
AKS	Africa KidSAFE
AME	Asia and Middle East Bureau
AMI	Amazon Malaria Initiative
AMTSL	Active management of the third stage of labor
ANM	Auxiliary nurse-midwife
APCA	African Palliative Care Association
API	Avian and pandemic influenza
ART	Antiretroviral treatment
ARV	Antiretroviral
CBHI	Community-based health insurance
CBO	Community-based organization
CBRHA	Community-based reproductive health agent
CCM	Community case management
CDC	Centers for Disease Control and Prevention
CMAM	Community-based management of acute malnutrition
CMC	Community mobilizer coordinator
CORE	Child Survival Collaborations and Resources
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
DR Congo	Democratic Republic of the Congo
DTP	Diphtheria-tetanus-pertussis
E&E	Europe and Eurasia Bureau
EHP	Emergency Hiring Plan
FBO	Faith-based organization
FP/RH	Family planning/reproductive health
FSW	Female sex worker
FY	Fiscal year

GAVI	Global Alliance for Vaccines and Immunization
GBD	Global burden of disease
GBV	Gender-based violence
GDF	Global TB Drug Facility
GH	Global Health Bureau
GH&CS	Global Health and Child Survival (USAID account)
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German development agency)
HAF	Health Action Framework
Hib	*Haemophilus influenzae* type b
HIS	Health information system
HRH	Human Resources for Health
IAVI	International AIDS Vaccine Initiative
ID	Infectioius disease
IDD	Iodine deficiency disorder
iHRIS	Integrated Human Resource Information System
IPG	Implementing Partners Group
IPTp	Intermittent preventive treatment for pregnant women
IRS	Indoor residual spraying
ITN	Insecticide-treated mosquito net
KMC	Kangaroo mother care
LAC	Latin America and Caribbean Bureau
LLIN	Long-lasting insecticide-treated mosquito net
L-ORS	Low-osmolarity oral rehydration salts
MC	Male circumcision
MCC	Millennium Challenge Corporation
MDG	Millennium Development Goal
MDR-TB	Multidrug-resistant tuberculosis
MHO	Mutual health organization
MMV	Medicines for Malaria Venture
MSM	Men who have sex with men
NGO	Nongovernmental organization
NMCP	National Malaria Control Program
NPI	New Partners Initiative (PEPFAR)
NTD	Neglected tropical disease
ORS	Oral rehydration solution
ORT	Oral rehydration therapy
OVC	Orphans and vulnerable children
PAVE	Partnership for AIDS Vaccine Evaluation
PCV	Pneumococcal conjugate vaccine
PEI	Polio Eradication Initiative
PEPFAR	U.S. President's Emergency Plan for AIDS Relief

PMI	President's Malaria Initiative
PMTCT	Prevention of mother-to-child HIV transmission
PNC	Postnatal care
POU	Point of use
PPH	Postpartum hemorrhage
PPPHW	Global Public-Private Partnership for Handwashing with Soap
PRISM	Performance of Routine Information System Management Framework
RAPID	Resources for the Awareness of Population Impacts on Development
RI	Rotary International
RLP	Rebuilding Lives Project (Georgia)
RTP	Right to Play (DCOF project)
RUSF	Ready-to-use supplementary food
RUTF	Ready-to-use therapeutic food
SAMT	Situation Analysis and Monitoring Tool
SCMS	Supply Chain Management System
SDM	Standard Days Method
SMNet	Social Mobilization Network (India)
SSFP	Smiling Sun Franchise Program (Bangladesh)
TASO	The AIDS Support Organization (Uganda)
TB	Tuberculosis
UNAIDS	Joint United Nations Program on HIV/AIDS
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, sanitation, and hygiene
WHO	World Health Organization
WRA	White Ribbon Alliance
XDR-TB	Extensively drug-resistant tuberculosis
ZPCT	Zambia Prevention, Care, and Treatment (Partnership)

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